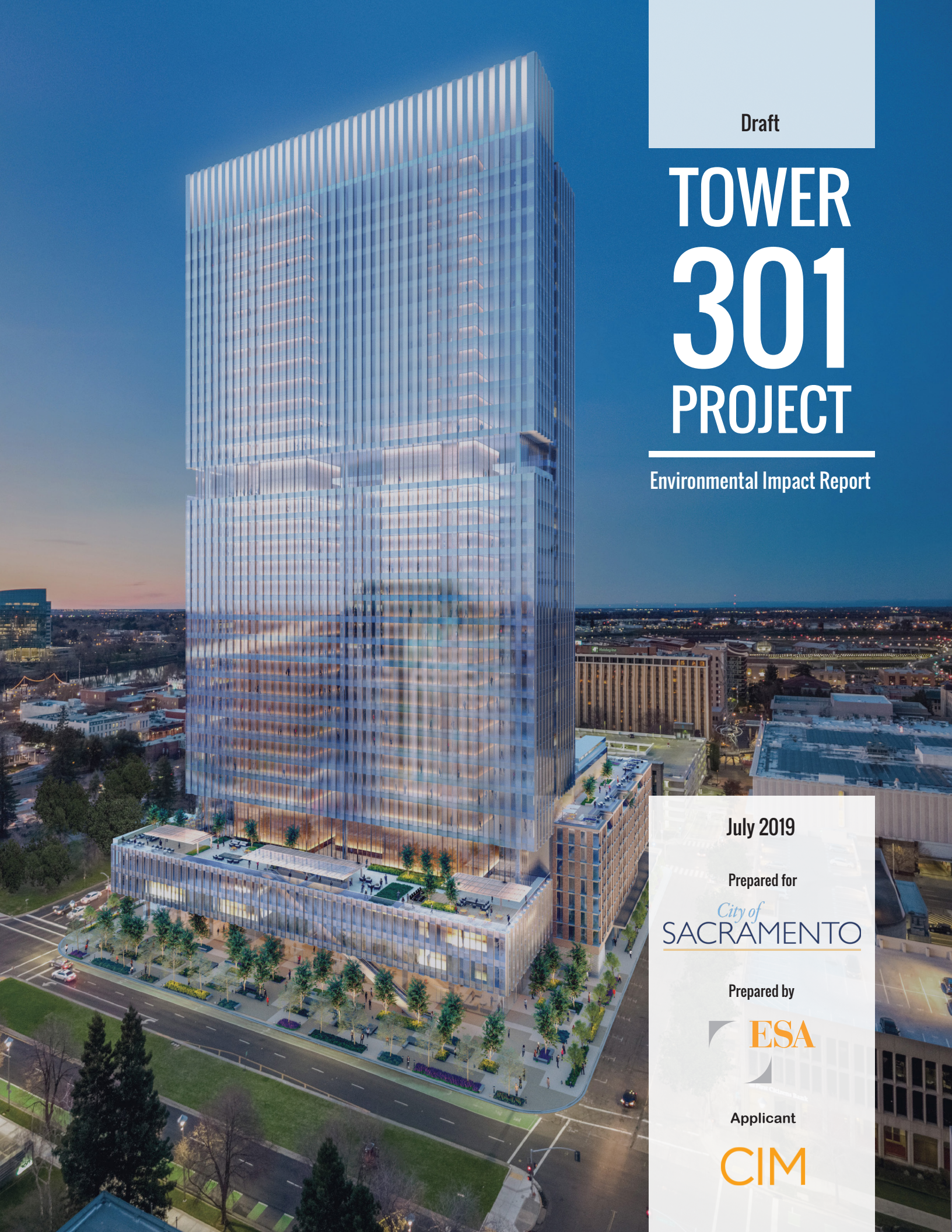

Draft

TOWER 301 PROJECT

Environmental Impact Report

July 2019

Prepared for

City of SACRAMENTO

Prepared by

ESA

Applicant

CIM

Draft

TOWER 301 PROJECT

Environmental Impact Report

Prepared for
City of Sacramento

July 2019

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SUMMARY

Tower 301 Project
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Introduction

This Environmental Impact Report (EIR) is intended to inform the public and decision-makers about the environmental consequences of the Tower 301 project. The EIR considers the environmental impacts of the proposed project as well as the additive effects of growth throughout the Sacramento area and the region. These latter impacts are referred to as cumulative impacts. The EIR has been prepared by the City of Sacramento pursuant to the requirements of the California Environmental Quality Act (CEQA).

The EIR describes the existing environmental conditions in the vicinity of the project site, located at 301 Capitol Mall, analyzes potential impacts on environmental resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of those significant impacts. The environmental resource topics evaluated in the EIR include land use, population and employment; aesthetics, light and glare; air quality; biological resources; global climate change; noise and vibration; and transportation, as well as potential for growth and urban decay effects. The EIR evaluates a range of alternatives for the proposed project.

This Draft EIR is subject to review and comment by the public, as well as responsible agencies and other interested jurisdictions, agencies, and organizations for a minimum of forty-five (45) days. The public may comment on the EIR by submitting written comments at any time during the public review period. The City will complete a Final EIR, which will include the written comments received regarding the Draft EIR, responses to substantial environmental issues raised in the comments, and any changes to the Draft EIR that are required by the responses to written comments, or that are initiated by staff.

Upon publication, the environmental documents described above are available online at http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports, and may be viewed in printed form at the City's Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811. Hearings regarding the project will occur at various times, and the City posts agendas at kiosks at City Hall and on its website at www.cityofsacramento.org.

City staff responsible for the drafting of the environmental document may be contacted with questions:

Ron Bess, Environmental Planning Services
City of Sacramento Community Development Department
300 Richards Boulevard, Third Floor
Sacramento, CA 95811
Telephone: (916) 808-8272
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The Final EIR will be submitted to the City of Sacramento Planning and Design Commission (PDC) for their consideration. As part of the project review and consideration, the PDC, prior to approving the project, is required under CEQA to certify that the EIR has been prepared in compliance with CEQA, and would also consider adoption of Findings of Fact pertaining to this EIR, specific mitigation measures, a Statement of Overriding Considerations relating to any identified significant and unavoidable effects, and a Mitigation Monitoring Plan.

Project Description

Project Location

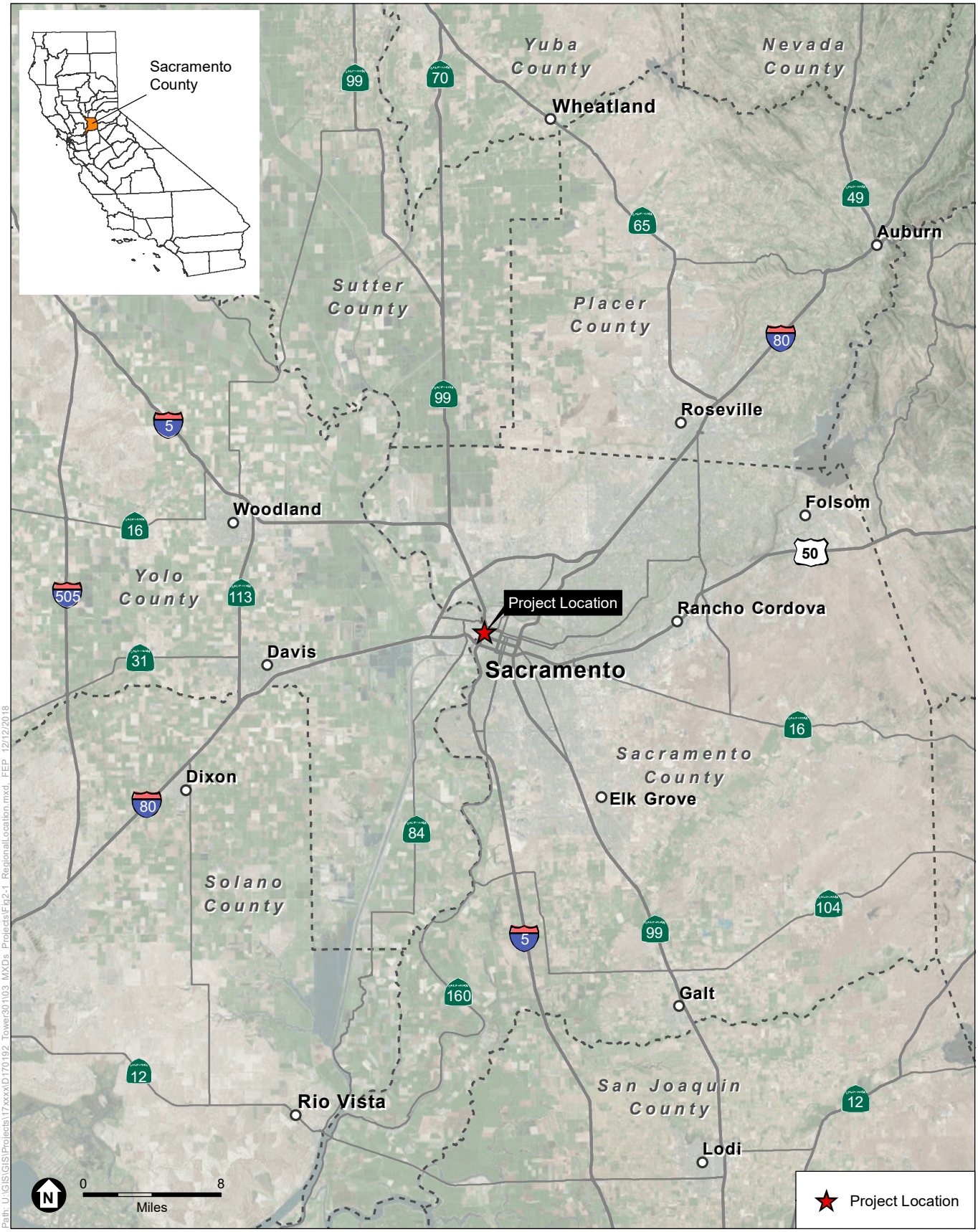
The project site is located within the City of Sacramento's Central City community. **Figure S-1** shows the location of the project site in the Sacramento region. The 2.39-acre project site is a full city block, generally bounded by L Street to the north, 3rd Street to the west, 4th Street to the east, and Capitol Mall to the south. The project site is within an area of downtown Sacramento under the Central Business District (CBD) general plan land use designation, within the CBD (C-3-SPD) zone, and within the Central City Special Planning District, the City's planning designations intended for the highest development density. The project site is located within the Central City Specific Plan boundaries.

The project site is within the City's existing downtown grid and has been previously developed but is currently unutilized, with remnant site excavation and foundational elements from a previous development effort. The project site is bounded by a parking structure to the north, office uses to the east and south, and open space and I-5 to the west. **Figure S-2** and **Figure S-3** show the project location in Sacramento's Central City.

Proposed Project

The proposed project would redevelop the entire city block as a mixed-use high-rise structure. The proposed structure would be an approximately 557-foot-tall, 41-story high-rise building that would include office, residential, restaurant, and retail uses. The proposed structure would include a single 31-story high-rise tower atop a 10-story podium and a single subgrade level.

Major components of the proposed project would include an office tower with penthouse levels, south-facing office lobby, publicly accessible view deck, internal parking levels, loft offices, residential units, north-facing residential lobby, upper and ground-floor retail. The podium structure would be the approximate length and width of the parcel, with the 31-story tower structure situated on an east-west axis atop the podium. The tower section of the structure would be set back 140 feet from Capitol Mall, in compliance with requirements for the Capitol View Protection Area. The tower section of the building would be primarily dedicated to office uses,

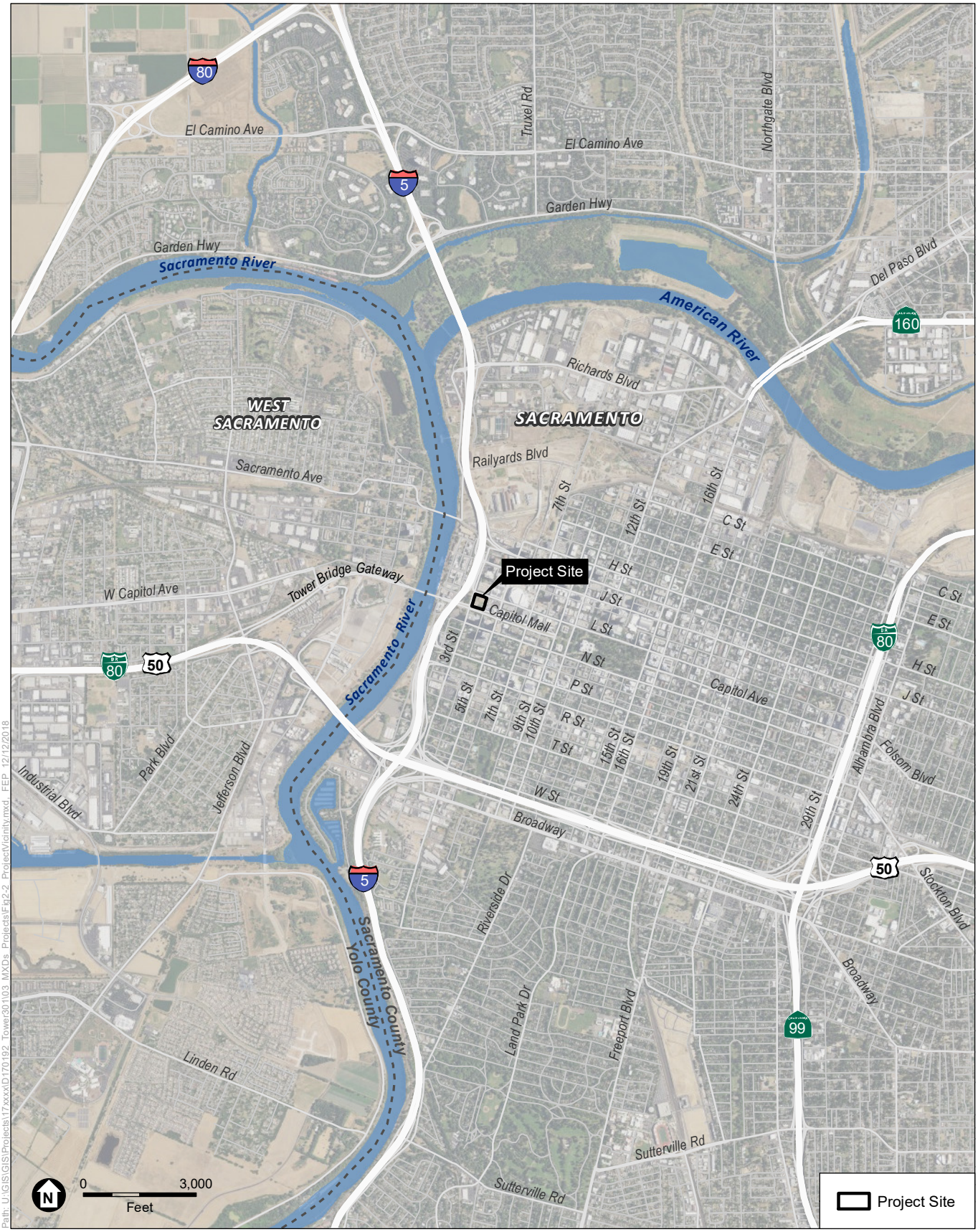


SOURCE: Esri, 2018; ESA, 2018

Tower 301

Figure S-1
Regional Location

ESA



SOURCE: USDA, 2016; Esri, 2015; ESA, 2018

Tower 301

Figure S-2
Project Vicinity

ESA

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SOURCE: Google, 2017; ESA, 2018

Tower 301

Figure S-3
Project Site

ESA

with the main pedestrian entry, lobby, elevator, and internal circulation areas on the south side of the building. The residential units would be in the podium levels along the L Street and 4th Street sides of the structure, with the residential lobby located on the ground level on the L Street frontage.

The proposed structure would include the programmed uses shown in **Table S-1**, below.

TABLE S-1
PROPOSED TOWER 301 PROGRAMMED USES

Use Type	Floor GSF x Number of Floor	Use Type Gross Square Feet (GSF)	Floors	Units	Total GSF
Office					
Lobby	13,723 GSF x 1	13,723 GSF	1 Floor		
Liner Office	25,120 GSF x 1 24,648 GSF x 1	49,768 GSF	2 Floors		
Loft Office	54,589 GSF x 1	54,589 GSF	1 Floor		
Tower Office	24,306 GSF x 26	631,956 GSF	26 Floors		
Transfer Floors	23,376 GSF x 1 18,236 GSF x 1	41,612 GSF	Lower Level (1 Floor) Mezzanine Level (1 Floor)		
Office Gross Area					**791,647 GSF**
Residential					
Residential Units		96,755 GSF	7 Levels	100 Residential Units	
Residential Gross Area					**96,755 GSF**
Retail/Amenity					
Ground Level Retail/ Restaurant	12,453 GSF x 1	12,453 GSF	Ground Level (1 Floor)		
Public Amenity Deck Retail/Restaurant/Gym	12,200 GSF x 1	12,200 GSF	Public Amenity Deck (1 Floor)		
Public Amenity Deck (Outdoor Space)	14,782 GSF x 1	14,782 GSF (Not Included in Total)	Public Amenity Deck (1 Floor)		
Retail Gross Area					**24,653 GSF**
Parking					
Below Grade Level			1 Floor	163 Vehicles Spaces 176 Long Term Bicycle Spaces	
Above Grade Level			8 Floors	1,141 Vehicle Spaces 58 Short Term Bicycle Spaces	
Parking Totals				**Vehicle Spaces: 1,304** **Bicycle Spaces: 234**	**536,227 GSF**
Total Program Gross Area (Parking Not Included)					**913,055 GSF**

SOURCE: Skidmore, Owings & Merrill, LLP, 2018.

As shown in Table S-1, the proposed project would include approximately 913,055 square feet (sf) of programmed uses, including 791,647 sf of office uses, 100 residential units (96,755 sf), 24,653 sf of retail and amenity uses, 1,304 vehicle parking spaces, and 234 bicycle parking spaces. A fitness center for residents and office tenants is on the tower level adjacent to the public view deck. In addition to the proposed ground floor retail, retail and amenity uses could be developed on the public view deck, including restaurant uses. The Loft Level could also include some amenity uses.

Project Circulation

The 1,304 onsite vehicle parking spaces included in the proposed project would be located on 9 levels including one subgrade level. Resident parking would be located on the subgrade parking level with access to and from the parking area on L Street. Employee parking for the office, retail, and amenity uses would be located in separate areas across all 9 parking levels, with access to and from the parking areas on 3rd Street and 4th Street. Delivery and loading facilities for the proposed project would be located along the internal driveway between the 3rd and 4th Street project driveway accesses.

Sidewalk improvements around the project site along the Capitol Mall, 3rd Street, 4th Street, and L Street frontages would comply with City standards for width and design. To further accommodate increased pedestrian demand, the proposed project would include the striping and addition of crossing equipment along the western segment of the L Street and 4th Street intersection.

The proposed project is designed to accommodate a proposed Streetcar platform on the east side of 3rd Street on the northwest side of the project site. The project driveway on 3rd Street is designed in anticipation that traffic entering and exiting the project site would cross the Streetcar tracks, which would be separated from 3rd Street by a secondary curb and a line of curbside parking along the east side of the road.

Project Utilities

The site of the proposed project is located within an area where infrastructure is well established. Minimal offsite improvements would be necessary to provide utility services to the project site. Water supply would be provided to the project site through existing 10-inch water supply mains in L and 3rd Streets. The wastewater systems for the proposed project would connect to the City's combined sewer system (CSS). The project would access the City's network of sanitary sewer mains via a 24-inch CSS main located in 3rd Street and an 8-inch CSS main located in 4th Street.

The proposed project would redevelop the site with a high-rise structure with impervious surfaces, for which stormwater drainage must be managed. It is anticipated that storm water would be collected and treated onsite before the treated runoff leaves the project site and enters the City's Basin 52 separated storm drain system. Since the storm water system is currently separated all the way to the outfall into the Sacramento River, the project site would include temporary storage with the necessary pre-release treatment facilities as required to meet both current water quality standards and the discharge capacity of the existing system. Stormwater

within the construction footprint would be managed pursuant to a Stormwater Pollution Prevention Plan that would be prepared for the proposed project.

Electrical service would be provided by the Sacramento Municipal Utility District (SMUD) through service from its 21-kV system. The project site would connect to the SMUD electrical grid at 21-kV underground local lines within L Street and 4th Street. Aside from connections that may be necessary to tie project systems to the SMUD system under adjacent streets, no further improvements to the SMUD electrical system would be required.

Natural gas service would be established via service laterals from the existing Pacific Gas & Electric (PG&E) service grid within the downtown roadway network. The nearest PG&E line to the project site is a 12-inch main, located along the west side of 3rd Street. A service lateral would likely be installed along this line to provide service to the project site. Other than proposed connections between the project site and the existing PG&E natural gas mains, no further improvements to the PG&E distribution system would be necessary.

The proposed project would acquire telephone and data service from the current existing carrier(s) that are now established in downtown Sacramento. Connection(s) would be completed in existing telephonic and data manholes. The project applicant would coordinate with the City and other utility providers to determine the optimal solution for gaining access to adjacent lines, potentially including either open cuts or directional drilling that could be done in these manholes without severe traffic interference. Where open cuts are determined to be necessary, appropriate traffic management plans would be developed, subject to approval by the City of Sacramento. If feasible, service to the project site would be coordinated with SMUD in a common joint trench, in which a few 2-inch conduits would be added to the joint trench for telecommunication service.

Project Construction

Construction of the proposed project would occur over approximately 31 months, beginning in December 2019 and concluding in July 2022. Anticipated activities could include some limited demolition of existing foundational elements from the previous project, and would include construction of the foundation, and erection of the proposed high-rise structure. The final year of construction would consist primarily of internal construction and commissioning, and exterior landscaping.

Site demolition and clearing would last approximately 1 month, and would include the preservation of some foundational piles from the previous development effort on the project site. Grading and foundation work would take approximately 7 months, including excavation to a depth of approximately 20 to 25 feet below ground level. Excavated soil and debris would be hauled offsite for disposal. This phase would also include the establishment of deep foundations/ footings, involving the driving or drilling of concrete foundation piles throughout the excavation area. The approximate duration of pile installation would be 3 months, within the 7-month duration of the grading and foundation work phase.

The construction phase would take approximately 21 months, and would include the erection of steel, concrete and/or precast concrete elements. Interior and exterior finish work would take

place over approximately 19 months, and would include creating and outfitting interior spaces and completing exterior finish of the building, plumbing, electrical, HVAC systems, and other internal infrastructure. Exterior site work and landscaping would take approximately 7 months, and would occur concurrently with interior and exterior finish work.

During project construction, the entire project site would be fenced off. Water-filled construction barriers would be placed on the south side of L Street between 3rd Street and 4th Street. Some on-street parking along the project site perimeter would be temporarily blocked during some phases of project construction. The main site access for construction vehicles and the import and export of materials to the project site would be located on L Street during site preparation and early project construction. As aboveground podium levels are completed, site access for construction and delivery vehicles would be anticipated to occur along 4th Street.

The proposed project would not require road closures. Short term, temporary lane closures may be necessary for the establishment of project links to utilities or construction elements along the perimeter of the project site; however, no long-term lane closures are anticipated. Construction vehicles would follow established truck routes for the City and which are determined by the streets that can access the site and the City's one-way street system.

Construction of the foundations and subgrade parking level components of the proposed project likely would require temporary dewatering during the rainy season. Analysis of the ground water, both for contaminates and quantity would be performed in advance of installation of the construction dewatering system. Monitor wells would be used to provide historical data prior to and during the construction dewatering period. Periodic water quality tests would be performed to establish needs requirements or onsite treatment prior to discharge to the city collection grid. Approval of dewatering activities and permitting for the discharge of the temporary dewatering into the City's sewer and/or storm drain systems would be coordinated with the City Department of Utilities, Sacramento Regional County Sanitation District, and the Central Valley Regional Water Quality Control Board, as appropriate.

Notice of Preparation Comments

During the public comment period on the Notice of Preparation (NOP), December 19, 2018 through January 25, 2019, the City of Sacramento received 12 written comment letters regarding the proposed project (see Appendix A for the NOP and Appendix B for the NOP Comment Letters). The comments requested that the EIR include analysis of issues such as:

- Construction-related concerns including construction duration and phasing; noise; road closures, lane closures, and roadway detours; preparation of a construction traffic management plan; and dust;
- Potential transportation impacts to and interface with the multi-modal transportation network, including the pedestrian, bike, transit, and freeway systems;
- Potential impacts to bird species from the proposed structure and construction;
- Consideration of Native American outreach and consultation;

- Potential impacts to gas and electrical infrastructure and facilities;
- Provision of electrical infrastructure.

These issues are discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

Environmental Effects

The following discussion provides an overview of the key environmental effects of the proposed project. At the end of this chapter, **Table S-2,** Summary Table, includes a complete summary of all impacts and mitigation measures described in Chapter 4 of the EIR.

Aesthetics, Light and Glare

The proposed project would change the visual character of the project site, with the existing vacant lot replaced with an approximately 557-foot-tall building that would be the tallest building in the Sacramento region. The changes would be consistent with City policy regarding urban design in the project vicinity as articulated in the 2035 General Plan and the Central City Urban Design Guidelines (CCUDG). While the changes in the visual character of the project site would be dramatic, the analysis demonstrates that the building features and design would not be adverse within the context of the City's articulated aesthetic values. The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.

The proposed project lighting and signage could result in brightly illuminated surfaces and could result in substantial changes to existing artificial light conditions or interfere with off-site activities. In the absence of good design, the increased visibility could disturb or distract individuals observing the area from homes, offices, automobiles, or while walking on downtown streets. Mitigation would require the implementation of lighting design requirements and performance measures that would ensure that new nighttime light from the proposed project would be designed and operated to avoid substantial disturbance to sensitive receptors.

While the proposed project would include glass as a primary exterior material, the exterior of the building is not proposed to be a monolithic plane of glass. The exterior of the tower would include staggered planes of recessed and non-recessed glass, and the exterior of the podium would include masonry panels that would frame the glass portions of the building exterior. Both of these design elements would substantially reduce or eliminate glare on adjacent properties, motorists, pedestrians, and other users. In addition, the project would be constructed consistent with the requirements of the CCUDG, which generally discourage the use of reflective surfaces in building facades. The proposed project would also be consistent with Policy ER 7.1.4 of the Sacramento 2035 General Plan, which prohibits new development from using glass or metal building materials that would cause substantial glare over a significant percentage of the structure, resulting in glare that could cause public hazard or a substantial annoyance to nearby land uses.

Air Quality

The Sacramento Area Council of Governments (SACOG) is required to consider adopted local land use plans in the formulation of the land use forecast and growth projections in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The Tower 301 project would be consistent with the growth projections included in the City's 2035 General Plan; therefore, the proposed project would be within the growth projections provided by SACOG and thereby consistent with the MTP/SCS.

The California Emission Estimator Model (CalEEMod version 2016.3.2) was used to calculate construction-related emissions of criteria air pollutants and to determine if such emissions would exceed the Sacramento Metropolitan Air Quality Management District's (SMAQMD) applicable regional significance thresholds.

Construction emissions for the Tower 301 project were estimated using the methods contained in SMAQMD's Guide to Air Quality Assessment in Sacramento County. According to the SMAQMD guidance, projects that do not implement the District's Best Management Practices (BMPs) must meet a zero peak daily and annual emission threshold for PM_{10} and $PM_{2.5}$. With implementation of the SMAQMD's BMPs, the SMAQMD's peak daily and annual thresholds increase to 80 pounds per day (ppd)/14.6 tons per year (tpy) of PM_{10}, and 82 ppd/15 tpy of $PM_{2.5}$.

Mitigation is proposed that would require the proposed project to implement the SMAQMD's Basic Construction Emission Control Practices to control for PM_{10} and $PM_{2.5}$. As a result, construction of the proposed project would result in emissions of PM_{10} and $PM_{2.5}$ below the SMAQMD significance thresholds. However, construction of the proposed project would generate unmitigated NO_X emissions that would exceed SMAQMD's thresholds. Consequently, construction of the proposed project would result in a short-term significant impact due to NO_X emissions. Mitigation would be required to control fugitive dust, reduce on-site exhaust emissions, and pay mitigation fees to SMAQMD for project NO_X emissions that exceed the SMAQMD significance threshold. Therefore, construction of the proposed project would result in emissions of NO_X below the SMAQMD significance threshold.

Construction of the Tower 301 project would generate diesel particulate matter (DPM) emissions due to operation of internal combustion engines in equipment such as loaders, backhoes, and cranes, as well as haul trucks. Modeling of health risk due to DPM exposure was completed and it was determined that exposure would exceed significance thresholds, in terms of Million Increase in Cancer Risk (MICR), when using the default Heavy-Duty construction fleet engine characteristics. Although construction activities of the proposed project would constitute a small percentage of the total 30-year exposure period used for health risk evaluations, the health risk impact is above the 10 in one million risk threshold. Mitigation would require that all construction equipment on the project site have Tier 4 engines or Tier 3 engines with Level 3 Diesel Particulate Filters (DPF). Use of Tier 4 engines or Tier 3 engines with Level 3 DPFs along with a construction equipment plan would greatly reduce the project's DPM emissions to levels below the significance thresholds, in terms of the MICR.

The Tower 301 project would increase long-term operational emissions due to motor vehicle trips and onsite area and energy sources. Operational emissions for project buildout were estimated using CalEEMod based on the proposed land uses (for area and stationary source emissions), trip generation rates, and VMT developed for the project. The proposed project would not generate emissions of reactive organic gases (ROG), NO_X, PM_{10}, and $PM_{2.5}$ that would exceed SMAQMD's significance thresholds after the implementation of operational best management practices required by applicable regulations.

Carbon monoxide (CO) concentration levels are highest near crowded or congested intersections where traffic is slow or idling. Projects that would increase traffic volumes on surrounding roadways and/or degrade the existing level of service (LOS) would potentially increase CO concentrations at nearby intersections. SMAQMD has developed screening criteria to analyze potential CO impacts and identify when site-specific CO dispersion modeling is necessary. According to SMAQMD's screening criteria, none of the study area intersections near the project site would require CO modeling. Therefore, the operation of the project would not have a substantial effect on local CO concentrations and no exceedances of the U.S. National Ambient Air Quality Standards or California ambient air quality standards for operational CO emissions would occur.

The project would result in only very limited operation period activities that would generate toxic air contaminants (TAC) emissions, including landscaping maintenance operations and emergency generator emissions as required. None of these activities would result in TACs being emitted in large quantity, or result in a major increase in associated health risks from the project's operation. As a result, nearby sensitive receptors would not be exposed to substantial TAC emissions.

Biological Resources

The project site was excavated in 2006, and, with the exception of the installation of foundational piles and developed landscape areas, has remained cleared since that time. These developed landscape areas currently remain intact, and ruderal herbaceous vegetation, ornamental trees, and manmade water-filled depressions and drainage swales have become established on the project site. Although the site does not include sensitive habitats, state and federal protected wetlands and waters, or wildlife movement corridors, the nonnative grassland and trees within and surrounding the project site may serve as potential nesting habitat for migratory birds and birds of prey. No regionally-occurring special-status plant species are likely to occur on the project site, but five special-status wildlife species have the potential to occur within the project site or its vicinity, including: grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), white-tailed kit (*Elanus leucurus*), and western pond-turtle (*Emys marmorata*).

Construction of the proposed project would include vegetation clearing and initial grading of the project site. Construction activities could result in impacts to special-status bird species, migratory birds, and raptors nesting within the construction footprint through removal or damage to eggs or young or through nest abandonment. Mitigation would ensure that vegetation clearing operations, including initial grading and tree removal, occur outside of the nesting season for all birds (September 16 to January 31) unless mitigation measures are implemented that reduce the

potential impact. Should vegetation removal occur during the nesting season, these measures require that a qualified biologist conduct a preconstruction survey within five days of commencement of ground disturbing activities and describe the appropriate course of action for evaluation, avoidance, and monitoring of any observed active nests. Additional mitigation specific to burrowing owl and Swainson's hawk would also be provided to reduce impacts to these species.

Construction activities could impact western pond turtle, if individuals are present in the manmade seasonally water-filled depressions or the nonnative grassland on the project site. Mitigation would require that a qualified biologist conduct a preconstruction survey on the project site no more than five days prior to initiation of materials staging or ground disturbing activities and appropriately relocate any observed individuals. Mitigation also requires that the biologist monitor all staging and initial grading activities. These measures would ensure that impacts to western pond turtles would be reduced to a less-than-significant level.

The manmade water-filled depressions and the swale on the project site are not considered protected since they were excavated in upland dry lands for the purposes of constructing a building associated with a previous project. Therefore, the proposed project would not result in substantial adverse effects on state or federally protected wetlands.

The proposed project would comply with the requirements of the City of Sacramento Tree Ordinance Code listed in Chapter 12.56 of the Sacramento City Code, which regulates the removal and maintenance of street trees within the City of Sacramento. As a result, impact to street trees would not be substantial.

Global Climate Change

Construction of the proposed project would result in an increase in construction-related Greenhouse Gas (GHG) emissions through a variety of construction activities, such as: grading, excavation, road building, and other earth moving activities; travel by construction equipment and employee vehicles, especially on unpaved surfaces; exhaust from construction equipment; architectural coatings; and asphalt paving. Operation of the proposed project would also result in an increase in GHG emissions, largely due to motor vehicle trips and onsite area and energy sources. The proposed project's modeled annual construction and operational GHG emissions from the Tower 301 project would be less than the per-service population significance threshold proposed by SMAQMD. Therefore, the proposed project would not result in the generation of incremental GHG emissions that may have a significant effect of the environment.

Under CEQA Guidelines Section 15183.5, GHG emissions may be analyzed and mitigated within the scope of a broader plan for the reduction of GHG emissions. The City of Sacramento Climate Action Plan (CAP) qualifies under Section 15183.5 as an applicable plan for use in this cumulative impact analysis relating to development projects. The 2035 General Plan incorporated the City's Climate Action Plan strategies, measures, and actions that reduce GHG emissions. The project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, reduce vehicle travel, and provide amenities that benefit residents of and visitors to the CBD consistent with the City of Sacramento's policies. In addition, the Tower 301

project would also align with the strategies of the 2017 Scoping Plan Update in ways that would contribute to both direct and indirect reduction of GHG emissions. Finally, the proposed project would meet the water use reduction and waste diversion rate requirements for State agencies under Executive Order B-18-12 and the California Integrated Waste Management Act, respectively. For these reasons, the project would not conflict with applicable plans and policies adopted for the purpose of reducing the emissions of GHGs.

Noise and Vibration

As the project site is located within the City of Sacramento, construction activities for the proposed project would be exempt under Section 8.68.080 of the Sacramento City Code, provided construction occurs between the hours of 7:00 a.m. and 6:00 p.m., Monday through Saturday, and between the hours of 9:00 a.m. and 6:00 p.m., on Sunday, and provided all construction equipment is fitted with the appropriate exhaust and intake silencers for internal combustion engines. The project applicant proposes to construct 10 hours per day, six days per week, within the hours permitted by the City of Sacramento Code. Therefore, project-related construction activities would not conflict with the City of Sacramento's noise standards.

To quantify construction-related noise exposure that would occur at the nearest sensitive receptors, it was assumed that the two loudest pieces of construction equipment would operate at the closest location on the project site to the nearest off-site sensitive receptors. The City of Sacramento does not contain noise level standards that are applicable to short-term construction activities in its general plan and City Code. However, the FTA's *Transit Noise and Vibration Impact Manual* identifies a daytime 1-hour L_{eq} threshold of 90 dBA as a noise level where adverse community reaction could occur at residential uses. Using this noise level, the closest resident to the project site would be exposed to a noise level below the 90 dBA L_{eq} threshold; therefore, the proposed project would not result in substantial adverse effects related to temporary increases in ambient noise levels from construction activities.

The Tower 301 project would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. However, none of the sensitive land uses along analyzed roadways would be exposed to an increase in traffic noise that would exceed the allowable incremental noise increases as detailed in the City of Sacramento 2035 General Plan. Therefore, the increase in vehicular traffic along local roadways would not result in the exposure of adjacent existing sensitive land uses to substantial traffic noise.

HVAC units would be installed within the residential and office uses of the proposed structure to regulate interior temperatures. Although the precise locations of potential HVAC units are currently unknown, the potential sound power generation levels of HVAC units were used to estimate noise levels at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations. Based on these approximate noise levels, the distance between the project site and nearby sensitive receptors would provide sufficient attenuation to reduce noise levels to below the City of Sacramento's nighttime noise standard of 50 dBA L_{eq} Therefore, operation of HVAC units at the project site would not expose nearby sensitive land uses to substantial noise levels.

Operational traffic as a result of the proposed project would increase traffic noise levels at existing land uses in the vicinity of the project. However, operation of the project would not generate traffic volumes along roadways within the Sacramento downtown area that would exceed the City of Sacramento's exterior noise standard to the extent that interior noise levels at existing residential uses adjacent to these roadway segments would exceed the City's interior noise standard of 45 dBA L_{dn}.

Operation of the Tower 301 project is not expected to expose nearby sensitive receptors or structures to vibration levels that would result in human annoyance or building damage. However, ground-borne vibration from onsite construction equipment could result in vibration at nearby sensitive receptors. Based on typical reference vibration levels for applicable equipment and the relative distances of the nearest sensitive receptors, nearby sensitive land uses would not be exposed to vibration levels resulting in substantial human annoyance or building damage during construction.

Transportation

The analysis of transportation and circulation effects of the proposed projects involves an assessment of potential effects on roadways, transit facilities, and bicycle and pedestrian facilities.

Under existing conditions, the proposed project would add traffic to some intersections in the City of Sacramento that have degraded operating conditions, but because LOS F operations are considered acceptable within the City's Core Area, the impact would be less than significant. However, under cumulative conditions, the project would add traffic and additional delay to the intersection of N and 4th streets, and this additional traffic would result in gridlock that would hamper all modes of travel. Mitigation would ensure that the project applicant makes a fair-share contribution to improvements at this intersection, which include a traffic signal. As a result, with the implementation of mitigation, the project's contribution to this cumulative impact would not be considerable.

The project would increase vehicle queuing at the I-5 freeway off-ramps near the project site. Under existing conditions, the addition of the project traffic would not result in queues that extend back to the freeway mainline. However, under cumulative conditions, the addition of project traffic would worsen queues that would spill back to the freeway mainline. Mitigation would require the project applicant to pay a fair share contribution to the I-5 Freeway Subregional Corridor Mitigation Program. Therefore, with the implementation of mitigation, the project's contribution to this cumulative impact would not be considerable.

Many transit services are provided in close proximity to the project site, including local and commuter bus, regional light rail, and intercity passenger rail service. The project would add traffic to the roadway facilities that serve transit routes. Under existing conditions, traffic progression for transit would be maintained and a breakdown in traffic flow resulting in gridlock would not occur. However, under cumulative conditions, the project would add delay that would create poor traffic progression for transit and deteriorate the travel time reliability of transit service along the Capitol Mall corridor. Mitigation would require the project to construct a dedicated eastbound left-turn pocket at the Capitol Mall/4th Street intersection. In addition, the

project would be required through to make a fair share contribution toward the construction of other improvements at the intersection. For these reasons, with the implementation of mitigation, the project's contribution to this cumulative impact would not be considerable.

As discussed above, many transit services are provided in close proximity to the project site. In addition, the planned Downtown Riverfront Streetcar would travel directly adjacent to the project on 3rd Street. The proposed project would be designed to be compatible with the proposed streetcar. The project would not interfere with the proposed streetcar stop platform on 3rd Street immediately south of L Street and would preserve right-of-way for the platform. In addition, the proposed project would expand and enhance access to nearby transit by improving sidewalks adjacent to the project site.

The project would not modify or change the existing bicycle system in the study area. As noted in the Central City Specific Plan, no planned bicycle facilities are located adjacent to the project on L Street, 3rd Street, or 4th Street; therefore, the project would not preclude the construction of any planned bicycle facilities.

The project would enhance the pedestrian facilities along the frontage of all streets adjacent to the project site. The project would not affect existing or planned pedestrian facilities. In addition, the project would result in an increase in the number of pedestrians along Capitol Mall, notably for pedestrians accessing the site to and from transit. The Capitol Mall/4th Street intersection does not allow eastbound left and westbound left-turn movements for vehicles. This requires motorists entering the project from the west along Capitol Mall to drive eastbound through the Capitol Mall/4th Street intersection, make an eastbound U-turn at Capitol Mall/5th Street, and a westbound right-turn at Capitol Mall/4th Street. This circuitous movement would require drivers to cross four marked pedestrian crosswalks, increasing potential conflicts with pedestrians at these locations by increasing the number of vehicles traveling across the crosswalks. Mitigation would require the construction of a dedicated eastbound left-turn pocket at the Capitol Mall/4th Street intersection. As a result, pedestrian impacts would be reduced to a less-than-significant level.

Project construction may require restricting or redirecting pedestrian, bicycle, and vehicular movements at locations around the site to accommodate material hauling, construction, staging, and modifications to existing infrastructure, and because of the extent and duration of construction, the project would cause construction-related impacts. Mitigation would require the preparation of a detailed Construction Traffic Management Plan that would reduce potential construction-related impacts to the nearby street system. Therefore, construction-related traffic impacts would be reduced to a less-than-significant level.

The proposed project increase daily vehicle miles traveled (VMT) generated in the Central City; however, the project would result in a slight decrease in daily VMT per service population (total of residents and employees) in the area from 42.7 under existing conditions to 41.9 under existing plus project conditions. The addition of residential land use in the Central City by cumulative conditions results in lower daily VMT per service population overall; however, the proposed project would change daily VMT per service population in the Central City by a smaller margin from 34.6 without the project to 34.3 with the project.

Cultural Resources

Project impacts to cultural resources were evaluated in the initial study prepared for the project and included in Appendix C of this EIR. The proposed project may result in significant impacts to historical resources and/or unique archaeological resources during project construction. Mitigation would require the implementation of an archaeological research design and treatment plan (ARDTP), which would include pre-construction testing, a treatment plan for discovered resources, provisions for analysis of data, reporting, and curation of artifacts. As a result, impacts to historical resources and/or unique archaeological resources would to be reduced to a less-than-significant level.

Evaluation of the project site determined that there is a low likelihood of the presence of human remains on the project site. However, the project would involve ground-disturbing activities and, while unlikely, if any unidentified human remains were encountered during ground disturbing activities impacts to the human remains could be potentially significant. Mitigation would require that appropriate and legal protocols would be followed in the event that human remains are inadvertently discovered during project construction. Therefore, impacts to human remains would to be reduced to a less-than-significant level.

The proposed project would also have the potential to significantly impact tribal cultural resources. The City has drafted comprehensive mitigation to address any potentially significant impacts to unknown tribal cultural resources should they be identified during project construction. These mitigation measures would include the conducting of cultural resources and tribal cultural resources sensitivity and awareness training prior to ground-disturbing activities, and the implementation of avoidance and minimization measures. For this reason, impacts to tribal cultural resources would to be reduced to a less-than-significant level.

Geology, Soils, and Seismicity

Project impacts related to geology, soils, and seismicity were evaluated in the initial study prepared for the project and included in Appendix C of this EIR. Although the project site is not located near any active or potentially active faults, strong ground shaking could occur at the project site during a major earthquake on any of the major regional faults. Earthquake resistant design and materials are required to meet or exceed the current seismic engineering standards of the CBSC Seismic Risk Zone 3 improvements. The proposed project would be required to comply with CBSC requirements and the City's 2035 General Plan, which require project applicants to prepare site-specific geotechnical evaluations and conform with Title 24 of the California Code of Regulations. Since the geotechnical investigation has not been completed to verify onsite geologic conditions, the impact is potentially significant. Mitigation would require the completion of a geotechnical investigation and the incorporation of recommendations from that investigation into final project design. As a result, impacts related to strong ground shaking would be reduced to a less-than-significant level.

Hazards

Project impacts related to hazards and hazardous materials were evaluated in the initial study prepared for the project and included in Appendix C of this EIR. There are no hazardous materials sites within the project site. Therefore, excavation and earth moving activities during construction are not anticipated to expose construction workers and/or the general public to unusual or excessive risks related to contaminated soils. However, should any previously undiscovered chemicals of concern be found during construction of the project, including excavation or earth moving activities, humans could be exposed to hazardous materials, which would be a significant impact. Mitigation would require that protocols for the evaluation of potentially hazardous materials be followed in the event that these materials are encountered during project construction. Therefore, impacts related to the exposure of human to hazardous materials would be reduced to a less-than-significant level.

The former Union Pacific Railroad (UPRR) yard is located approximately 0.5 miles to the north of the project site. Groundwater at the site, known as the South Plume, is contaminated due to past releases of hazards materials on the site. There is no known groundwater contamination existing on the project site. However, dewatering during construction activities could result in the movement of the South Plume. If groundwater was actively pumped from the site for construction and operation, the South Plume could move towards the project site, potentially exposing humans to contaminated groundwater, which would be a significant impact. Mitigation would require the implementation of a dewatering regime detailed in a subdrain plan. The subdrain plan would use a passive dewatering system, including, but not limited to, a series of subdrains, sumps, and pumps, to prevent any influence on the movement or extent of the existing South Plume. As a result, impacts related to the exposure of humans to contaminated groundwater would be reduced to a less-than-significant level.

Significant and Unavoidable Environmental Effects

Pursuant to CEQA Guidelines Section 15123(b)(1), an EIR must summarize the impacts and mitigation measures associated with a proposed project, as well as any significant impacts following mitigation. This information is detailed in this EIR in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, and is summarized in **Table S-2** at the end of this chapter.

There are no environmental impacts resulting from the proposed project which cannot be avoided or reduced to a less-than-significant level with the implementation of feasible mitigation measures.

Alternatives to the Proposed Project

CEQA Guidelines Section 15126.6 requires that an EIR must present and consider a reasonable range of alternatives to the proposed project. These alternatives should be able to feasibly achieve the majority of the basic objectives of the project while avoiding or substantially lessening one or more of the significant effects of the project. The feasibility of an alternative is determined by the lead agency and is evaluated based on a variety of factors, which may include site suitability,

economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site acquisition and control.

The alternatives considered within this EIR are summarized below. Of the alternatives considered for the Tower 301 project, the use of an alternative site was considered but rejected, as no other parcel of sufficient size to accommodate the proposed project is controlled by the project applicant or the City within the CBD. Therefore, the ability of the applicant to purchase and develop the project at another site is considered speculative. No other alternatives were found to be facially infeasible or worthy of dismissal prior to further consideration.

As discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, no environmental impacts would result from the Tower 301 project which could not eliminated or mitigated to less-than-significant levels. Therefore, the range of alternatives considered within this EIR evaluates how specific environmental impacts would differ in severity compared to those associated with the proposed project. There alternatives considered in this EIR include:

- Alternative 1: No Project/No Development Alternative
- Alternative 2: No Project/Existing Zoning Alternative
- Alternative 3: Reduced Intensity Alternative

Alternative 1: No Project/No Build Alternative

Under the No Project/No Build Alternative (Alternative 1), as required by CEQA Guidelines Section 15126.6(e), the Tower 301 project would not be developed, and the project site would remain undeveloped.

Alternative 2: No Project/Existing Zoning Alternative

Under the No Project/Existing Zoning Alternative (Alternative 2), the Tower 301 project would not be developed on the project site, and the project site would be developed in a manner consistent with the existing zoning designation for the project site. Based on applicable zoning, development on the project site, under the No Project/Existing Zoning Alternative, would occur in a manner consistent with the land use pattern along the Capitol Mall, which includes high rise development.

Development under the No Project/Existing Zoning Alternative would be similar in size and scale to the most recently completed development project along Capitol Mall, which is the Bank of the West Building, also known as Five Hundred Capitol Mall. This structure, completed in 2009, is 25 stories in height and includes approximately 445,000 square feet of building space. The development under the No Project/Existing Zoning Alternative would also be 25 stories in height and include 445,000 square feet of office space. In addition, the same amount of ground floor retail and amenities would be provided as the proposed project. Based on the square-footage, the alternative would include 1,115 parking spaces. The design of the structure would also retain the tower-over-podium composition similar to the proposed project, with a 10-story podium and a 15-story tower.

Alternative 3: Reduced Intensity Alternative

Under the Reduced Intensity Alternative (Alternative 3), the proposed project would be developed with the same types and square footage of uses proposed in the Tower 301 project, but would construct 475,670 square feet of office space, or approximately 60 percent of the proposed office in the proposed project. Overall, the structure would have 35 percent less building space than the proposed project. The structure that would be constructed under the Reduced Intensity Alternative would retain the tower-over-podium composition with a 10-story podium and 16-story tower. The amount of retail, restaurant, and residential space and the number of amenities would remain the same as in the proposed project.

Environmentally Superior Alternative

Pursuant to State CEQA Guidelines Section 15126.6, an EIR must identify the environmentally superior alternative from among the range of alternatives that are evaluated. Per Section 15126.6(e)(2) of the State CEQA Guidelines, if the designated environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives evaluated.

Of the alternatives considered within Chapter 6, Project Alternatives, the environmentally superior alternative for the Tower 301 project would be Alternative 1, the No Project/No Development Alternative. This alternative would avoid all potentially significant impacts and required mitigation associated with the proposed project. The environmentally superior alternative from among the other alternatives would be the No Project/Existing Zoning Alternative, which would result in the fewest adverse impacts. This alternative would require a shorter construction duration, could be anticipated to consume fewer resources and raw materials, and potentially have less substantial operational impacts than the Tower 301 project.

Summary Table

Table S-2 (Summary of Impacts and Mitigation Measures) is structured to correspond with the environmental issues discussed in Chapter 4. The table is arranged in four columns:

1. Environmental impacts (“Impact”)
2. Level of significance without mitigation (“Significance Before Mitigation”)
3. Mitigation measures (“Mitigation Measure”)
4. Level of significance following implementation of mitigation measures (“Significance After Mitigation”)

If an impact is determined to be significant or potentially significant, mitigation measures are identified to reduce the effects of that impact, where appropriate. Multiple mitigation measures may be required to reduce the impact to a less-than-significant level. This EIR assumes compliance with all plans, policies, guidelines, and regulations relevant and applicable to the proposed project. These actions and the plans, policies, guidelines, and laws upon which they are based are discussed within the Regulatory Setting and applicable impact analysis of each issue area.

TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.1 Aesthetics, Light, and Glare			
Impact 4.1-1: The proposed project could substantially degrade the existing visual character or quality of public views of the site and its surroundings.	LTS	None required.	NA
Impact 4.1-2: The proposed project would create a new source of substantial light.	PS	**Mitigation Measure 4.1-2(a):** Exterior lighting included shall incorporate fixtures and light sources that focus light onsite to minimize spillover light.	LTS
		Mitigation Measure 4.1-2(b): The project applicant shall prepare and submit a conceptual signage and lighting design plan for review and approval by the City's Urban Design Manager. The City shall review and monitor the installation and testing of the lighting in order to ensure compliance with all City lighting regulations and these mitigation measures.	
		Mitigation Measure 4.1-2(c): Project lighting shall not cause more than two foot-candles of lighting intensity or direct glare from the light source at any residential property.	
Impact 4.1-3: The proposed project could create a new source of glare.	LTS	None required.	NA
Impact 4.1-4: The proposed project could contribute to substantial cumulative degradation of the existing visual character or quality in the vicinity.	LTS	None required.	NA
Impact 4.1-5: The proposed project could contribute to cumulative sources of substantial light in the area.	LTS	None required.	NA
Impact 4.1-6: The proposed project could contribute to cumulative sources of glare.	LTS	None required.	NA

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.2 Air Quality			
Impact 4.2-1: Implementation of the proposed project could conflict with or obstruct implementation of an applicable air quality plan.	LTS	None required.	NA
Impact 4.2-2: Implementation of the proposed project would result in a net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	PS	**Mitigation Measure 4.2-2(a):** The applicant shall require all construction plans to include the following required SMAQMD Basic Construction Emission Control Practices: • Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. • Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered. • Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. • Limit vehicle speeds on unpaved roads to 15 miles per hour. • Pave all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads shall be laid immediately after grading unless seeding or soil binders are used. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site. • Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment shall be checked by a certified mechanic and determine to be running in proper condition before it is operated.	LTS

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.2 Air Quality (cont.)			
		Mitigation Measure 4.2-2(b): The project applicant shall provide a plan for approval by the Sac Metro Air District that demonstrates the heavy-duty off-road vehicles (50 horsepower or more) to be used 8 hours or more during the construction project will achieve a project wide fleet-average 10 percent NOX reduction1 compared to the most recent California Air Resources Board (CARB) fleet average. The plan shall have two components: an initial report submitted before construction and a final report submitted at the completion. • Submit the initial report at least four (4) business days prior to construction activity using the Sac Metro Air District's Construction Mitigation Tool. • Provide project information and construction company information. • Include the equipment type, horsepower rating, engine model year, project hours of use, and CARB equipment identification number for each piece of equipment in the plan. Incorporate all owned, leased and subcontracted equipment to be used. • Submit the final report at the end of the job, phase, or calendar year, as pre-arranged with Sac Metro Air District staff and documented in the approval letter, to demonstrate continued project compliance.	
		Mitigation Measure 4.2-2(c): Prior to the issuance of a building permit, developers shall quantify the construction emissions of NO_X. The applicant shall require all construction plans to include the following SMAQMD off-site fee mitigation: • The project applicant shall pay into SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_X that exceed SMAQMD's daily emission threshold of 85 ppd. The project applicants shall coordinate with SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the applicable current SMAQMD Fee. The applicants shall keep track of actual equipment use and their NO_X emissions so that mitigation fees can be adjusted accordingly for payment to SMAQMD.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.2 Air Quality (cont.)			
Impact 4.2-3: Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations.	PS	**Mitigation Measure 4.2-3:** The contractor shall utilize one of the following strategies to reduce the cancer risk related to TAC construction emissions to no greater than 10 people in one million. • Use Tier 4 engines on all construction equipment; or • Use Tier 3 engines equipped with Level 3 Diesel Particulate Filters (DPF) on all construction equipment; or • Use a combination of Tier 4 engines and Tier 3 engines equipped with Level 3 Diesel Particulate Filters (DPF) on all construction equipment; or • Use a combination of technological solutions to ensure that construction-related emissions do not exceed a cancer risk of 10 people in one million.	LTS
Impact 4.2-4: Implementation of the proposed project, in conjunction with other planned projects, could result in a cumulative net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	LTS	None required.	NA
Impact 4.2-5: Implementation of the proposed project, in conjunction with other planned projects, could cumulatively expose sensitive receptors to substantial pollutant concentrations.	LTS	None required.	NA
4.3 Biological Resources			
Impact 4.3-1: Implementation of the proposed project could impact nesting special-status bird species, migratory birds, and raptors, including grasshopper sparrow, burrowing owl, Swainson's hawk, and white-tailed kite.	S	**Mitigation Measure 4.3-1:** a) Vegetation clearing operations, including initial grading and tree removal, shall occur outside of the nesting season that encompasses all birds (September 16 through January 31), to the extent feasible. If vegetation removal begins during the nesting season (February 1 to September 15), a qualified biologist shall conduct a preconstruction survey for active nests. The preconstruction survey shall be conducted within 5 days prior to commencement of ground disturbing activities. If the preconstruction survey shows that there is no evidence of active nests, then a letter report shall be submitted to the project applicant and the City for their records within 14 days of the survey and no additional measures are required. If construction does not commence within 5 days of the preconstruction survey, or halts for more than 5 days, an additional preconstruction survey is required.	LTS

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3 Biological Resources (cont.)			
Impact 4.3-1 (cont.)		b) If any active nests are located within the project site, an appropriate buffer zone shall be established around the nests, as determined by the biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged or the nest is determined to no longer be active. Buffer zones are typically 50 to 100 feet for migratory bird nests and 250 to 500 feet for raptor nests (excluding Swainson's hawk). If active nests are found within the vicinity of the construction areas, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist may reduce the buffer depending on the species and daily monitoring would be required to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied. A letter report documenting the monitoring activities shall be submitted to the project applicant and the City for their records within 14 days following the final monitoring event.	
		Additional Measures for Burrowing Owl	
		c) Due to the size of the project site, a single take avoidance survey shall be conducted between 14 days and 30 days prior to commencement of construction activities, in accordance with Appendix D of the CDFW's 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report). The survey area should include an approximately 500-foot (150-meter) buffer around the project site, where access is permitted. If the survey is negative, then a letter report documenting the results of the survey shall be provided to the project applicant and the City for their records within 14 days of the survey, and no additional mitigation is required.	
		d) If active burrows are observed within 500 feet of the project site, an impact assessment shall be prepared and submitted to the CDFW, in accordance with the 2012 Staff Report. If it is determined that project activities may result in impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat, the project applicant shall delay commencement of construction activities until the biologist determines that the burrowing owls have fledged and the burrow is no longer occupied. If this is infeasible, the project applicant shall consult with the CDFW and develop a detailed mitigation plan such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced. The mitigation plan shall be based on the requirements set forth in Appendix F of the 2012 Staff Report. No construction can commence until the CDFW has approved the mitigation plan.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3 Biological Resources (cont.)			
Impact 4.3-1 (cont.)		***Additional Measures for Swainson's Hawk*** e) If construction activities are anticipated to commence during the Swainson's hawk nesting season (March 1 to September 15), a qualified biologist shall conduct a minimum of two preconstruction surveys during the recommended survey periods in accordance with the 2008 or more recent update to the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. All potential nest trees within 0.25 miles of the proposed project footprint shall be visually examined for potential Swainson's hawk nests, as accessible. If no active Swainson's hawk nests are identified on or within 0.25-mile of the project site, a letter report documenting the survey methodology and findings shall be submitted to the project applicant and the City for their files within 14 days of the final survey and no additional mitigation measures are required.	
		f) If active Swainson's hawk nests are found within 0.25 miles of construction activities, a survey report shall be submitted to the CDFW, and an avoidance and minimization plan shall be developed for approval by the CDFW prior to the start of construction. The avoidance plan shall identify measures to minimize impacts to the active Swainson's hawk nest depending on the exact location of the nest. These measures may include, but are not limited to: i. Conducting a Worker Awareness Training Program prior to the start of construction; ii. Establishing a buffer zone and work schedule to avoid impacting the nest during critical periods. If possible, no work will occur within 200 yards of the nest while it is in active use. If work will occur within 200 yards of the nest, then construction will be monitored by a qualified biologist to ensure that no work occurs within 50 yards of the nest during incubation or within ten days after hatching; iii. Having a biological monitor conduct regular monitoring of the nest during construction activities; and iv. Allowing the biologist to halt construction activities until the CDFW is consulted if the biologist determines that the construction activities are disturbing the nest.	
Impact 4.3-2: Implementation of the proposed project could impact western pond turtle.	S	**Mitigation Measure 4.3-2:** a) A qualified biologist shall conduct a preconstruction survey within 5 days prior to commencement of materials staging or ground disturbing activities. If the preconstruction survey shows that there is no evidence of western pond turtle, then a letter report shall be submitted to the project applicant and the City for their records within 14 days of the survey and no additional measures are required. If construction does not commence within 5 days of the preconstruction survey, or halts for more than 5 days, an additional preconstruction survey is required.	LTS
		b) If western pond turtles are observed, the biologist shall relocate the species offsite to similar habitat on public lands within ten miles of the project site. In addition, the biologist shall monitor all staging and initial grading activities. The relocation work and monitoring shall be documented in a letter report to the project applicant and the City for their records within 14 days of the final monitoring work.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.3 Biological Resources (cont.)			
Impact 4.3-3: Implementation of the proposed project could have a substantial adverse effect on state or federally protected wetlands.	LTS	None required.	NA
Impact 4.3-4: Implementation of the proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LTS	None required.	NA
Impact 4.3-5: Implementation of the proposed project, in combination with other development, could contribute to cumulative impacts on biological resources.	LTS	None required.	NA
4.4 Global Climate Change			
Impact 4.4-1: Implementation of the proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant on the environment.	LTS	None required.	NA
Impact 4.4-2: Implementation of the proposed project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	None required.	NA
4.5 Noise and Vibration			
Impact 4.5-1: Construction of the project would generate noise that could conflict with the City of Sacramento's noise standards.	LTS	None required.	NA

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.5 Noise and Vibration (cont.)			
Impact 4.5-2: Construction of the project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	LTS	None required.	NA
Impact 4.5-3: Operation of the project could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Sacramento noise standards.	LTS	None required.	NA
Impact 4.5-4: Operation of the project could introduce new stationary noise sources that could conflict with the City of Sacramento noise standards.	LTS	None required.	NA
Impact 4.5-5: Operation of the project could result in interior noise levels of 45 dBA L_{dn} or greater at nearby residential uses.	LTS	None required.	NA
Impact 4.5-6: Construction of the proposed project could expose existing and/or planned buildings, and persons within, to vibration that could disturb people and damage buildings.	LTS	None required.	NA
Impact 4.5-7: The project could result in exposure of people to cumulative increases in construction noise levels.	LTS	None required.	NA
Impact 4.5-8: The proposed project could contribute to cumulative increases in traffic noise levels.	LTS	None required.	NA

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.6 Transportation			
Impact 4.6-1: The proposed project could worsen conditions at intersections in the City of Sacramento.	LTS	None required.	NA
Impact 4.6-2: The proposed project could worsen conditions at freeway off-ramps in the study area.	LTS	None required.	NA
Impact 4.6-3: The proposed project could adversely affect public transit operations.	LTS	None required.	NA
Impact 4.6-4: The proposed project could fail to adequately provide access to transit.	LTS	None required.	NA
Impact 4.6-5: The proposed project could adversely affect existing or planned bicycle facilities or fail to provide for access by bicycle.	LTS	None required.	NA
Impact 4.6-6: The proposed project would adversely affect existing or planned pedestrian facilities or fail to provide for access for pedestrians.	PS	**Mitigation Measure 4.6-6:** Construct a dedicated eastbound left-turn pocket, with 180 feet of storage, at the Capitol Mall/4th Street intersection, and modify and retime the traffic signal at the Capitol Mall/4th Street intersection to include a protected eastbound left-turn phase.	LTS
Impact 4.6-7: The proposed project would cause construction-related traffic impacts.	PS	**Mitigation Measure 4.6-7:** i. Before issuance of any demolition or building permits for any phase of the project, the project applicant shall prepare a detailed Construction Traffic Management Plan that will be subject to review and approval by the City Department of Public Works, in consultation with affected transit providers, and local emergency service providers including the City of Sacramento Fire and Police departments. The plan shall ensure that acceptable operating conditions on local roadways are maintained. At a minimum, the plan shall include: o The number of truck trips, time, and day of street closures o Time of day of arrival and departure of trucks o Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting o Provision of a truck circulation pattern	LTS

LTS = less than significant; NA = Not applicable; NI = no impact; PS = potentially significant; SU = significant and unavoidable.

TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.6 Transportation (cont.)			
Impact 4.6-7 (cont.)		○ Identification of detour routes and signing plan for street closures ○ Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas) ○ Maintain safe and efficient access routes for emergency vehicles and transit ○ Manual traffic control when necessary ○ Proper advance warning and posted signage concerning street/lane closures ○ Provisions for pedestrian and bicycle safety A copy of the approved construction traffic management plan shall be submitted to local emergency response agencies and transit providers, and these agencies shall be notified at least 30 days before the commencement of construction that would partially or fully obstruct roadways. ii. The project applicant, in coordination with the City of Sacramento, Regional Transit, and other transit providers within the project vicinity and subject to their approval, shall identify temporary bus stop locations and cause ADA-compliant replacement bus stop facilities to be constructed in place of any bus stops that need to be temporarily closed during project construction. The relocation of bus stops may have a secondary impact related to the loss/relocation of a small number of on-street parking spaces and/or loading zones. This secondary impact would not be significant.	
Impact 4.6-8: The proposed project would worsen cumulative conditions at intersections in the City of Sacramento.	PS	**Mitigation Measure 4.6-8:** The project applicant shall make a fair-share contribution to the City of Sacramento for the installation of a traffic signal at the N Street/4th Street intersection when warranted, and to restripe the intersection to include dedicated eastbound and westbound left-turn pockets.	LTS
Impact 4.6-9: The proposed project would worsen cumulative conditions at freeway off-ramps in the study area.	PS	**Mitigation Measure 4.6-9:** Pay fair share contribution to the I-5 Freeway Subregional Corridor Mitigation Program.	LTS
Impact 4.6-10: The proposed project would adversely affect cumulative public transit operations.	PS	**Mitigation Measure 4.6-10(a):** Implement Mitigation Measure 4.6-6 - Construct a dedicated eastbound left-turn pocket at the Capitol Mall/4th Street intersection, with 180 feet of storage, and modify and retime the traffic signal at the Capitol Mall/4th Street intersection to include a protected eastbound left-turn phase.	LTS
		Mitigation Measure 4.6-10(b): • Restripe the northbound and southbound approaches to the Capitol Mall/4th Street intersection to include dedicated left-turn lanes and one shared through/right lane. • Restripe the northbound approach to the L Street/4th Street intersection to include dual left-turn lanes.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
4.6 Transportation (cont.)			
Impact 4.6-11: The proposed project could fail to adequately provide access to transit under cumulative conditions.	LTS	None required.	NA
Impact 4.6-12: The proposed project could adversely affect existing or planned bicycle facilities or fail to provide for access by bicycle under cumulative conditions.	LTS	None required.	NA
Impact 4.6-13: The proposed project would adversely affect existing or planned pedestrian facilities or fail to provide for access for pedestrians under cumulative conditions.	PS	**Mitigation Measure 4.6-13:** Implement Mitigation Measure 4.6-6 - Construct a dedicated eastbound left-turn pocket at the Capitol Mall/ 4th Street intersection, with 180 feet of storage, and modify and retime the traffic signal at the Capitol Mall/ 4th Street intersection to include a protected eastbound left-turn phase.	LTS
Impact 4.6-14: The proposed project could cause construction-related traffic impacts under cumulative conditions.	LTS	None required.	NA

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Cultural Resources			
The proposed project could cause a substantial adverse change in the significance of an archaeological resource as pursuant to § 15064.5.	PS	**Mitigation Measure CUL-1:** **Archaeological Research Design and Treatment Plan**. Prior to submittal of a building permit or grading application to the City of Sacramento, the project applicant shall retain a Secretary of the Interior-qualified archaeologist to prepare and implement an Archaeological Resources Design and Treatment Plan (ARDTP). The ARDTP shall include a pre-construction preliminary archaeological testing program for previously undisturbed portions of the project area. The ARDTP shall identify the types of expected archaeological materials that may be encountered in the project area, the testing methods to be used to identify potential feature or site boundaries and constituents, and the locations recommended for testing. the purpose of the testing program will be to determine to the extent possible the presence or absence of archaeological materials in the proposed areas of disturbance for the project that have not been previously disturbed. If, during the testing, a significant archaeological feature or site is uncovered, the project applicant shall conduct a data recovery program as outlined in the ARDTP. The ARDTP will include how the data recovery program would preserve the significant information the archaeological resource is expected to contain. Treatment would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of targeting the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The ARDTP shall include provisions for analysis of data in a regional context; reporting of results; curation of artifacts and data at a local facility acceptable to the City; and dissemination of final confidential reports to the North Central Information Center of the California Historical Resources Information System and the City.	LTS
The proposed project could disturb any human remains, including those interred outside of formal cemeteries.	PS	**Mitigation Measure CUL-2:** **Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.** If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the City the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]). If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains. If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.	LTS

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Cultural Resources (cont.)			
The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC § 21074.	PS	**Mitigation Measure CUL-3:** **Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities.** The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, as well as culturally affiliated Native American tribes. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.	LTS
		Mitigation Measure CUL-4: In the Event that Cultural Resources or Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources. If cultural resources or tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including: • Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. • Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project site to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Cultural Resources (cont.)			
		Mitigation Measure CUL-4 (Cont.): • Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified. • If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes. • The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area." If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources: • Each resource will be evaluated for California Register of Historical Resources- (California Register) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable. If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the California Register, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.	

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Cultural Resources (cont.)			
		Mitigation Measure CUL-4 (Cont.): Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure. If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached: • Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. • Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following: – Protect the cultural character and integrity of the resource. – Protect the traditional use of the resource. – Protect the confidentiality of the resource. – Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places. – Protect the resource.	
Geology, Soils, and Seismicity			
The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic hazards.	PS	**Mitigation Measure GEO-1:** **Geotechnical Investigation**. Prior to issuance of a building permit, the project applicant shall conduct a geotechnical investigation of the project site to determine the potential for ground rupture, earth shaking, and liquefaction due to seismic events, as well as expansive soils problems. As required by the City, recommendations identified in the geotechnical report for the proposed development shall be implemented.	LTS

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TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
Hazards			
The proposed project could expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities.	PS	**Mitigation Measure HAZ-1:** If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities work shall stop in the area of potential contamination, and the type and extent of contamination shall be identified by a qualified professional. The qualified professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, summary of anticipated contaminants and contaminant concentrations, and recommendations for appropriate handling and disposal. Site preparation or construction activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency.	LTS
The proposed project could expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.	PS	**Mitigation Measure HAZ-2:** Construction and operation of the Proposed project shall implement a dewatering regime detailed in subdrain plan. The subdrain plan shall use a passive dewatering system, including, but not limited to, a series of subdrains, sumps, and pumps, to prevent any influence on the movement or extent of the existing South Plume. The passive dewatering system and subdrain plan shall be written, managed, and updated by a qualified State licensed engineer.	LTS

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CHAPTER 1
Introduction

The CIM Group (applicant) proposes to develop the Towers 301 project, an office and mixed-use high-rise development on a previously developed and currently unutilized lot in downtown Sacramento. This Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines in order to disclose the potential environmental consequences of implementing the proposed project. As required under CEQA, the EIR evaluates and describes potentially significant environmental impacts, identifies mitigation measures to avoid or reduce the significance of potential impacts, and evaluates the comparative effects of potentially feasible alternatives to the proposed project.

1.1 Background

The project site, located at 301 Capitol Mall, encompasses a full city block in an area of the City that has been developed for a number of uses throughout the City's history. The most recent developed use on the project site was the Copley Press office and plant site, constructed in 1967-68. The Copley Press operated on the site until 1994, at which point the building on the site was vacated. In 2005, the City's Planning Commission approved entitlements for the Towers on Capitol Mall project (P04-221), a 53-story twin-tower high-rise structure, which was planned to include 1,800,000 square feet of mixed-use residential, hotel, and related development. Construction of the Towers on Capitol Mall project (P04-221) began in 2006 with the demolition of the Copley Press building. The project site was graded and excavated for subgrade levels at the proposed northwest and southeast tower locations, where numerous foundational piles were installed. Construction ceased during that phase of the Towers on Capitol Mall project (P04-221), and the project was never completed. The partially-excavated project site was fenced off and has remained unutilized. Tower 301, the current development application for redevelopment of the project site (P18-078), was submitted to the City by the CIM Group on November 16, 2018.

1.2 Purpose and Use of this EIR

CEQA requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document that identifies and evaluates potential environmental impacts of a project, recommends mitigation measures to lessen or eliminate significant adverse impacts, and examines feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the City and by any responsible agencies (as defined in CEQA) prior to a decision to approve, disapprove, or modify the proposed

project. This EIR has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811.

1.3 CEQA Environmental Review

1.3.1 Preliminary Project Evaluation

The State CEQA Guidelines define the role and standards of adequacy of an EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (State CEQA Guidelines section 15121[a]).

- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects 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 have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines section 15151).

State CEQA Guidelines section 15382 defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" Therefore, in identifying the significant impacts of the project this EIR describes the potential for the proposed project to result in substantial physical effects within the area affected by the project, and identifies mitigation measures that would avoid or reduce the magnitude of those effects. See Section 4.0, Introduction to the Analysis, for further description of the approach to analyzing environmental impacts and identifying mitigation measures presented in this EIR.

The California Court of Appeal has addressed the question of how to properly identify the "type" of EIR that should be prepared for a project. In noting that there are many different names for EIRs, the court stated that "courts strive to avoid attaching too much significance to titles in ascertaining whether a legally adequate EIR has been prepared for a particular project" (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal. App. 4th 1036). In *Treasure Island*, the Court restated its findings in *California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227, 271) that the "fact that this EIR is labeled a 'project' rather than a 'program' EIR matters little for purposes of its sufficiency as an informative document. 'The level of specificity of an EIR is determined by the nature of the project and the "rule of reason" [citation], rather than any semantic label accorded to the EIR.'"

To determine the need for an EIR, the City prepared an Initial Study Checklist, which is included with this EIR as **Appendix C**. The Initial Study Checklist evaluates potential environmental impacts from the proposed project, identifying potentially significant impacts that should be reviewed in the EIR. The Initial Study Checklist also identifies potential project impacts that would be less than significant or impacts for which the application of feasible mitigation would reduce the severity of those impacts to less-than-significant levels.

1.3.2 EIR Scoping

On December 19, 2019, the City issued a Notice of Preparation (NOP) of the Draft EIR to governmental agencies and organizations and persons interested in the project (included in **Appendix A**). The NOP review period ended on January 25, 2019. The NOP was distributed to governmental agencies, organizations, and persons interested in the proposed project along with notice to the general public. The City sent the NOP to agencies with statutory responsibilities in connection with the proposed project with the request for their input on the scope and content of the environmental information that should be addressed in the EIR.

The City of Sacramento received 12 written comment letters regarding the proposed project (included in **Appendix B**). Although many specific issues were mentioned in the NOP comment letters, the comments generally tended toward larger themes such as:

- Construction-related concerns including construction duration and phasing; noise; road closures, lane closures, and roadway detours; preparation of a construction traffic management plan; and dust;
- Potential transportation impacts to and interface with the multi-modal transportation network, including the pedestrian, bike, transit, and freeway systems;
- Potential impacts to bird species from the proposed structure and construction;
- Consideration of Native American outreach and consultation;
- Potential impacts to gas and electrical infrastructure and facilities;
- Provision of electrical infrastructure.

The scope of this EIR includes environmental issues determined to be potentially significant as determined through preparation of the Initial Study, included as Appendix C, the NOP, responses to the NOP, and discussions among the public, consulting staff, and the City of Sacramento. This process identified potentially significant impacts associated with the construction and/or operation of the proposed project in the following issue areas:

- Aesthetics, Light, and Glare;
- Air Quality;
- Biological Resources;
- Global Climate Change;

- Noise and Vibration; and
- Transportation and Circulation.

In accordance with CEQA this EIR evaluates the direct, indirect, and cumulative physical environmental impacts on the environment resulting from construction and operation of the proposed project in these issue areas.

The focus of the analyses in the EIR are on the impacts of the proposed project on the physical environment. Recently the California Supreme Court found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, the Supreme Court explained that an agency is only required to analyze the potential impact of such hazards on future residents if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore typically concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents.

Thus, with respect to such issues as geologic and seismic hazards, exposure to existing levels of air pollution and noise, and exposure to existing hazardous materials, this EIR does not address the effects of bringing a new population into an area where such hazards exist, because the project itself would not increase or otherwise affect the existing conditions that create those risks.

1.3.3 Public Review

The Draft EIR will be available for public review and comment as set forth in the Notice of Availability. During the review and comment period written comments (including email) regarding the Draft EIR may be submitted to the City at the address below:

Ron Bess, Environmental Planning Services
City of Sacramento, Community Development Department
300 Richards Boulevard, Third Floor
Sacramento, CA 95811
Email: rbess@cityofsacramento.org
Telephone: (916) 808-8272

The Draft EIR, Notice of Availability and other supporting documents, such as technical studies prepared by the City as part of the EIR process, are available for public review at the offices of the Community Development Department at 300 Richards Boulevard, Third Floor, Sacramento, California 95811, and on the City's website at http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.

1.3.4 Final EIR and EIR Certification

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on environmental issues addressed in the Draft EIR that are received within the specified review period. The responses

and any other revisions to the Draft EIR will be provided as a Final EIR. The Draft EIR and its Appendices, together with the Final EIR, will collectively constitute the EIR for the proposed project.

1.3.5 Mitigation Monitoring Plan

Throughout this EIR (including the initial study), mitigation measures have been identified and presented in language that will facilitate preparation of a mitigation monitoring plan (MMP). As required under CEQA, an MMP will be implemented following certification of the Final EIR for the proposed project and will identify the specific timing and roles and responsibilities for implementation of adopted mitigation measures.[1]

1.4 Subsequent Project Approvals

This EIR discloses the environmental effects of construction and operation of the proposed project pursuant to the requirements of the State CEQA Guidelines, as described in Chapter 2, Project Description. Discretionary approvals related to the proposed project may be considered at the same time as action to certify this EIR, or may take place incrementally over a period of time.

Use of this EIR to cover later project-related actions by the City or responsible agencies is addressed in PRC section 21166 and State CEQA Guidelines section 15162(a). Under those sections, if the proposed future actions are consistent with the proposed project as analyzed in this EIR, and would not create new significant or substantially more severe significant impacts that were not examined in this EIR, the later actions are considered to be within the scope of the EIR and no further review under CEQA is required. More specifically, State CEQA Guidelines section 15162(a) states:

> *When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:*
>
> 1. *Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
> 2. *Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
> 3. *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:*

[1] See State CEQA Guidelines, section 15097.

a. *The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*

b. *Significant effects previously examined will be substantially more severe than shown in the previous EIR;*

c. *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*

d. *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

To the extent appropriate and consistent with the requirements of CEQA and the State CEQA Guidelines, the City and responsible agencies would rely on this EIR in conjunction with its consideration of subsequent project-related actions.

1.5 Document Organization

This Draft EIR document is organized as follows:

Summary – This section summarizes the proposed project and the conclusions of the Draft EIR. A summary table is included and organized to allow the reader to easily identify potentially significant effects, proposed mitigation measures, and any residual environmental impacts after implementation of mitigation measures. A summary of the alternatives to the proposed project and the environmentally superior alternatives are also provided. The Summary also describes areas of controversy regarding the proposed project that are known to the City as of publication of this Draft EIR.

Chapter 1, Introduction – This chapter describes the purpose and organization of the EIR.

Chapter 2, Project Description – This chapter describes the proposed project. The description includes, with text and graphics, the location and boundaries of the proposed project, statements of objectives from the project applicant and the City, and a description of the proposed project's components and characteristics.

Chapter 3, Land Use, Population, Employment, and Housing – This chapter provides an overview of the land use and planning issues that may arise in connection with development of the proposed project. In addition, it describes employment conditions and trends in the City of Sacramento.

Chapter 4, Environmental Setting, Impacts, and Mitigation Measures – For each environmental issue, this chapter discusses the environmental and regulatory setting, the

methodology used, the detailed analysis of potential impacts (including direct, indirect, and cumulative impacts), and, if necessary, a discussion of potentially feasible mitigation measures.

Chapter 5, Other CEQA Required Considerations – This chapter discusses several issues required to be included in an EIR, including effects not found to be significant, significant and unavoidable impacts, significant irreversible environmental changes, the potential for the proposed project to cause urban decay, and the potential for the proposed project to induce urban growth and development.

Chapter 6, Project Alternatives – This chapter describes potentially feasible alternatives to the proposed project that may avoid or substantially reduce one or more significant impacts while attaining most of the basic objectives of the project, and evaluates the comparative environmental effects of the alternatives.

Chapter 7, List of Preparers and Persons Consulted – This chapter identifies the agency staff and consultants who prepared the EIR, and agencies or individuals consulted during preparation of the EIR.

Chapter 8, Acronyms and Abbreviations – This chapter lists the acronyms used in this Draft EIR in alphabetical order.

Chapter 9, References – This chapter lists all citations used throughout the Draft EIR.

Appendices – The appendices include environmental scoping information and technical reports and data used in the preparation of the Draft EIR. These documents are included on CD at the back of the Draft EIR.

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CHAPTER 2
Project Description

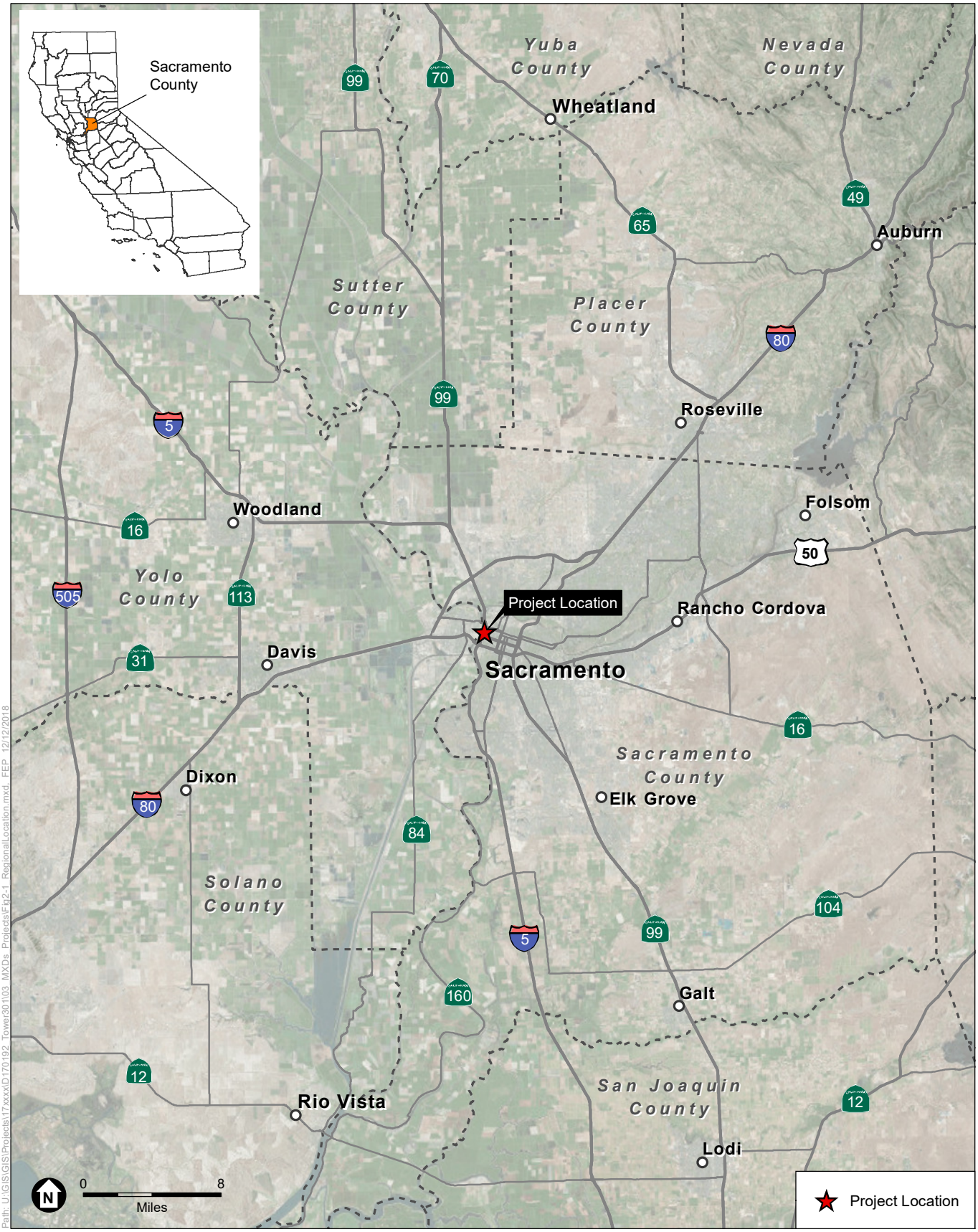
2.1 Introduction

This Draft EIR includes consideration of the components and characteristics of the proposed Tower 301 project and discretionary approvals required to implement it. The proposed project is described herein, including the project site; physical characteristics; operational characteristics including employment and similar characteristics; construction characteristics; and anticipated discretionary approvals by the City and other agencies.

2.2 Project Location

The project site is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Sacramento is a major transportation hub, the point of intersection of transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, Los Angeles to the south, and Oregon and the Pacific Northwest to the north. The City is bisected by major freeways including Interstate 5 (I-5) that traverses the state from north to south; Interstate 80, which provides an east-west connection between San Francisco and Reno; and U.S. Highway 50 which provides an east-west connection between Sacramento and South Lake Tahoe. Two railroads, the Union Pacific Railroad and the Burlington Northern Santa Fe Railway transect Sacramento. **Figure 2-1** shows the location of the project site in the Sacramento region.

The Tower 301 project site is generally bounded by 3rd Street to the west, 4th Street to the east, L Street to the north, and Capitol Mall to the south. **Figure 2-2** shows the project site within Sacramento's Central City. The project site is presently not in use but has been developed as a part of the City's downtown grid in the past and contains exposed piles from a previously approved project that was not completed (see **Figure 2-3**).

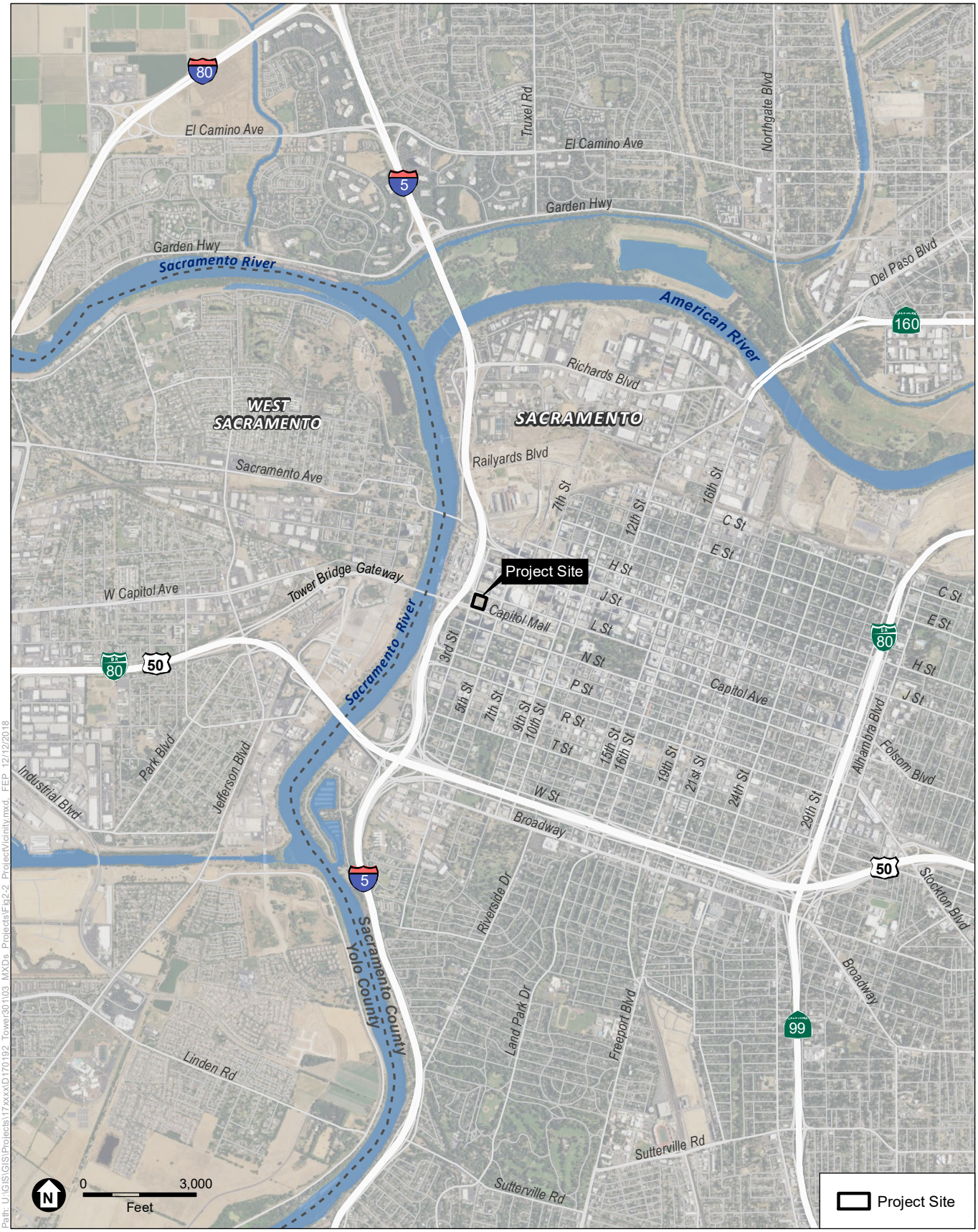


SOURCE: Esri, 2018; ESA, 2018

Tower 301

Figure 2-1
Regional Location

ESA



SOURCE: USDA, 2016; Esri, 2015; ESA, 2018

Tower 301

Figure 2-2
Project Vicinity

ESA

Path: U:\GIS\GIS\Projects\17xxxx\D170192_Tower301\03_MXDs_Projects\Fig2-3_ProjectSite.mxd FEP 12/12/2018

SOURCE: Google, 2017; ESA, 2018

Tower 301

Figure 2-3
Project Site

ESA

2.3 Project Objectives

CEQA Guidelines section 15124(b) requires that the project description include a statement of the objectives intended to be achieved by the project. The objectives describe the purpose of the project and are intended to assist the lead agency in developing a reasonable range of alternatives for consideration in the EIR, as well as assisting the decision makers in assessing the feasibility of mitigation measures and alternatives. The following are the objectives of the Tower 301 project.

2.3.1 Project Objectives

The following are the applicant's stated objectives for the proposed project:

1. Create a high-quality visual landmark that enhances and defines the Downtown skyline.
2. Provide a complimentary mix of office, retail, residential and entertainment uses to enhance the emergence of Downtown as a 24-hour urban center.
3. Engage the public realm by providing active uses and pedestrian friendly features along all street frontages.
4. Provide amenities that benefit residents of and visitors to the Central Business District (CBD).
5. Provide office space with a variety of floorplate sizes to target a broad range of office tenants, including government uses, private businesses, and other creative professionals.
6. Provide an urban housing option within the CBD.
7. Create a high-rise development that incorporates sustainable features into building design and operation.

2.4 Proposed Project

2.4.1 Project Site

Location

The Tower 301 project site consists of approximately 2.39 acres, encompassing a full city block in downtown Sacramento.[1] (see Figure 2-3) The project site is located on the block bounded by 3rd, L, and 4th streets and Capitol Mall.

Existing Conditions

General Plan and Zoning

The Tower 301 project site is designated as CBD on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram.

According to the 2035 General Plan, "[t]he Central Business District is Sacramento's most intensely developed area. The CBD includes a mixture of retail, office, governmental,

[1] The project site consists of Assessor's Parcels 006-0141-043.

entertainment and visitor-serving uses built on a formal framework of streets and park spaces laid out for the original Sutter Land Grant in the 1840s. The vision for the CBD is a vibrant downtown core that will continue to serve as the business, governmental, retail, and entertainment center for the city and the region. A significant element in the future CBD includes new residential uses. Increasing the residential population will add vitality to the CBD by extending the hours of activity and the built-in market for retail, services, and entertainment."

The project site is zoned C-3-SPD: CBD zone and Central City Special Planning District as defined in sections 17.216.800 through 17.216.880 and 17.444.010 through 17.44.180 of the Sacramento Planning and Development Code. The C-3-SPD zone is intended for the most intense residential, retail, commercial and office developments in the City and is the only classification which has no height limit, aside from 300-foot height limit imposed by the Capitol View Protection requirements (PDC section 17.216.860). Generally, office, retail, restaurant, residential, fitness, and theaters are permitted by right in the C-3 zone. An assembly use is allowed in the C-3 zone subject to the approval of a conditional use permit by the City Planning and Design Commission. Additional detail on the site zoning is provided in Chapter 3, Land Use, Population, Employment, and Housing.

Existing and Adjacent Uses

The project site is made up of a single parcel, which has been developed for different uses at different times in the past. At present, the project site is not in use but contains foundational elements from a previous development effort, the Towers on Capitol Mall project (P04-221). That project was approved in August of 2005, and construction on the site was started but never completed. As part of the previous Towers on Capitol Mall project (P04-221), the project site was excavated for the construction of subgrade levels and foundational piles were installed in the northwest and southeast quadrants of the project site. No further project elements were completed. The project site has remained closed to the public, with fencing surrounding the perimeter of the project site. The interior of project site has been subject to vegetative growth due to non-use.

The project site is located at the entrance to the Capitol Mall Corridor, which leads to the State Capitol. The predominant uses along the Capitol Mall are office, with some street-facing restaurant uses. Similar to the project site, the adjacent blocks to the north, south, and east are designated CBD in the 2035 General Plan and Central City Community Plan and zoned C-3-SPD. To the west the triangular strip west of 3rd Street is designated as Parks, and the larger vegetated area between the slip ramp and I-5 is designated as Public. Structures along the Capitol Mall vary in height from three floors (at the northeast corner of 4th Street and Capitol Mall) to 30 floors (on Capitol Mall between 4th Street and 5th Street). The 18-floor Westamerica Bank office building is located immediately south of the proposed project site along Capitol Mall. The tallest existing building along Capitol Mall is the Wells Fargo Center, which is 30 floors and 423 feet tall, located on the south side of the Capitol Mall at 4th Street. North of the project site, on L Street, is a parking garage with five levels above grade and one level below grade. A three-story office

building and a three-story parking-over-retail building are located east of the site, along 4th Street. There are no developed uses west of 3rd Street, between I Street and N Street.

Farther east of the proposed project site, there are additional office and commercial uses, including Downtown Commons and the Golden 1 Center.

2.4.2 Project Elements

Building Design

The proposed Tower 301 project would construct an approximately 557-foot-tall, 41-story high-rise building that would include office, residential, restaurant, and retail uses. The proposed structure would include a single, 31-story high-rise tower, atop a 10-story podium and a single subgrade level. **Figure 2-4** provides a rendering the proposed structure. Major components of the proposed project would include an office tower with penthouse levels, south-facing office lobby, publicly accessible view deck, internal parking levels, loft offices, residential units, north-facing residential lobby, upper and ground-floor retail. **Figure 2-5** shows the general distribution of uses across each level of the proposed structure. The location of the Tower on the podium and entrances to the project are shown in Figure 2-4. Ground level uses, including the main office lobby, residential lobby, retail, parking, vehicle accesses, utilities, and site exterior are shown in **Figure 2-6**. Plans for the proposed basement, podium, and tower levels are shown in **Figures 2-7 through 2-17**.

As is shown in Figures 2-6 through 2-17, the podium portion of the structure would be the approximate length and width of the parcel, spanning approximately 294 feet, from north/south, and approximately 317 feet east/west. The podium structure would be set back approximately 90 feet from the center of Capitol Mall and centered on the block (see **Figure 2-18**). The 31-story tower portion of structure would be situated along an east-west axis atop the podium, with an east-west length of approximately 267 feet and a north-south width of approximately 92 feet. The tower section of the structure would be set back 140 feet from the center of Capitol Mall, in compliance with requirements for the Capitol View Protection Area. The main pedestrian entry to the proposed Tower 301 building would be oriented toward Capitol Mall and centered on the block. The tower section of the building would be primarily dedicated to office uses and have a side-core configuration on the south side of the tower, with elevator and internal circulation areas on the south side of the building, placing the majority of the office space to the north (see **Figures 2-19, 2-20, and 2-21**). Elevator lobbies and circulation on each floor would be oriented toward the south and the Capitol Mall.

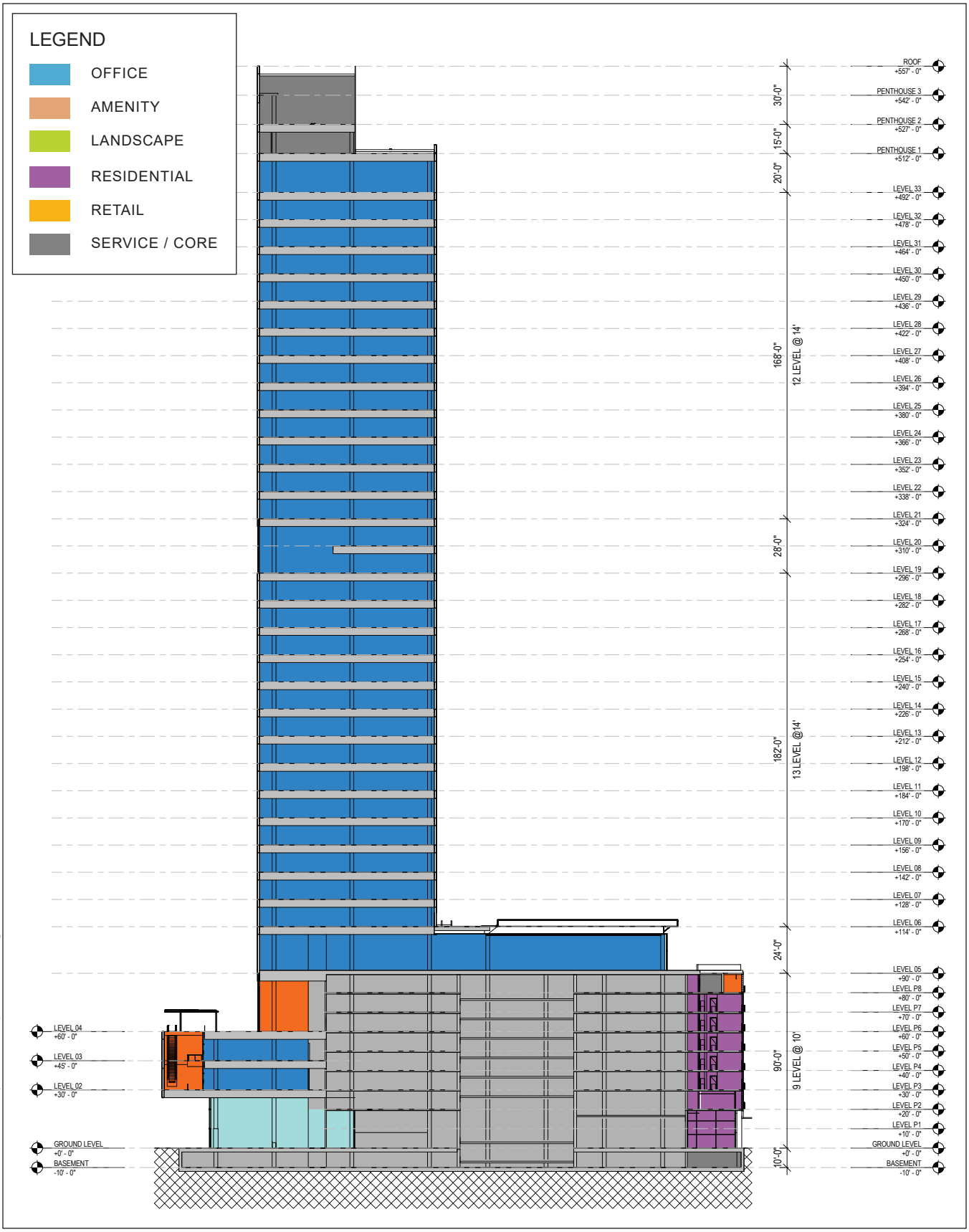
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-4
Rendering of the Proposed Towers on Capitol Mall Structure

ESA



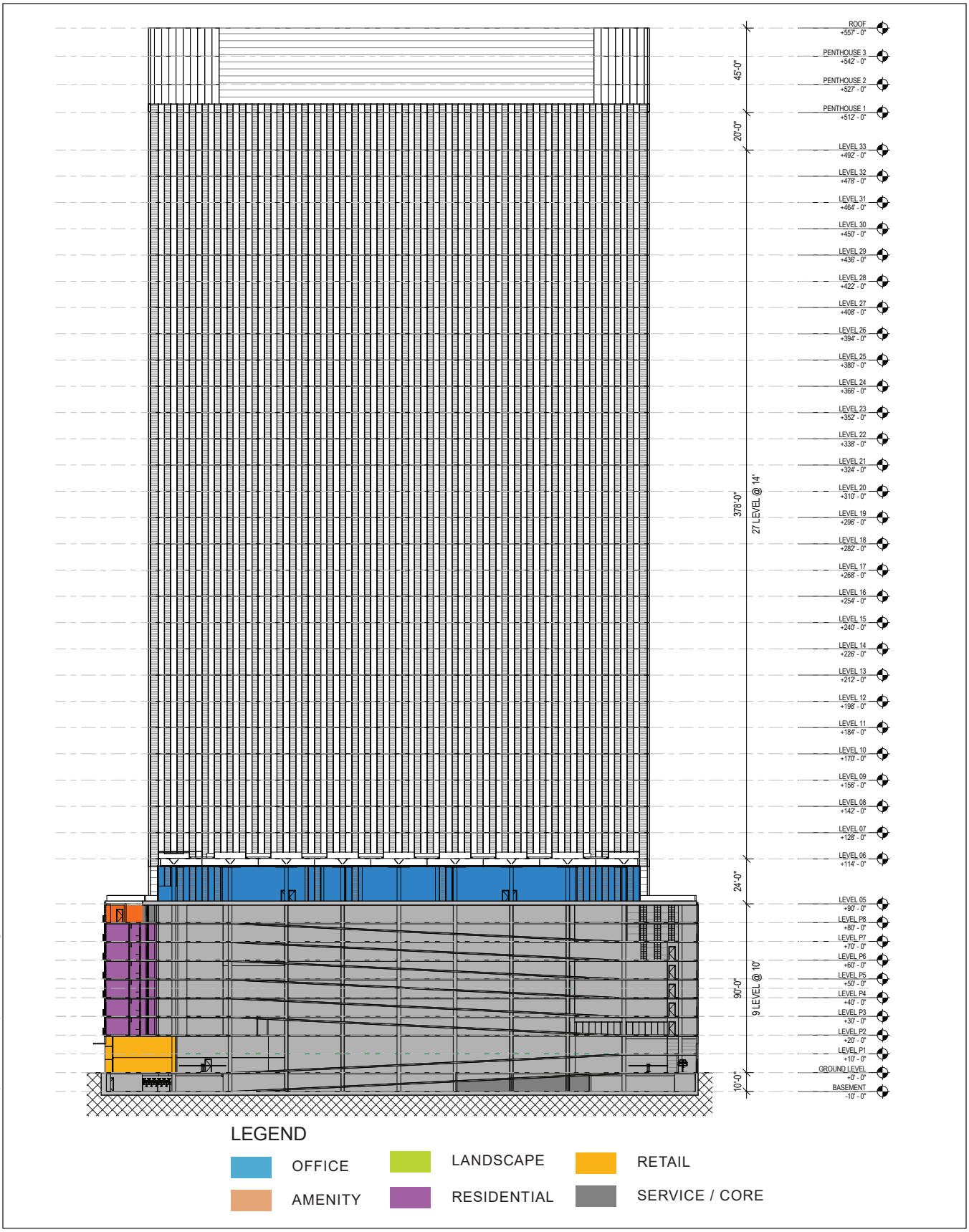
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-5a
Building Sections

ESA



SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

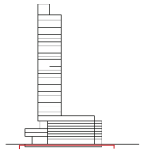
Figure 2-5b
Building Sections

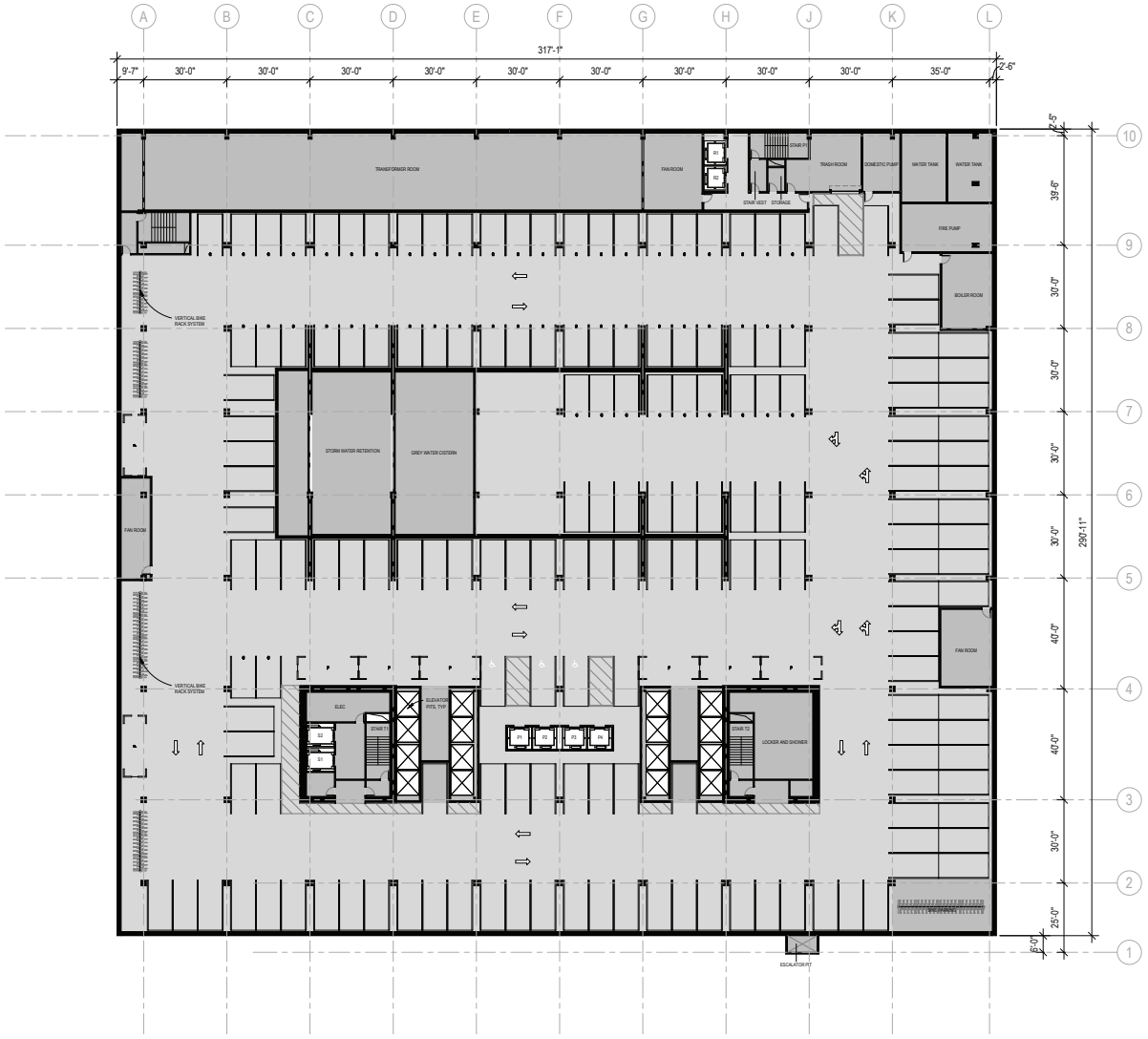
ESA

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-6
Ground Level Plan





LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

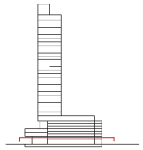
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-7
Basement Level Plan

ESA



LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

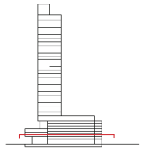
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

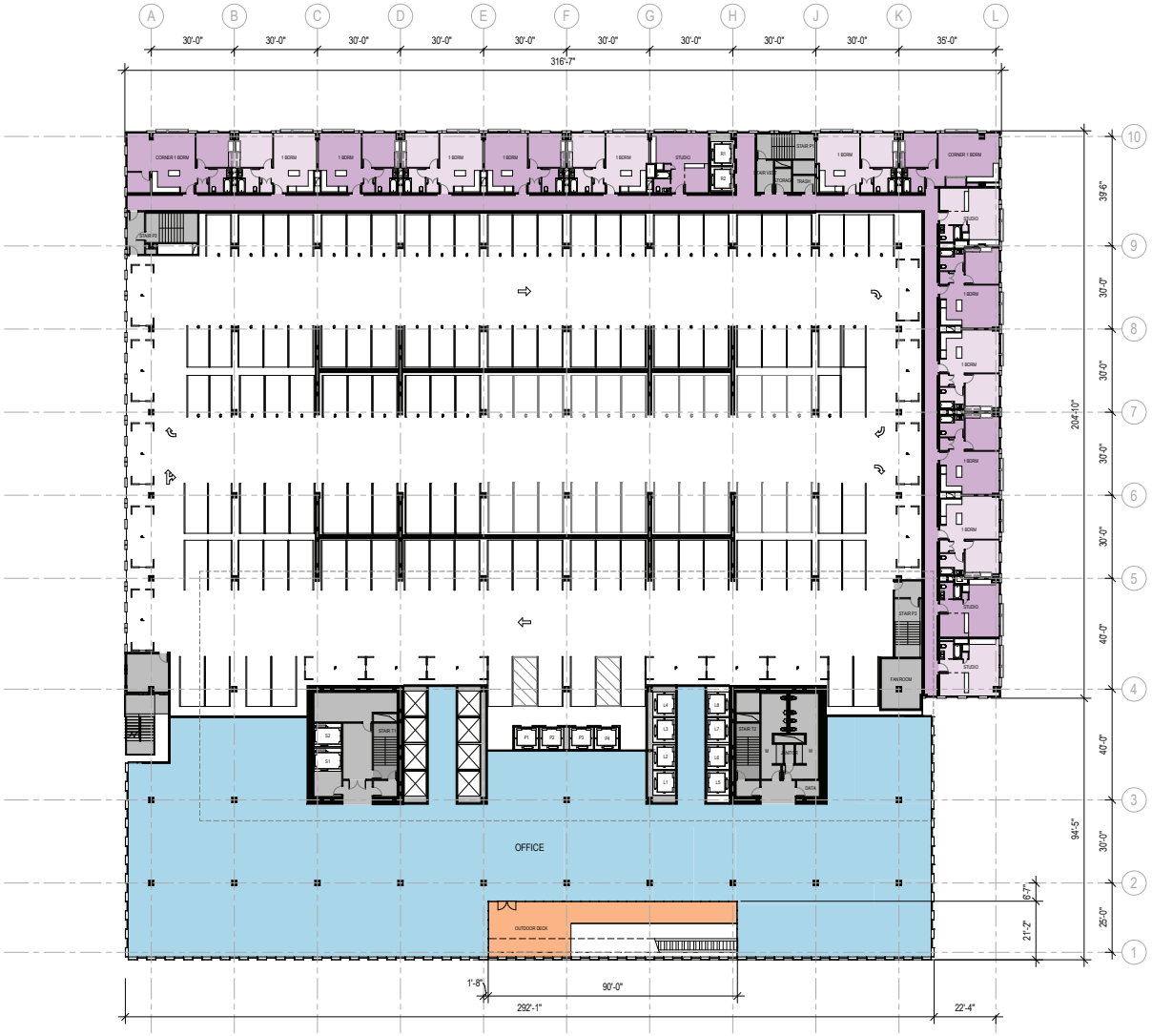
SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-8
Residential Level 01

ESA





LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

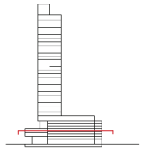
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

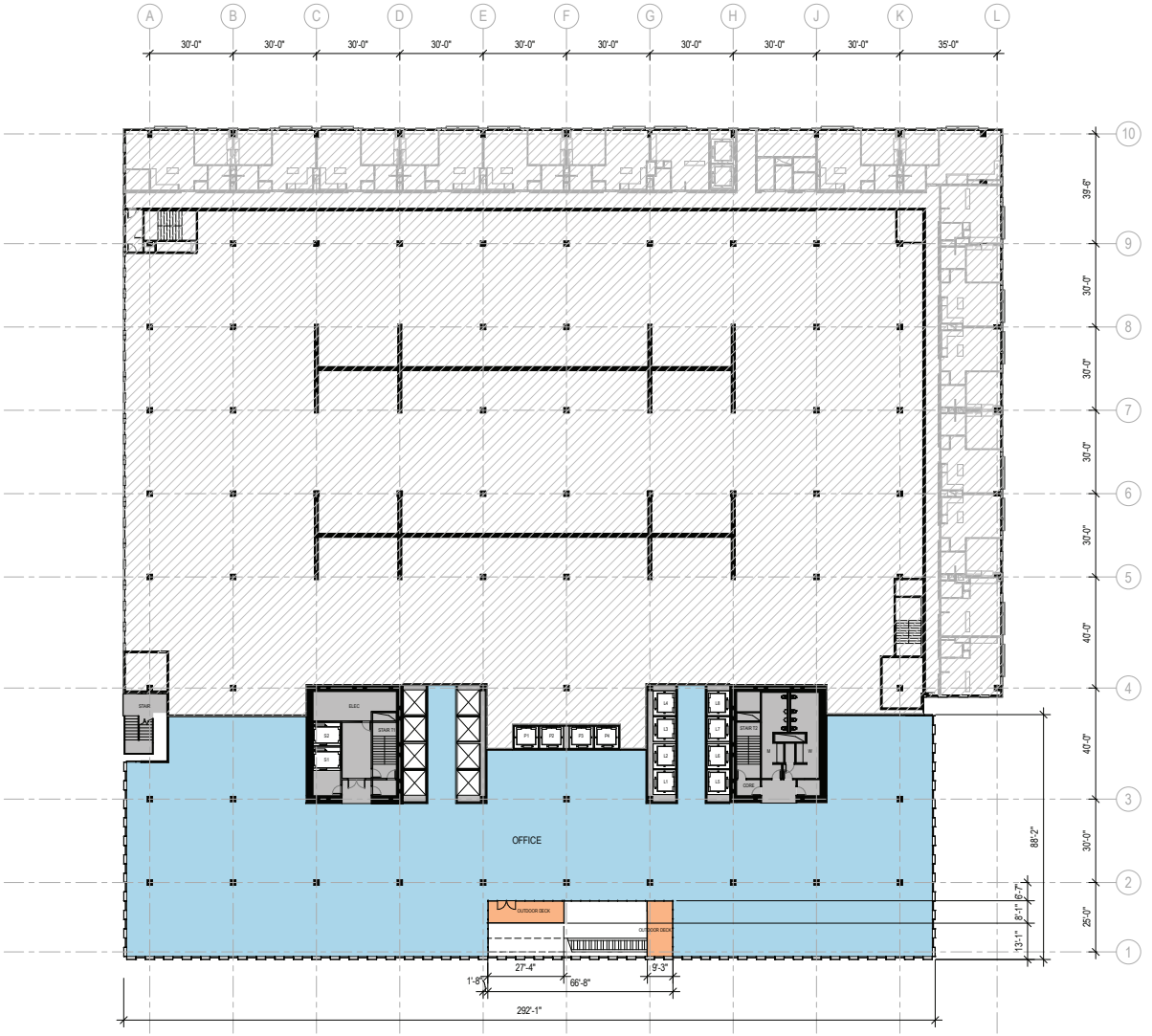
SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-9
Office Liner Level 02

ESA





LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

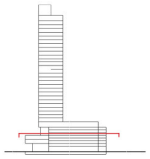
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-10
Office Liner Level 03

ESA



LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

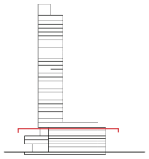
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-11
Podium Deck

ESA



LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

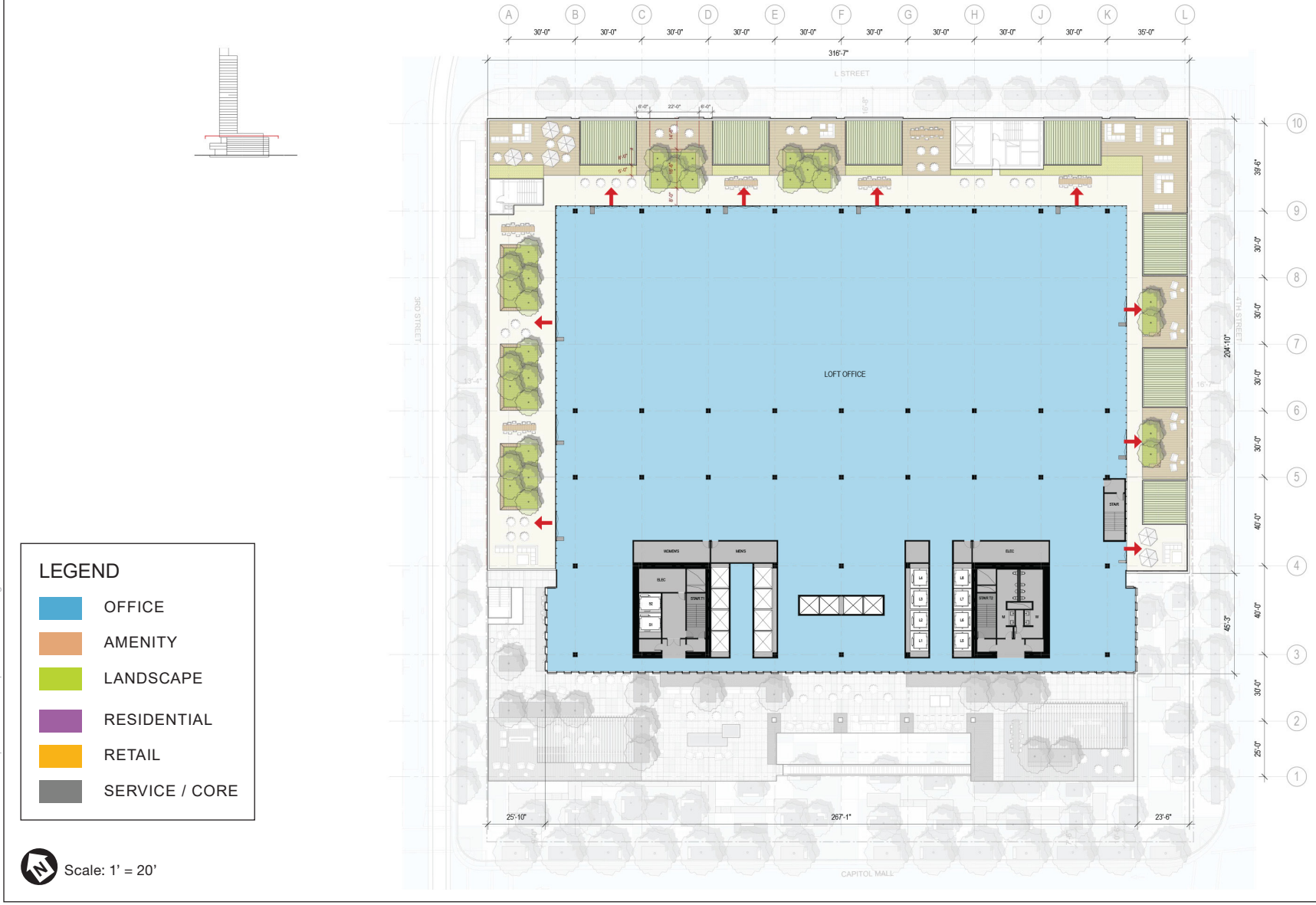
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-12
Residential Level 08

ESA



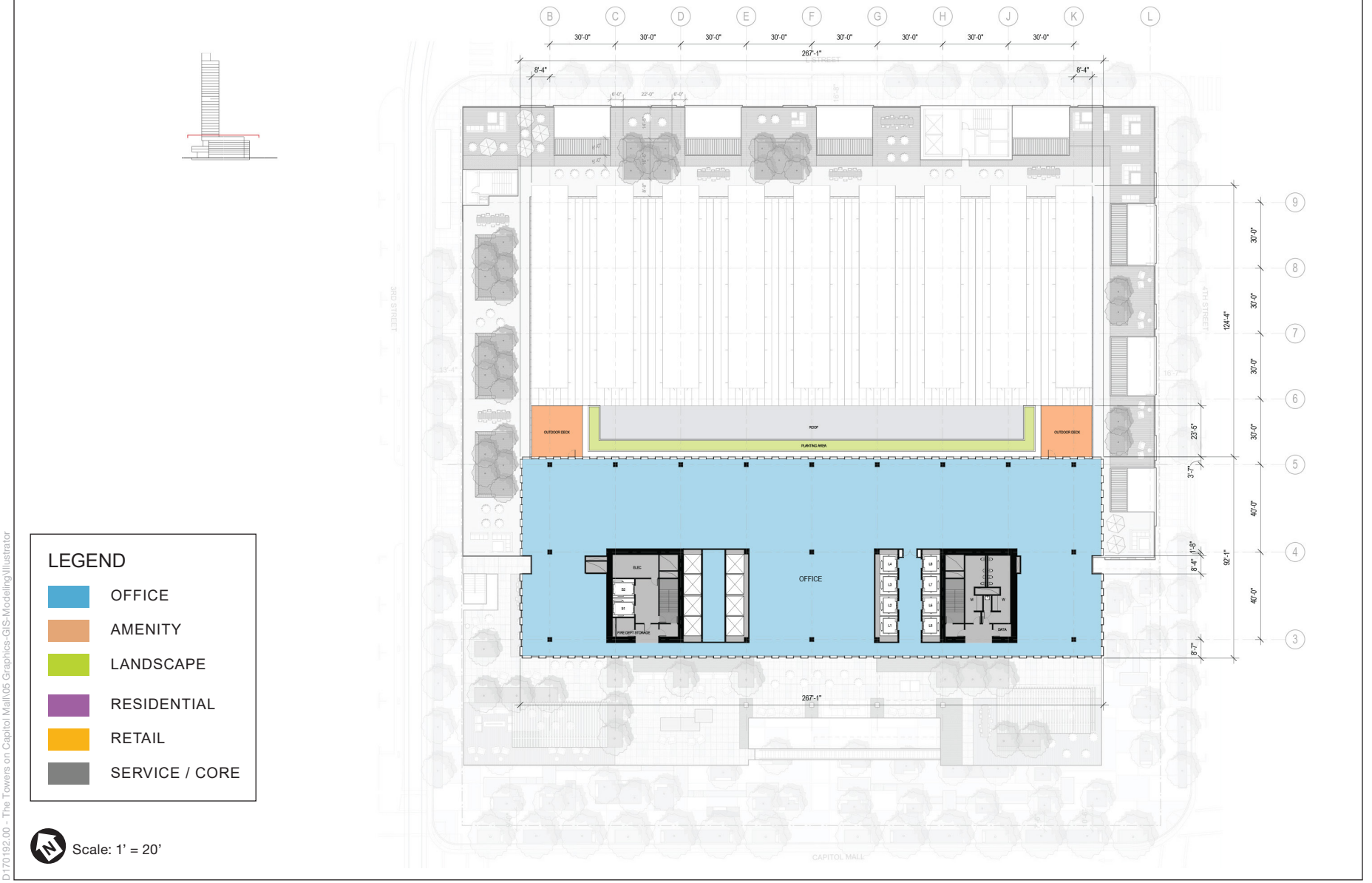
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-13
Office Loft Level 05

ESA



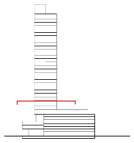
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

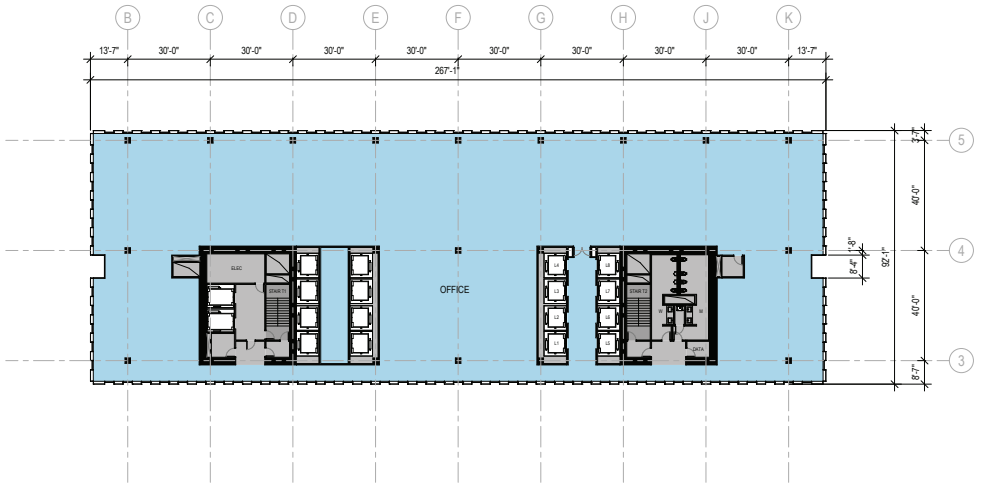
SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-14
Loft Roof Level

ESA





LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

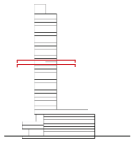
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

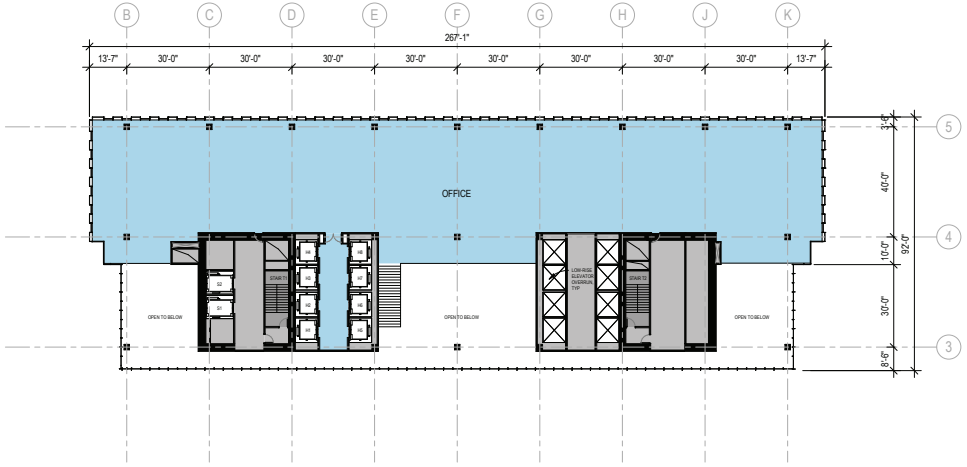
SOURCE: Skidmore, Owings & Merrill LLP, 2018

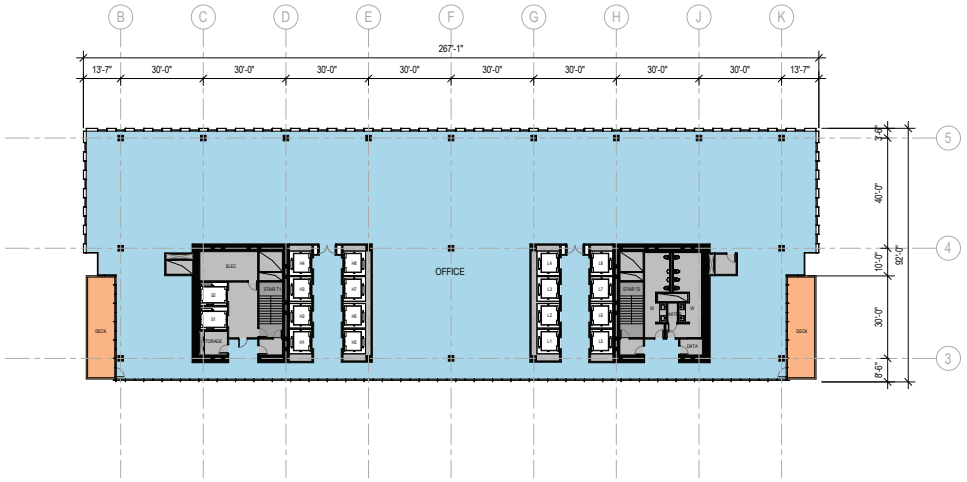
Tower 301

Figure 2-15
Typical Office Low Rise

ESA







LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

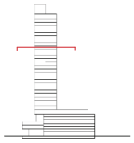
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

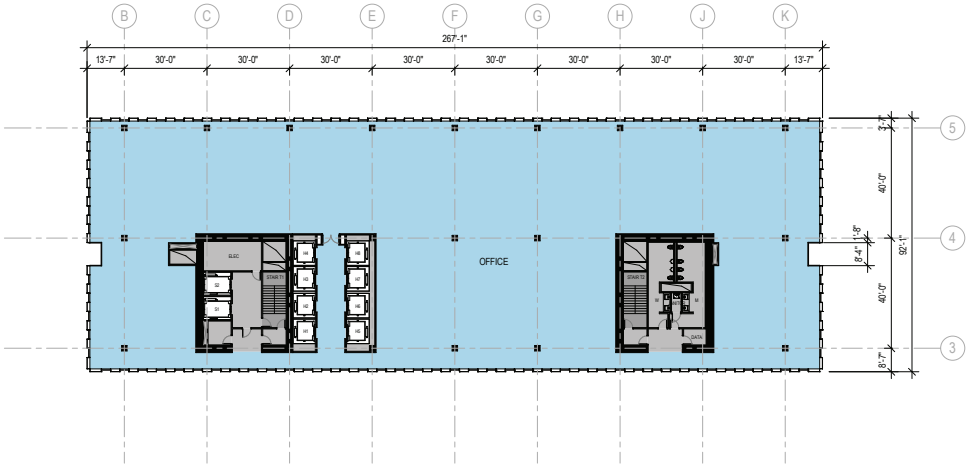
SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-16
Transfer Floors

ESA





LEGEND

- OFFICE
- AMENITY
- LANDSCAPE
- RESIDENTIAL
- RETAIL
- SERVICE / CORE

Scale: 1' = 20'

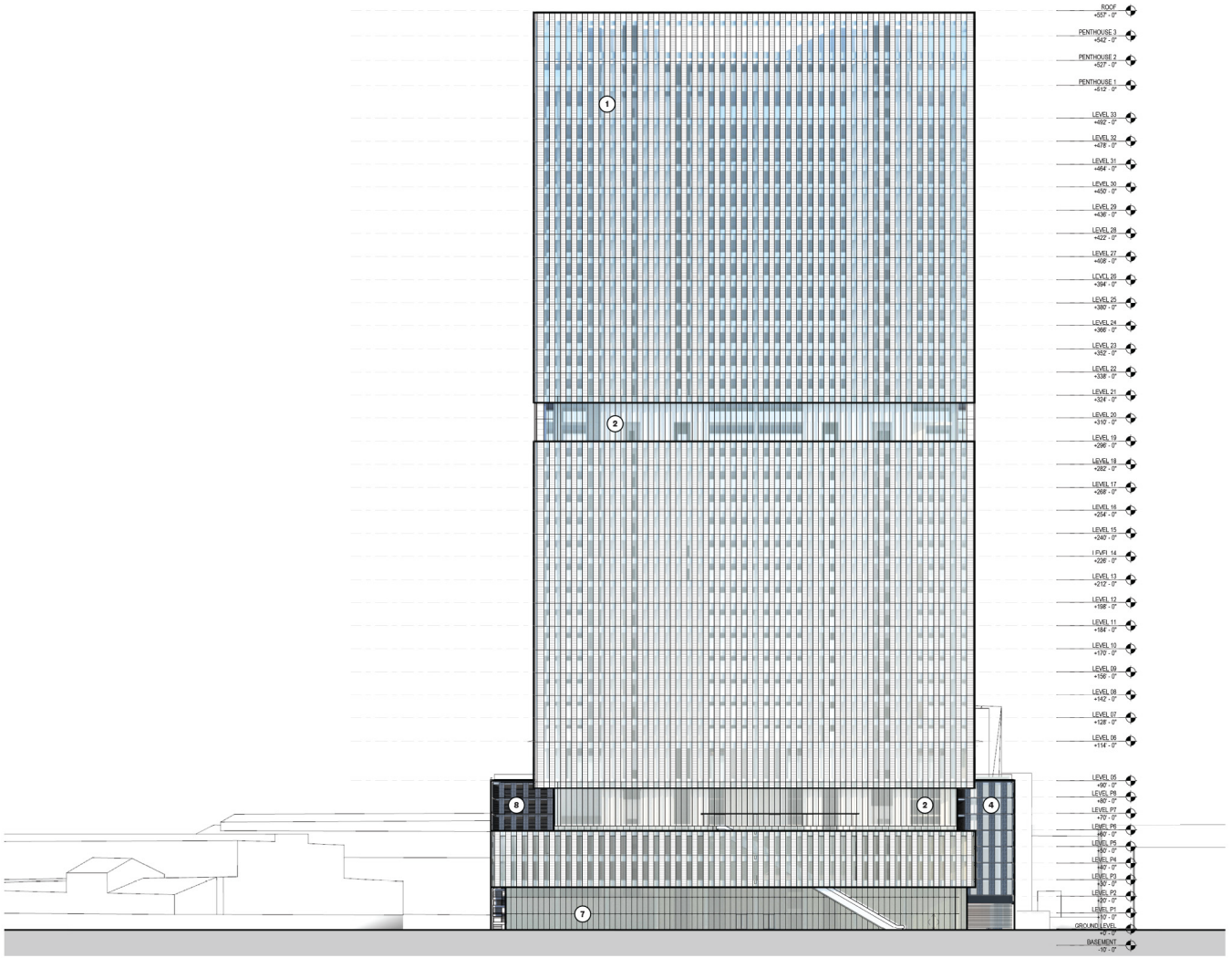
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-17
Typical Office High Rise

ESA



TYPICAL MATERIAL LEGEND

1	Tower Curtain Wall System	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Proud vertical modules to have custom ceramic frit pattern.
2	Amenity & Transfer level wall system	Transfer and Amenity levels. Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. Extruded aluminum mullion extensions on module with the tower wall define the exterior wall on these levels.
3	Liner Office-escalator courtyard	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. This will be a flush structural silicone glazed system on module with the Wall Type 1.
4	Residential window wall system	Custom floor to floor window wall system to be thermally broken. Aluminum and glass system to incorporate operable windows and doors for French balcony access. Architectural precast spandrel panel at structural deck edge. Solid panel will be articulated with face brick.
5	Retail storefront system	Custom glass and aluminum storefront system with integral narrow style glass doors.
6	Loft Office curtain wall system	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Glass to be IGU with low E coating. System to incorporate large size "Nana" operable panels to access outdoor terraces.
7	Lobby structural glazing system	Structural glass glazing system with vertical glass fin supports or tension cable system as required.
8	Garage wall system	Architectural precast spandrel panel at structural deck edge. Alternating open and solid panels spanning between spandrel panels. Solid areas will be double wythe, face brick wall in order to provide brick finish at interior and exterior of garage. Open areas will have planter at base, with SS tension cables at 4" o.c. to provide substrate for vine planting, and to provide fall protection. Entire assembly to be designed to resist vehicular impact per CBC.
9	Louver	Architectural performance louver with high performance finish to match curtain wall mullion finish.

Scale: 1' = 30'

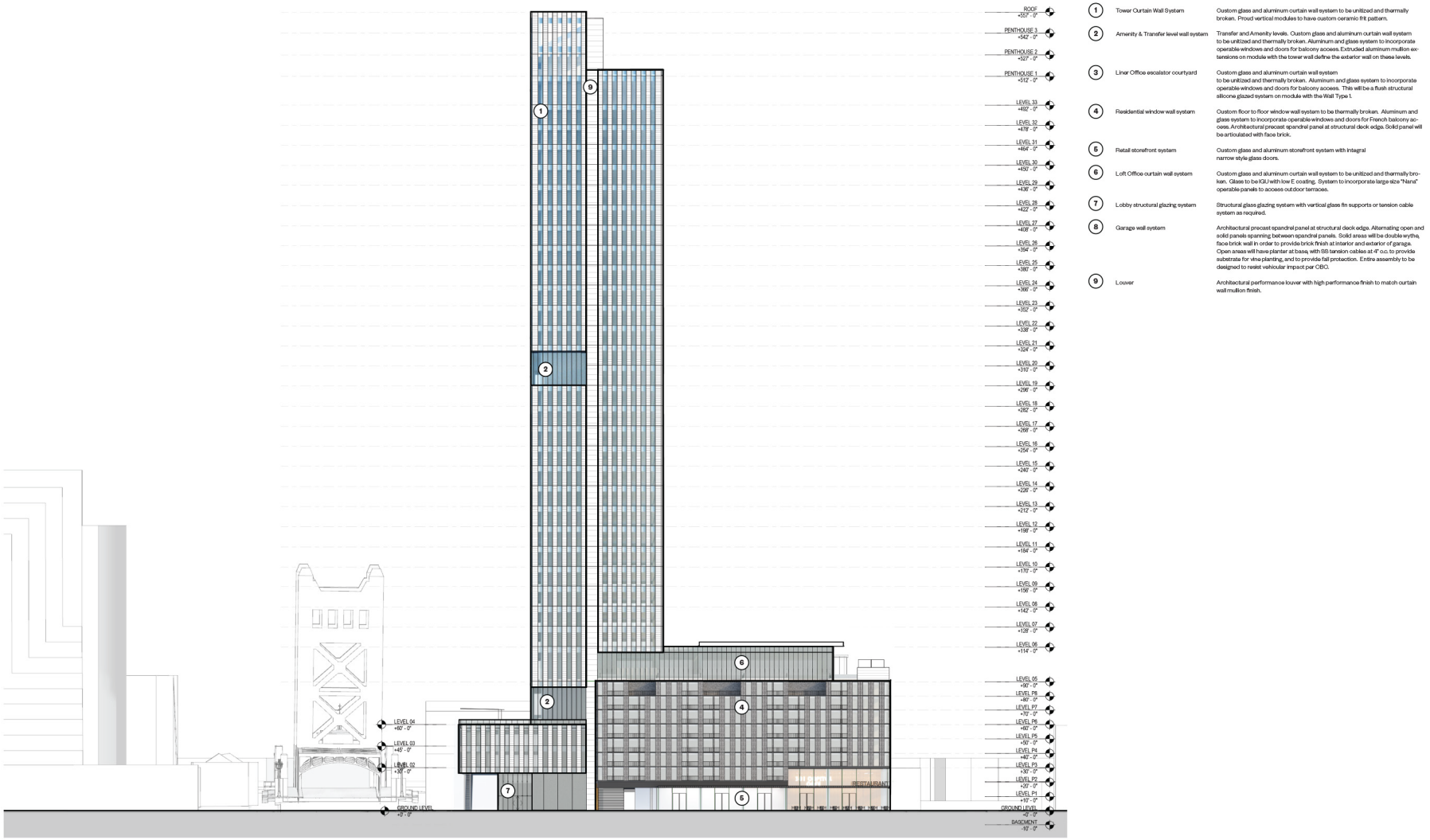
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-18
South Elevation – Capitol Mall

ESA



TYPICAL MATERIAL LEGEND

1	Tower Curtain Wall System	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Proud vertical modules to have custom ceramic frit pattern.
2	Amenity & Transfer level wall system	Transfer and Amenity levels. Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. Extruded aluminum mullion extensions on module with the tower wall define the exterior wall on these levels.
3	Liner Office escalator courtyard	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. This will be a flush structural silicone glazed system on module with the Wall Type 1.
4	Residential window wall system	Custom floor to floor window wall system to be thermally broken. Aluminum and glass system to incorporate operable windows and doors for French balcony access. Architectural precast spandrel panel at structural deck edge. Solid panel will be articulated with face brick.
5	Retail storefront system	Custom glass and aluminum storefront system with integral narrow style glass doors.
6	Loft Office curtain wall system	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Glass to be IGU with low E coating. System to incorporate large size "Nana" operable panels to access outdoor terraces.
7	Lobby structural glazing system	Structural glass glazing system with vertical glass fin supports or tension cable system as required.
8	Garage wall system	Architectural precast spandrel panel at structural deck edge. Alternating open and solid panels spanning between spandrel panels. Solid areas will be double wythe, face brick wall in order to provide brick finish at interior and exterior of garage. Open areas will have planter at base, with SS tension cables at 4" o.c. to provide substrate for vine planting, and to provide fall protection. Entire assembly to be designed to resist vehicular impact per CBC.
9	Louver	Architectural performance louver with high performance finish to match curtain wall mullion finish.

Scale: 1' = 30'

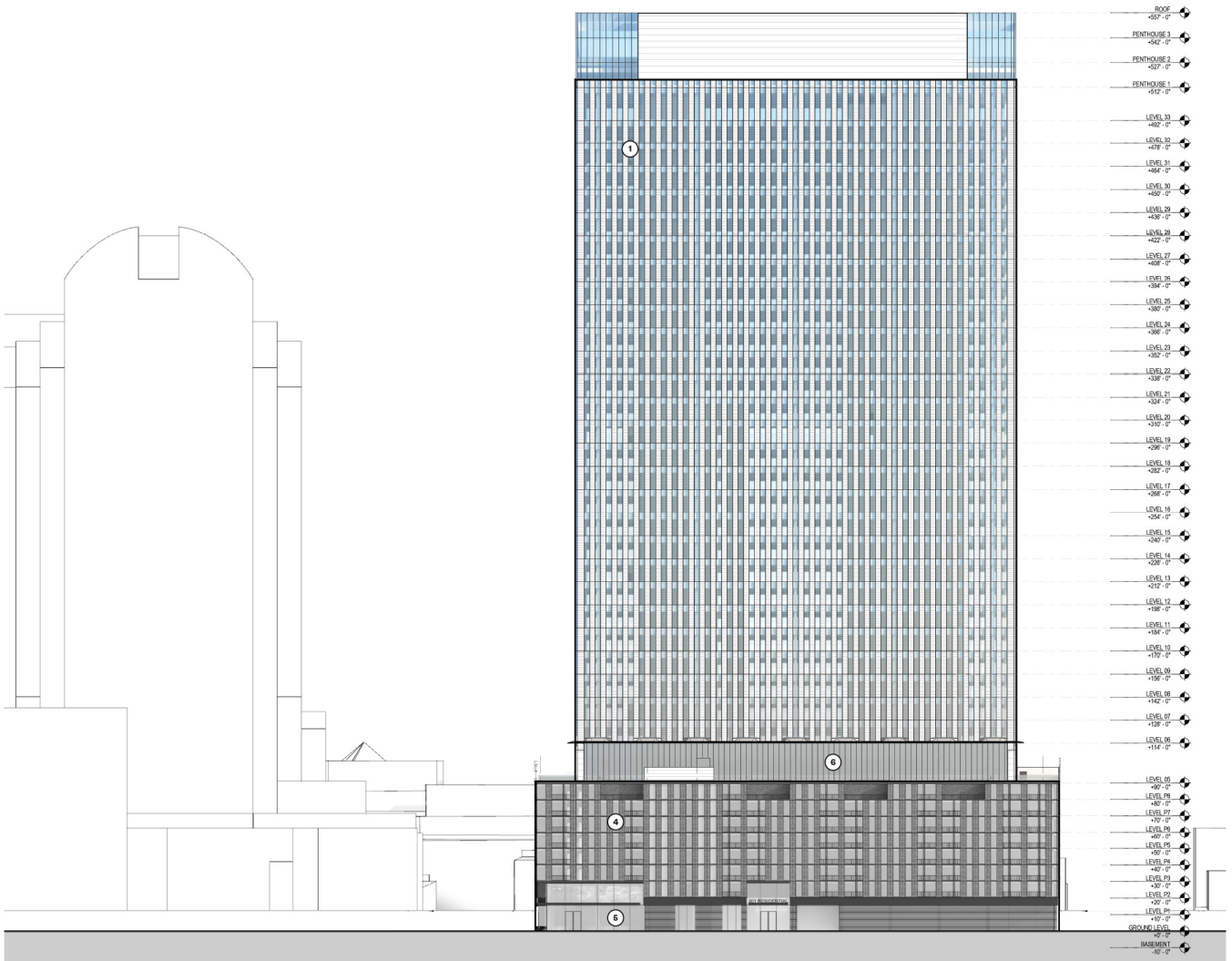
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-19
East Elevation – 4th Street

ESA



TYPICAL MATERIAL LEGEND

1	Tower Curtain Wall System	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Proud vertical modules to have custom ceramic frit pattern.
2	Amenity & Transfer level wall system	Transfer and Amenity levels. Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. Extruded aluminum mullion extensions on module with the tower wall define the exterior wall on these levels.
3	Liner Office escalator courtyard	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. This will be a flush structural silicone glazed system on module with the Wall Type 1.
4	Residential window wall system	Custom floor to floor window wall system to be thermally broken. Aluminum and glass system to incorporate operable windows and doors for French balcony access. Architectural precast spandrel panel at structural deck edge. Solid panel will be articulated with face brick.
5	Retail storefront system	Custom glass and aluminum storefront system with integral narrow style glass doors.
6	Loft Office curtain wall system	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Glass to be IGU with low E coating. System to incorporate large size "Nana" operable panels to access outdoor terraces.
7	Lobby structural glazing system	Structural glass glazing system with vertical glass fin supports or tension cable system as required.
8	Garage wall system	Architectural precast spandrel panel at structural deck edge. Alternating open and solid panels spanning between spandrel panels. Solid areas will be double wythe, face brick wall in order to provide brick finish at interior and exterior of garage. Open areas will have planter at base, with SS tension cables at 4" o.c. to provide substrate for vine planting, and to provide fall protection. Entire assembly to be designed to resist vehicular impact per CBC.
9	Louver	Architectural performance louver with high performance finish to match curtain wall mullion finish.

Scale: 1' = 30'

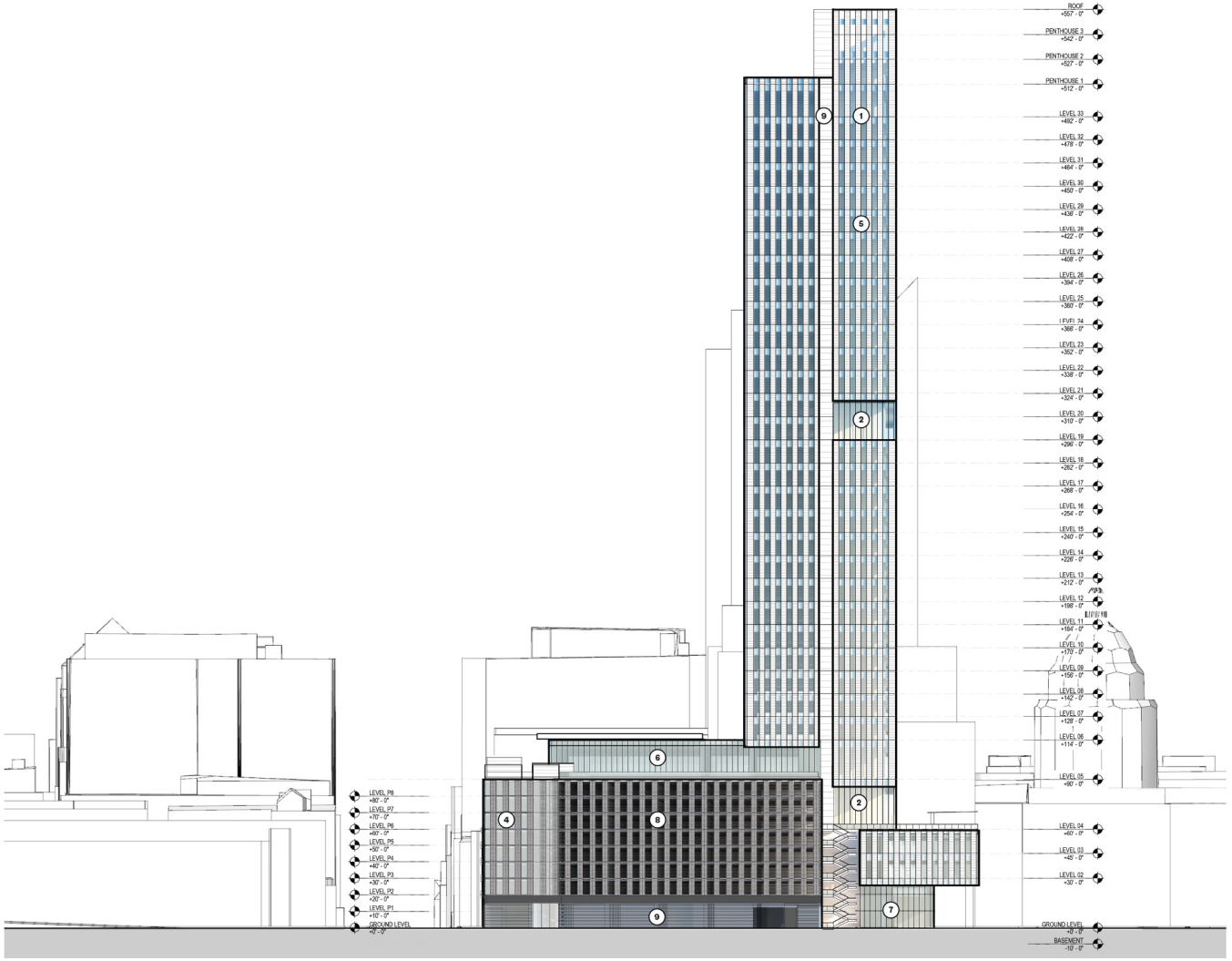
D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-20
North Elevation – L Street

ESA



TYPICAL MATERIAL LEGEND

1	Tower Curtain Wall System	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Proud vertical modules to have custom ceramic frit pattern.
2	Amenity & Transfer level wall system	Transfer and Amenity levels. Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. Extruded aluminum mullion extensions on module with the tower wall define the exterior wall on these levels.
3	Liner Office escalator courtyard	Custom glass and aluminum curtain wall system to be unitized and thermally broken. Aluminum and glass system to incorporate operable windows and doors for balcony access. This will be a flush structural silicone glazed system on module with the Wall Type 1.
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9	Louver	Architectural performance louver with high performance finish to match curtain wall mullion finish.

Scale: 1' = 30'

D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-21
West Elevation – 3rd Street

ESA

The proposed structure would include the programmed uses shown in **Table 2-1**, below.

TABLE 2-1
PROPOSED TOWER 301 PROGRAMMED USES

Use Type	Floor GSF x Number of Floor	Use Type Gross Square Feet (GSF)	Floors	Units	Total GSF
Office					
Lobby	13,723 GSF x 1	13,723 GSF	1 Floor		
Liner Office	25,120 GSF x 1 24,648 GSF x 1	49,768 GSF	2 Floors		
Loft Office	54,589 GSF x 1	54,589 GSF	1 Floor		
Tower Office	24,306 GSF x 26	631,956 GSF	26 Floors		
Transfer Floors	23,376 GSF x 1 18,236 GSF x 1	41,612 GSF	Lower Level (1 Floor) Mezzanine Level (1 Floor)		
Office Gross Area					**791,647 GSF**
Residential					
Residential Units		96,755 GSF	7 Levels	100 Residential Units	
Residential Gross Area					**96,755 GSF**
Retail/Amenity					
Ground Level Retail/ Restaurant	12,453 GSF x 1	12,453 GSF	Ground Level (1 Floor)		
Public Amenity Deck Retail/Restaurant/Gym	12,200 GSF x 1	12,200 GSF	Public Amenity Deck (1 Floor)		
Public Amenity Deck (Outdoor Space)	14,782 GSF x 1	14,782 GSF (Not Included in Total)	Public Amenity Deck (1 Floor)		
Retail Gross Area					**24,653 GSF**
Parking					
Below Grade Level			1 Floor	163 Vehicles Spaces 176 Long Term Bicycle Spaces	
Above Grade Level			8 Floors	1,141 Vehicle Spaces 58 Short Term Bicycle Spaces	
Parking Totals				**Vehicle Spaces: 1,304** **Bicycle Spaces: 234**	**536,227 GSF**
Total Program Gross Area (Parking Not Included)					**913,055 GSF**

SOURCE: Skidmore, Owings & Merrill, LLP, 2018.

As shown in Table 2-1, the proposed Tower 301 project would include approximately 791,647 GSF of office space, 24,663 GSF of retail and amenity space, 100 residential units totaling 96,755 GSF, 1,304 vehicle parking spaces, and 234 bicycle parking spaces.

Office

The proposed project would include approximately 791,647 GSF of office uses. Office uses would be spread across 30 floors with larger single-floor uses on the Lower Level, Mezzanine Level, and Loft Office Level. Most of the office uses would be concentrated in the office tower, with larger office spaces available in the podium levels.

Residential

The proposed project would include 100 residential units across 7 levels, that would line the east and north sides of the podium levels. The proposed residential uses would have a separate lobby on the ground floor that fronts to L Street, and separate parking areas. Residents would also have a separate vehicle entrance and exit along L Street. There would be a proposed gym located on the public view deck level for which residents would have shared access with office uses.

Retail/Amenity

The proposed project would feature ground level-retail, as shown in Figure 2-6. Additional retail and amenity uses could be developed on the public view deck, including restaurant use and/or a gym. The Loft Level could also include some amenity uses.

Parking

As shown in Figure 2-1, the proposed project would include 1,304 onsite vehicle parking spaces, spread across 9 levels. Resident parking would be located on the subgrade parking level with access to and from the parking area on L Street. Employee parking for the office, retail, and amenity uses would be located in separate areas across all 9 parking levels, with access to and from the parking areas on 3rd Street and 4th Street. Office parking spaces may be made available for events at the Downtown Commons and Golden 1 Center, during evening hours when office parking is not required. It is anticipated that such uses would have access to internal parking areas limited to the 3rd Street and 4th Street vehicle entry points.

2.4.3 Circulation

Vehicular

The proposed project would provide onsite parking in a 9-floor parking garage within the proposed structure. The proposed structure would include vehicle entrances to the internal parking garage on 3rd Street, 4th Street, and L Street (see Figure 2-6). Vehicle access to subgrade and above-ground-level parking levels would be available via a system of internal ramps within the parking structure components of the project site (see Figures 2-5a and 2-5b).

Curbside parking places presently located along the east side of 3rd Street, between L Street and Capitol Mall would be temporarily preserved, with the exception of 2 to 3 parking spaces, at mid-block, which would be removed to allow for the construction of the western project driveway. Upon adoption of the Final design of the Sacramento Streetcar project (described in the Transit discussion), curbside parking may be relocated to make way for the streetcar tracks and station in 3rd Street. Curbside parking on 4th Street would be generally preserved, with the exception of 2 to

3 parking spots that would be eliminated to establish the east vehicle entry and exit points to the project site.

Delivery and Loading

Delivery and loading facilities for the proposed project would be located along the internal driveway between the 3rd and 4th Street project driveway accesses.

Pedestrian

Sidewalk improvements around the project site along the Capitol Mall, 3rd Street, 4th Street, and L Street frontages would comply with City standards for width and design. The office lobby of the proposed project would face Capitol Mall, providing pedestrian access from Capitol Mall and from the internal project driveway on the Ground Level. The residential lobby would face L Street, providing access from L Street to the residential uses within the project site.

The proposed project would attract pedestrian traffic to the office, residential, retail and restaurant uses on the project site. Crosswalks presently exist along most segments of each intersection that is located adjacent to the project site. To further accommodate increased pedestrian demand, the proposed project would include the striping and addition of crossing equipment along the western segment of the L Street and 4th Street intersection.

Bicycle

Employee, resident, and short-term patron bicycle parking spaces would be provided on-site, including 176 long-term bicycle parking spaces in the subgrade parking level and 58 short-term bicycle parking spaces on the ground level of the parking garage. The proposed project would not include alterations to existing vehicle lanes, vehicle turning movements, or parking configurations on existing roadways, with the exception of provisions for three project driveways. As such, no alterations are proposed to existing City bicycle facilities including the dedicated bicycle lane on the North side of Capitol Mall, that lines the south side of the project site.

Transit

The project site is located adjacent to the anticipated pathway of the Sacramento Downtown Streetcar (Streetcar), which is planned run east and west across Capitol Mall and Tower bridge, to and from West Sacramento, before turning north on 3rd Street, in Downtown Sacramento. The proposed project is designed to accommodate a proposed Streetcar platform on the east side of 3rd Street on the northwest side of the project site. The project driveway on 3rd Street is designed in anticipation that traffic entering and exiting the project site would cross the Streetcar tracks, which would be separated from 3rd Street by a secondary curb and a line of curbside parking along the east side of the road.

2.4.4 Utilities

The site of the proposed project is located within an area where infrastructure is well established. Thus, minimal offsite improvements would be necessary to provide utility services to the project

site, as described below. **Figures 2-22a** and **2-22b** show the locations of existing utility locations and anticipated service lateral points.

Water

Water supply would be provided to the project site through existing 10-inch water supply mains in L and 3rd streets (see Figures 2-22a and 2-22b).

Wastewater

The wastewater systems for the proposed project would connect to the City's combined sewer system (CSS). The project would access the City's network of sanitary sewer mains via a 24-inch CSS main located in 3rd Street and an 8-inch CSS main located in 4th Street (see Figures 2-22a).

Drainage

The proposed project would develop a high-rise structure with impervious surfaces, for which stormwater drainage must be managed. It is anticipated that storm water would be collected and treated on-site before the treated runoff leaves the project site and enters the City's Basin 52 separated storm drain system. Since the storm water system is currently separated all the way to the outfall into the Sacramento River, the project site would include temporary storage with the necessary pre-release treatment facilities as required to meet both current water quality standards and the discharge capacity of the existing system.

Stormwater within the construction footprint would be managed pursuant to a Stormwater Pollution Prevention Plan that would be prepared for the proposed project.

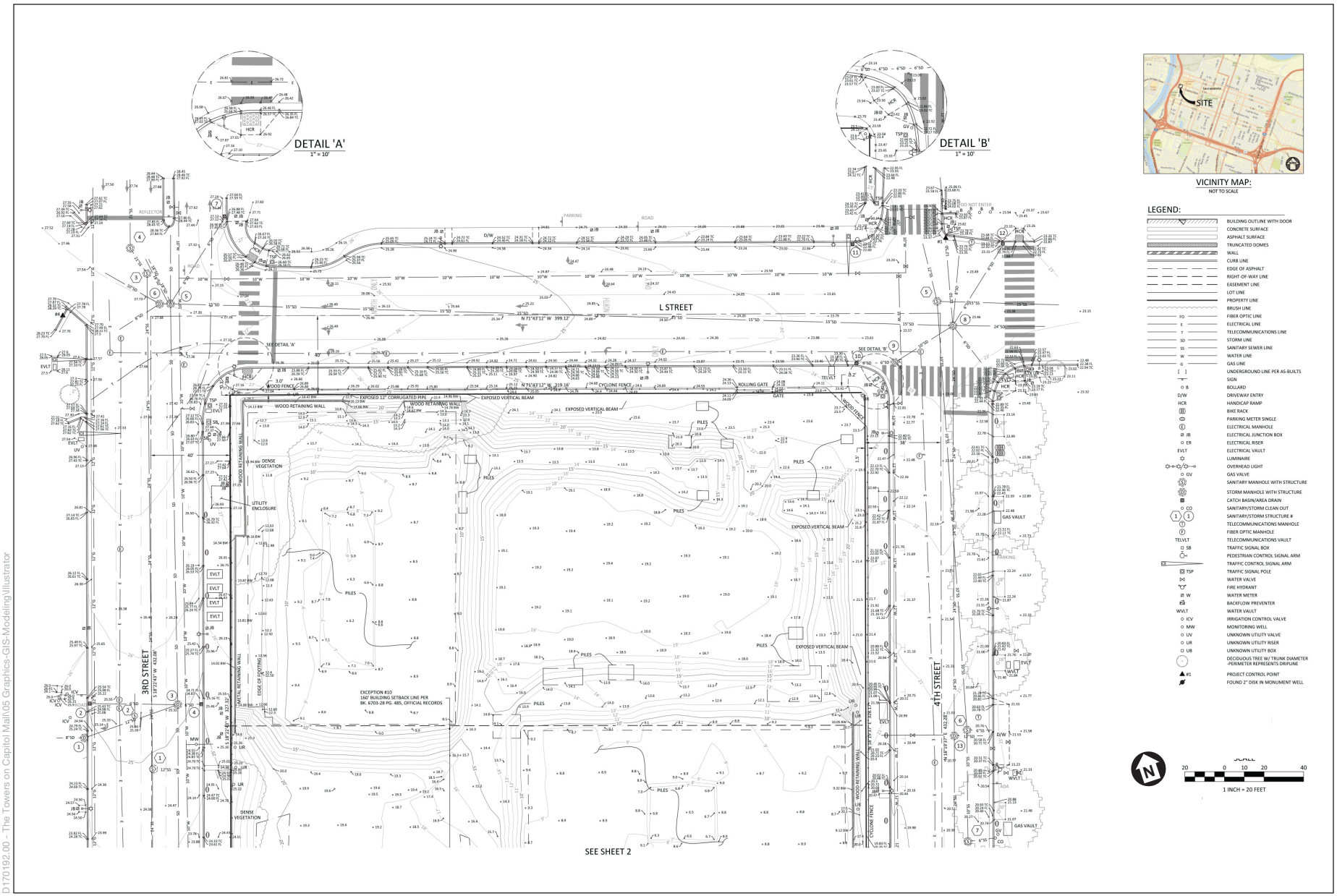
Energy and Telecommunications

Electrical Service

Electrical service would be provided by the Sacramento Municipal Utility District (SMUD) through service from its 21-kV system. The project site would connect to the SMUD electrical grid at a 21-kV underground local lines within L Street and 4th Street. Aside from connections that may be necessary to tie project systems to the SMUD system under adjacent streets, no further improvements to the SMUD electrical system would be required.

Natural Gas

Natural gas service would be established via service laterals from the existing Pacific Gas & Electric (PG&E) service grid within the downtown roadway network. The nearest PG&E line to the project site is a 12-inch main, located along the west side of 3rd Street. A service lateral would likely be installed along this line to provide service to the project site. Other than proposed connections between the project site and the existing PG&E natural gas mains, no further improvements to the PG&E distribution system would be necessary.



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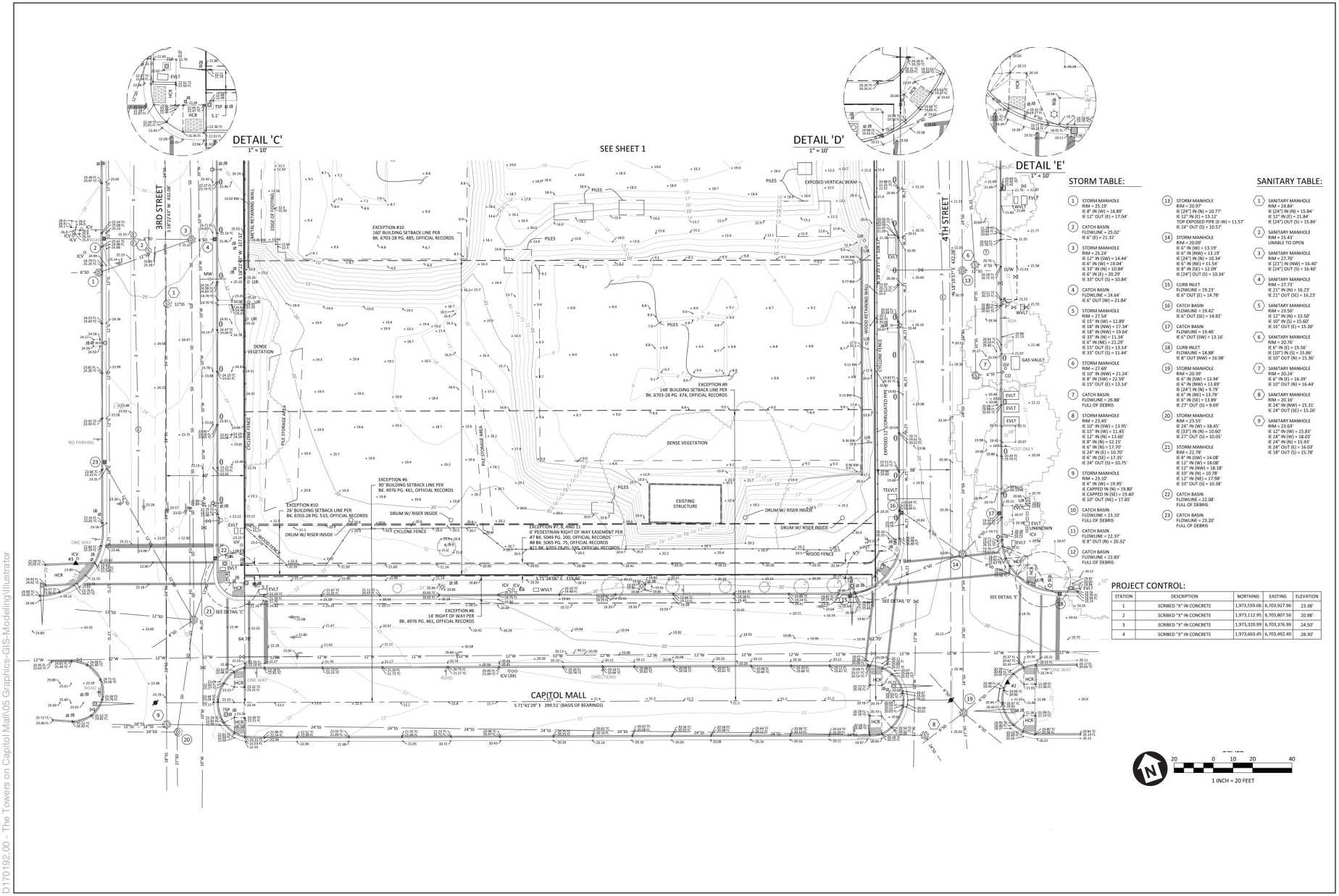
SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-22a
Project Site Utilities

ESA



SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-22b
Project Site Utilities

Telecommunications

The proposed project would acquire telephone and data service from the current existing carrier(s) that are now established in downtown Sacramento. Connection(s) would be completed in existing telephonic and data manholes. The project applicant would coordinate with the City and other utility providers to determine the optimal solution for gaining access to adjacent lines, potentially including either open cuts or directional drilling that could be done in these manholes without severe traffic interference. Where open cuts are determined to be necessary, appropriate traffic management plans would be developed, subject to approval by the City of Sacramento. If feasible, service to the project site would be coordinated with SMUD in a common joint trench, in which a few 2-inch conduits would be added to the joint trench for telecommunication service.

2.4.5 Sustainable Development Features

The proposed project proposes high-density mixed-use project on an infill site in close proximity to commercial development, employment centers and several modes of transit. The project proposes to incorporate the following measures to minimize energy and water consumption, improve indoor environmental quality, minimize vehicular traffic and associated air pollutant emissions.

Water

- The project will comply with minimum CALGreen Tier 1 water efficiency standards.
- New landscape plants will be drought tolerant, native to California or other Mediterranean climates, or other low water use species.
- High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers will be used.
- All water fixtures (faucets, showerheads, and toilets) will be low flow and/or WaterSense certified for low water use.
- All units will be equipped with Energy Star certified dishwashers for low water use.
- High-efficiency hot water boiler systems will be used for efficient hot water distribution.

Energy

- The structure will comply with 2019 Title 24 Energy Efficiency Standards (Effective January 1, 2020).
- The proposed project will be wired for the future installation of electrical vehicle charging stations.
- All residences will be equipped with Energy Star certified appliances (dishwashers and refrigerators).
- Energy efficient LED light fixtures will be installed within the residences and office suites and for exterior lighting.

- All residential units and business suites will incorporate energy efficient Low-E windows.
- The parking garage will be designed for future electric vehicle charging station expansion.

Materials

- Durable, non-combustible materials, and fire-resistant roofing will be used.
- Low/no volatile organic compound (VOC) paints and coatings will be used in project construction and maintenance.
- Low VOC caulks, construction adhesives, and sealants will be used in project construction and maintenance.

Site Planning & Design

- The proposed project will be equipped with secure bike lockers for residents and employees

2.4.6 Project Construction

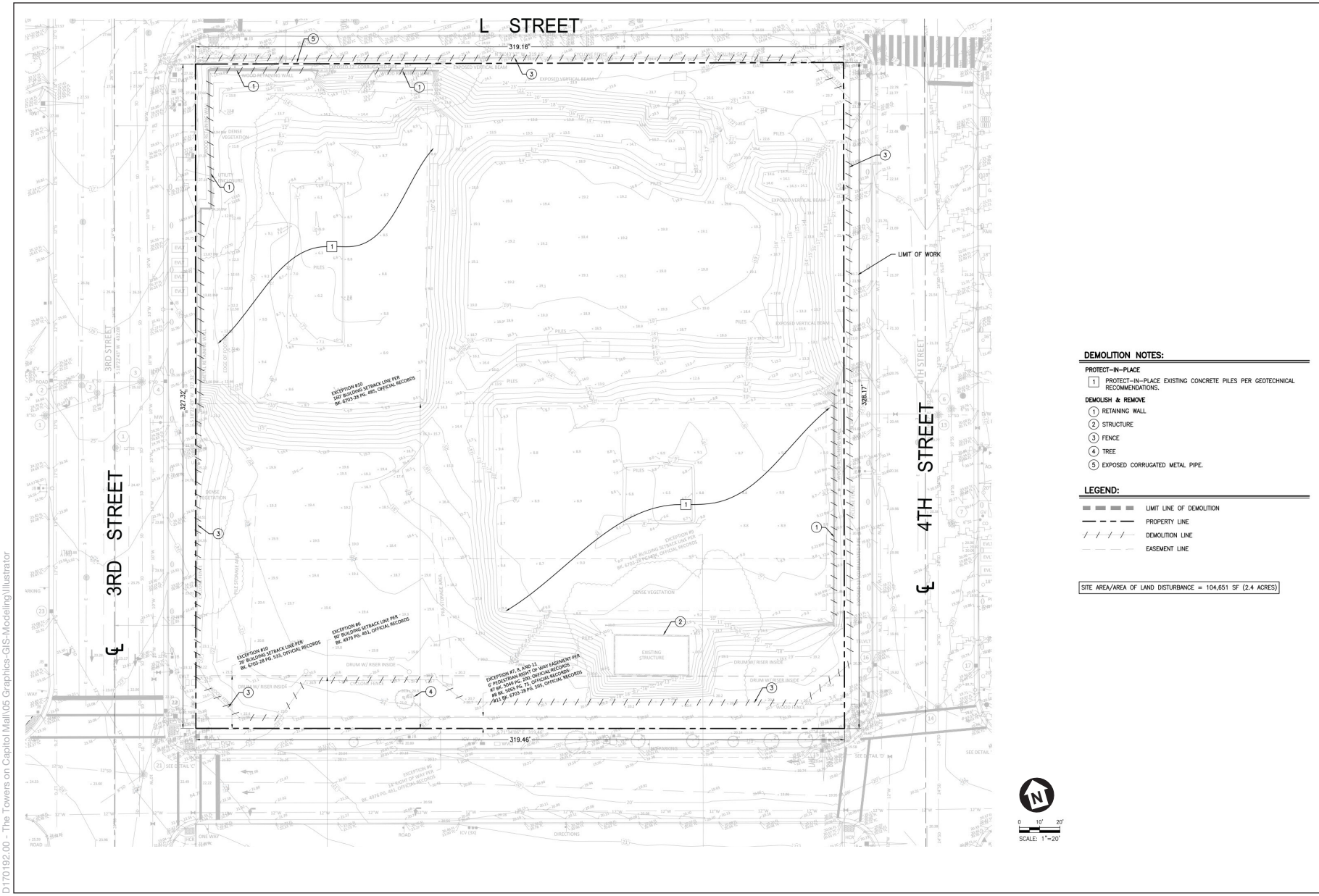
Construction of the proposed project would occur over approximately 31 months, beginning in December 2019 and concluding in July 2022. Anticipated activities would include demolition of some existing foundational elements from the previous project, construction of the foundation, and erection of the proposed high-rise structure. The final year of construction would consist primarily of internal construction and commissioning, and exterior landscaping.

Demolition

The first element of project construction would be demolition and clearing of the project site including removal of existing utilities, planters, trees, and other site features. Demolition would also include removal of some existing foundational elements from the previous project on the project site, for which construction was never completed. Some foundational piers from the previous project have been marked for preservation and would be incorporated into the foundational structure of the proposed project. Elements to be preserved are shown in **Figure 2-23**. Site demolition and site clearing would last approximately 1 month.

Grading and Foundation Work

Grading and foundation work would take approximately 7 months. The project site was previously excavated to make way for a subgrade level for a previous project. It is not anticipated that substantial additional excavation would be required. The project site would be excavated to a depth of approximately 20 to 25 feet below ground level, where previous excavation to that level has not occurred (see Figure 2-23). Excavated soil and debris would be hauled offsite for disposal. It is estimated that approximately 34,000 cubic yards of material would be exported from the project site and 17,500 cubic yards of material would be imported to the project site during this phase.



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SOURCE: Skidmore, Owings & Merrill LLP, 2018

Tower 301

Figure 2-23
Demolition Plan

ESA

Construction

The deep foundations/footings phase of construction would involve the driving or drilling of concrete foundation piles throughout the excavation area, except where piles from the previous project would be utilized. As described above, some of the foundational elements constructed for the previous project would be utilized for the proposed project. However, additional cast-in-drilled-hole piles would be needed for the proposed structure. The approximate duration of pile installation will be 3 months, and would take place within the anticipated 7-month-duration of grading and foundation work.

The construction phase would involve the erection of steel, concrete and/or precast concrete elements, and would take place over approximately 21 months. This phase would involve the use of numerous cranes, loaders, welders, generators, concrete pumpers, and similar construction equipment.

Interior and exterior finish work would take place over approximately 19 months. This phase would involve a wide variety of construction activities involving creating and outfitting interior spaces and completing the exterior finish of the building, including plumbing, electrical, heating and air conditioning systems, and the like.

Exterior site work and landscaping, including landscaping on the public view deck, would be undertaken over a period of approximately 7 months, concurrent with interior and exterior finish work.

Construction Circulation

During construction, the entire project site would be fenced off. Construction fencing would be placed along the west side of 4th Street between L Street and Capitol Mall. Construction fencing would also be placed along the south side of L Street, the west side of 3rd Street, and the north side of Capitol Mall.

Water-filled construction barriers would be placed on the south side of L Street between 3rd Street and 4th Street. The on-street parking on the western curb of 4th Street between L Street and Capitol Mall would be temporarily blocked, for the duration of construction, as would the on-street curbside parking along 3rd Street.

Construction gates providing access to the site would be located on L Street during work at ground level. As above ground podium levels are completed, site access for construction and delivery vehicles would occur along 4th Street. Additional construction gates may be provided to other roadways around the project site.

Road Closures

The proposed project would not require road closures. Short term, temporary lane closures may be necessary for the establishment of project links to utilities or construction elements along the perimeter of the project site, however no long-term lane closures are anticipated.

Truck Routes

Construction vehicles would follow established truck routes for the City and which are determined by the streets that can access the site and the City's one-way street system. As depicted on **Figure 2-24** (Construction Truck Routes), inbound truck trips would access the project site from L Street.

The direction of outbound truck trips would be determined by the destination of the truck, especially during demolition when trucks would be transporting demolition materials to recycling facilities or landfills. Outbound trucks headed to Richards Boulevard would depart the site on L Street. Trucks heading toward I-5 could travel west on L Street to the L Street northbound onramp. Trucks heading south on I-5 could travel south on 3rd Street to P Street to the P Street onramp to I-5 South and connecting freeways.

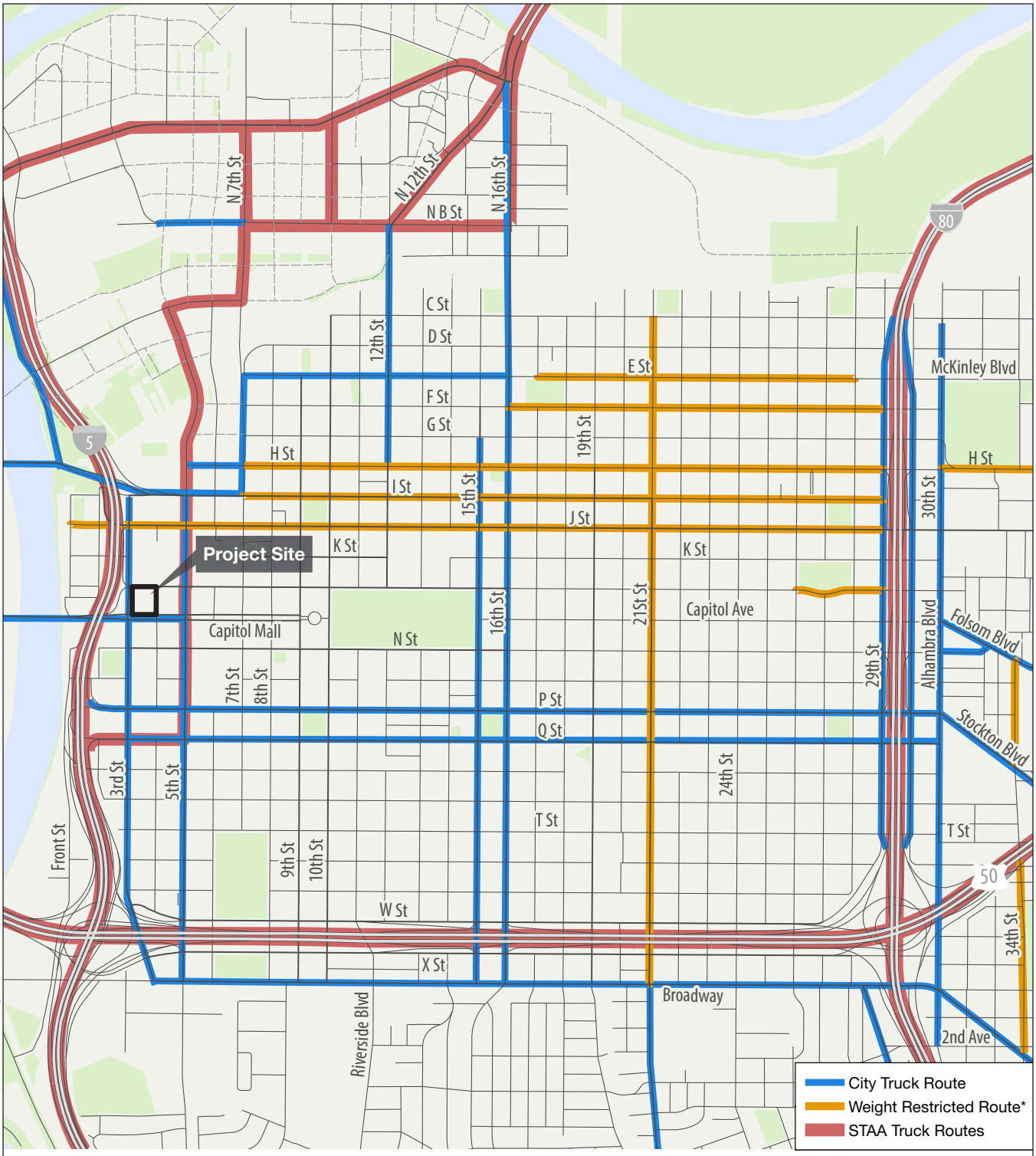
Construction Dewatering

Construction of the foundations and subgrade parking level components of the proposed project likely would require temporary dewatering during the rainy season. Analysis of the ground water, both for contaminates and quantity would be performed in advance of installation of the construction dewatering system. Monitor wells would be used to provide historical data prior to and during the construction dewatering period. The wells would be either new or existing wells around the project site, including the project vicinity covering an area with a radius of about three-quarters of a mile. The system of monitoring wells would be used to determine subsidence parameters which in turn would dictate to the dewatering subcontractor how low the immediate site water table can be dropped. Automatic controls may be used to alternate pumps and subsequent discharge quantities during the construction dewatering period.

Periodic water quality tests would be performed to establish needs requirements or onsite treatment prior to discharge to the city collection grid. Approval of dewatering activities and permitting for the discharge of the temporary dewatering into the City's sewer and/or storm drain systems would be coordinated with the City Department of Utilities, Sacramento Regional County Sanitation District, and the Central Valley Regional Water Quality Control Board, as appropriate.

2.5 Actions

This EIR is intended to support decisions made by the City and responsible agencies that would allow the construction and operation of the proposed project. Pursuant to State CEQA Guidelines section 15125(d), the following discussion describes the actions of the City or other agencies that the City is aware of at this time. If it is determined at a later date that additional actions are required to facilitate execution of the proposed projects, it is the City's intent that this EIR would be used to support those actions.



* City Code 10.24.020:
Trucks exceeding a manufacturer's gross vehicle weight rating of ten thousand pounds prohibited.

Not to scale

D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Fehr & Peers, 2017

Tower 301

Figure 2-24
Construction Truck Routes

ESA

2.5.1 Project Actions

The proposed project is anticipated to require, but may not be limited to, the following City actions:

- Certification of the EIR to determine that the EIR was completed in compliance with the requirements of CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City of Sacramento;
- Adoption of a Mitigation Monitoring Plan, which specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment;
- Adoption of Findings of Fact, and for any impacts determined to be significant and unavoidable, a Statement of Overriding Considerations;
- Approval of a Site Plan and Design Review;
- Approval of a demolition permit;
- Approval of a grading permit to regulate land disturbances, landfill, soil storage, pollution, and erosion and sedimentation resulting from construction activities; and
- Approval of a groundwater memorandum of understanding from the City of Sacramento for construction dewatering.

The proposed project is anticipated to include, but may not be limited to, the following actions by entities other than the City:

- Approval of a construction activity stormwater permit, including a Stormwater Pollution Prevention Plan, from the Central Valley Regional Water Quality Control Board (CVRWQCB);
- Approval of a pre-treatment permit from the Sacramento Regional County Sanitation District (SRCSD) to allow discharges associated with construction de-watering to the combined sewer system; and
- Approval of a stationary source permit from the Sacramento Metropolitan Air Quality Management District (SMAQMD).

2.6 Responsible and Trustee Agencies

This EIR is intended to be used by responsible and trustee agencies (as defined by sections 15381 and 15386 of the State CEQA Guidelines) that may have review or discretionary authority over some component of the project. Agencies in addition to the Lead Agency that also may use this EIR in their review of the project or that may have responsibility over approval of certain project elements may include, but are not limited to, the following:

- CVRWQCB,

- SMAQMD,
- SMUD,
- SRCSD, and
- Sacramento Regional Transit.

CHAPTER 3
Land Use, Population, Employment, and Housing

3.1 Introduction

This chapter provides an overview of the land use and planning issues that may arise in connection with implementation of the proposed project. This chapter describes existing and planned land uses in and adjacent to the project site, including current land uses, land use designations, and zoning. Section 15125 of the State CEQA Guidelines states that an "EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans." Potential inconsistencies between the proposed project and the Sacramento 2035 General Plan, the Central City Community Plan (CCCP), the Central City Specific Plan (CCSP), the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), and the City's Planning and Development Code are discussed in this chapter. Notwithstanding the conclusions reflected in this document, the final determination of project consistency with the 2035 General Plan, the CCCP, the CCSP, the SACOG MTP/SCS, and the City's Planning and Development Code is within the authority of the City Council. The information provided in this chapter is intended to inform that determination.

The City does not consider inconsistency with plan policies or codes to necessarily be indicative of significant environmental impacts. To the extent that significant environmental impacts would occur as a result of policy inconsistencies, they are disclosed in the environmental impact sections of Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this EIR. Thus, the reader is referred to the various environmental resource evaluations presented in Chapter 4 for a discussion of potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts.

This chapter also describes existing levels of and trends in population and housing in the City of Sacramento. It identifies the development assumptions upon which the proposed project is based and analyzes projected population and housing growth in relation to City projections.

While an EIR may provide information regarding land use, socioeconomic, population, employment, or housing issues, CEQA does not recognize these issues as direct physical effects on the environment.[1] Therefore, this chapter does not identify environmental impacts and

[1] State CEQA Guidelines section 15064(d)(1).

mitigation measures. Adverse physical effects on the environment that could result from implementation of the project, including the changes to land use addressed in this chapter, are evaluated and disclosed in the appropriate technical sections of this EIR.

3.2 Land Use Consistency and Compatibility

The evaluation included in this section was developed based on information provided in the City of Sacramento 2035 General Plan, the City of Sacramento 2035 General Plan Master Environmental Impact Report, the CCCP, the CCSP, and the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy.

3.2.1 Notice of Preparation Comments

A Notice of Preparation (NOP) for this EIR was circulated for public review from December 19, 2018 to January 25, 2019. During the public comment period, no letters were received which commented on land use issues related to the proposed project.

3.2.2 Environmental Setting

Regional Context

The City of Sacramento is located approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe in the northern portion of the great Central Valley, at the northern end of the Sacramento/San Joaquin river delta and at the confluence of the Sacramento and American Rivers. Sacramento is the seat of government for the State of California and also serves as the county seat of Sacramento County. The City of Sacramento is the largest incorporated city in Sacramento County.

Sacramento is a major transportation hub, the point of intersection of major transportation routes that connect Sacramento to the San Francisco Bay area to the west, the Sierra Nevada mountains and Nevada to the east, the City of Los Angeles to the south, and Oregon to the north. The City is bisected by a number of major freeways, including Interstate 5, which traverses the state from north to south; Interstate 80 and the Capital City Freeway, which provide an east-west connection between San Francisco and Reno; and U.S. Highway 50, which provides an east-west connection between Sacramento and South Lake Tahoe. In addition, the Union Pacific Railroad and the Burlington Northern Santa Fe Railway transect the City.

Existing and Adjacent Uses

The project site consists of approximately 2.39 acres, encompassing a single city block in downtown Sacramento. The project site is located on the block bounded by 3rd, L, and 4th streets and Capitol Mall. The project site has been developed for different uses at different times in the past. At present, the project site is not in use but contains foundational elements from a previous development effort, the Towers on Capitol Mall project (P04-221). That project was approved in August 2005, and construction on the site was started but never completed. The project site has

remained closed to the public. Fencing surrounds the perimeter of the project site and the interior of the project site has been subject to vegetative growth due to non-use.

3.2.3 Regulatory Setting

Federal

There are no federal regulations that specifically regulate land use or land use compatibility on non-federal lands that would be applicable to the proposed project.

State

Planning and Zoning Law, Government Code Sections 65000 – 66035

California Planning and Zoning Law requires each city to prepare and adopt "…a comprehensive, long term general plan for the physical development of the…city, and of any land outside its boundaries…" (Cal. Government Code Section 65300.) Under Government Code Section 65302, each general plan must include the following seven elements: Land Use; Circulation; Housing; Conservation; Open Space; Noise; and Safety.

Specific Plans are hybrid documents that act as a bridge between the City's General Plan and Zoning Regulations for development of a particular area. Government Code Section 65450 states that a city may prepare a specific plan "for the systematic implementation of the general plan…" A Specific Plan is adopted in the same manner as a general plan (Cal. Government Code Section 65453) and is considered a legislative act. As discussed below, the CCSP was adopted by City Council April 19, 2018.

Sustainable Communities and Climate Protection Act (SB 375)

The Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill (SB) 375 or SB 375, supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, the California Air Resources Board (CARB) sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a SCS as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the

SCS would not meet the regional targets, the MPO must prepare a separate "alternative planning strategy" (APS) to meet the targets. The APS is not a part of the RTP.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers may streamline certain environmental review requirements under CEQA if new residential and mixed-use projects are consistent with a region's SCS (or APS) targets (see California Public Resources Code sections 21155, 21155.1, 21155.2, 21159.28.).

Local

Sacramento Area Council of Governments Blueprint and Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities, including the City of Sacramento. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG, in partnership with the non-profit organization Valley Vision, undertook the Blueprint Project to build a consensus around a single, coherent, long-term vision for the development of the Sacramento region. The project was not intended to advocate any particular development pattern; instead, SACOG assumed that if it provided accurate information and forecasting tools to a wide variety of interest groups, a consensus would naturally emerge on what the region as a whole wanted for its future.

Through discussions at a series of workshops held throughout the greater Sacramento region, a consensus emerged that the low-density, segregated land use developments of the recent past would likely cause deterioration in the regional quality of life if continued into the future. The regional consensus supported the notion that future development should follow the principles of "smart growth," incorporating density of both residential and commercial development, diversity of land uses within a neighborhood, design of the neighborhood, and access to regional destinations.

The Blueprint, adopted by the SACOG Board of Directors in December 2004, is a voluntary framework for guiding future growth in the region. The Blueprint is not a policy document and does not regulate land use or approve or prohibit growth in the region. The Blueprint is a transportation and land use analysis suggesting how cities and counties should grow based on the key principles listed below. A key issue for the Blueprint Project is that compliance with the adopted plan relies entirely on SACOG's ability to persuade jurisdictions to voluntarily follow the SACOG model. The Blueprint is intended by SACOG to be advisory and to guide the region's transportation planning and funding decisions.

The approved Blueprint is based on seven interlocking principles:

- Compact Development that requires less conversion of rural land, shortens travel distances, and reduces the per-unit cost of infrastructure and services.
- Housing Choices, in particular small lot single-family dwellings and attached products that suit the needs of seniors, empty-nesters, young couples, single-person households, single-parent households and other types of small households that currently make up 4-out-of-5 American households. The smaller products fit well with the theme of compact development.
- Mixed-Use Developments that allow people to work and shop near their home.
- Use of Existing Assets, in particular the development of sites that are already within the urban footprint and urban services coverage. This includes both infill development of vacant lots as well as re-development of under-utilized sites such as low-density strip retail areas.
- Transportation Choices, in particular the ability to use non-auto modes (transit, bike, walk) for at least some trips. Non-auto modes are most practical in compact, mixed-use communities.
- Quality Design in terms of aesthetic buildings but also in terms of providing attractive, walkable public spaces that create a sense of community.
- Conservation of Natural Resources through less conversion of land to urban use, slower growth of demand for water, and reduction in the amount of per-capita auto travel.

Based on the principles of the Blueprint, SACOG's 2016 MTP/SCS is a plan for improving regional transportation. The 2016 MTP/SCS pro-actively links land use, air quality, and transportation needs. Goals include shortening commute times, reducing traffic congestion, lessening dependence on automobiles, improving air quality, reducing greenhouse gas emissions, reducing distances traveled between jobs and housing, and providing for housing choices more aligned with the changing demographic. While the MTP/SCS is not a land use plan, it does include assumptions for land use and development trends. The project site is included in the Center and Corridor Community Type in the 2016 MTP/SCS, which describes land uses that are typically higher density and more mixed than surrounding land uses. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them.

In the Center and Corridor Community type, the MTP/SCS forecasts 23,007 new housing units and 45,308 new employees. SACOG is completing its quadrennial update of the MTP/SCS (scheduled for adoption in 2020) and will be working with the City to determine if there is a need to update the projections for the downtown Center and Corridor Community type for the next MTP/SCS.

City of Sacramento 2035 General Plan

State law requires each city and county to prepare and adopt a comprehensive and long-range general plan for its physical development (California Government Code Section 65300). A comprehensive general plan provides a jurisdiction with a consistent framework for land use

decision-making. The general plan has been referred to as the "constitution" for land use development to emphasize its importance to land use decisions. The general plan and its maps, diagrams, and development policies form the basis for the City's zoning, subdivision, and public works actions. Under California law, no specific plan, area plan, community plan, zoning, subdivision map, nor public works project may be approved unless the City finds that it is consistent with the adopted general plan. The Sacramento 2035 General Plan was adopted on March 3, 2015.

The 2035 General Plan, like its predecessors, is a long-term policy guide for the physical, economic, and environmental growth within the City. The 2035 General Plan's goals, policies, and implementation programs define a roadmap to achieving Sacramento's vision to be the most livable city in America. Underlying the vision and connecting it to the roadmap are six themes that thread throughout the General Plan:

- Making Great Places,
- Growing Smarter,
- Maintaining a Vibrant Economy,
- Creating a Healthy City,
- Living Lightly-Reducing Our "Carbon Footprint," and
- Developing a Sustainable Future.

In implementing these themes, the 2035 General Plan includes a land use diagram that establishes land use designations for the entire City, as well as goals, policies, and implementation programs that provide a framework for future decisions intended to reflect the General Plan themes.

Existing General Plan Land Use Designation

The project site is designated as Central Business District (CBD) on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram. The CBD is Sacramento's most intensely developed area. The CBD includes a mixture of retail, office, governmental, entertainment, and visitor-serving uses built on a formal framework of streets and park spaces laid out for the original Sutter Land Grant in the 1840s. The vision for the CBD is a vibrant downtown core that will continue to serve as the business, governmental, retail, and entertainment center for the city and the region. A significant element in the future CBD includes new residential uses. Increasing the residential population will add vitality to the CBD by extending the hours of activity and the built-in market for retail, services, and entertainment.

The CBD designation provides for mixed-use high-rise development and single-use or mixed-use development within easy access to transit (i.e., ground floor office/retail beneath residential apartments and condominiums), including office, retail, and service uses; multifamily dwellings (e.g., apartments and condominiums); gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses. Development standards within the CBD are as follows:

- Minimum Density: 61.0 Units/Net Acre,
- Maximum Density: 450.0 Units/Net Acre,
- Minimum FAR: 3.00 FAR, and
- Maximum FAR: 15.00 FAR.

The proposed project would retain the existing CBD designation as described above and in the 2035 General Plan. Goals and policies from the 2035 General Plan that are applicable to the proposed project are presented in **Table 3-1**.

Central City Community Plan

The CCCP is part of the City's 2035 General Plan, and provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the CCCP area. The CCCP serves as a development guide for the public and private sector when planning physical improvements in the Central City area. The CCCP includes the area bounded by the Sacramento River to the west, the American River to the north, Sutter's Landing Park and Alhambra Boulevard to the east, and Broadway to the south. The primary goal of the CCCP is to continue revitalization of the Central City to provide a viable living, working, shopping, and cultural environment with a full range of day and night activities for residents, employees, and visitors. The CCCP was first adopted by the City in May 1980, but was updated as part of the 2035 General Plan. The CCCP land use designation for the project site is CBD. The proposed project would retain the existing CBD designation as described above and in the CCCP. Goals and policies from the CCCP that are applicable to the proposed project are presented in Table 3-1.

Central City Specific Plan

In 2015 the Downtown Housing Initiative was launched to bring 10,000 new housing units in the next 10 years to Central City Sacramento. The CCSP took that initiative further by looking at growth opportunities for the next twenty years and beyond.

Through plan development, the City highlighted and evaluated opportunity sites ready for development. The City worked with development experts, community based interest groups, and the community at large to develop the CCSP through stakeholder meetings, community workshops, and online engagement. The development of the CCSP was kicked off in late summer of 2016 and was completed in 2018.[2] The CCSP was adopted by City Council April 19, 2018.

[2] Formerly referred to as the "Downtown Specific Plan," the name was changed to the Central City Specific Plan in October 2017.

TABLE 3-1
TOWER 301 PROJECT
CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES

Applicable 2035 General Plan Goal/Policy	Discussion
Land Use and Urban Design	
• **LU 2.4.4 Iconic Buildings.** The City shall encourage the development of iconic public and private buildings in key locations to create new landmarks and focal features that contribute to the city's structure and identity. (RDR/MPSP)	The proposed project would be a distinctive, highly visible, iconic structure near the entrance to Capitol Mall. The proposed project would be the tallest building in the city and would be a prominent feature of the city skyline, visible from a substantial portion of the surrounding region. The proposed project would serve as a landmark that would contribute to the city's structure and identity.
• **LU 2.4.5 Distinctive Urban Skyline.** The City shall encourage the development of a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the city's tallest buildings, complemented by smaller urban centers with lower-scale mid- and high-rise development. (RDR/MPSP)	The proposed project would be the tallest building in the city, would be a visible from a substantial portion of the surrounding region, and would contribute a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the city's tallest buildings.
• **LU 2.6.1 Sustainable Development Patterns.** The City shall promote compact development patterns, mixed use, and higher-development intensities that use land efficiently; reduce pollution and automobile dependence and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use. (RDR)	The proposed project would develop a high-rise building that would include office, residential, restaurant, and retail uses on an infill site near downtown housing, commercial, and transit uses. The proposed project would meet the City's objective of promoting compact development patterns, mixed use, and higher-development intensities that use land efficiently, reduce pollution and automobile dependence, and facilitate walking, bicycling, and transit use.
• **LU 2.6.2 Transit-Oriented Development.** The City shall actively support and facilitate mixed-use retail, employment, and residential development around existing and future transit stations (RDR)	The proposed project would provide residential and non-residential uses at the center of the region, in a location proximate to a multitude of transportation options, including light rail, passenger heavy rail, and buses. The project site is located adjacent to the anticipated pathway of the Sacramento Downtown Streetcar, which is planned to run east and west across Capitol Mall and Tower bridge, to and from West Sacramento, before turning north on 3rd Street, in Downtown Sacramento. The proposed project is designed to accommodate a proposed Streetcar platform on the east side of 3rd Street on the northwest side of the project site.
• **LU 2.6.4 Sustainable Building Practices.** The City shall promote and, where appropriate, require sustainable building practices that incorporate a "whole system" approach to designing and constructing buildings that consume less energy, water and other resources, facilitate natural ventilation, use daylight effectively, and are healthy, safe, comfortable, and durable. (RDR/IGC)	The proposed project would incorporate measures to minimize energy and water consumption, improve indoor environmental quality, minimize vehicular traffic and associated air pollutant emissions. Those measures would include the following: *Water* • The project will comply with minimum CALGreen Tier 1 water efficiency standards. • New landscape plants will be drought tolerant, native to California or other Mediterranean climates, or other low water use species. • High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers will be used. • All water fixtures (faucets, showerheads, and toilets) will be low flow and/or WaterSense certified for low water use. • All units will be equipped with Energy Star certified dishwashers for low water use. • High-efficiency hot water boiler systems will be used for efficient hot water distribution.

TABLE 3-1
TOWER 301 PROJECT
CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES

Applicable 2035 General Plan Goal/Policy	Discussion
Land Use and Urban Design (cont.)	
LU 2.6.4 (cont.)	*Energy* • The structure will comply with 2019 Title 24 Energy Efficiency Standards (Effective January 1, 2020). • The proposed project will be wired for the future installation of electrical vehicle charging stations. • All residences will be equipped with Energy Star certified appliances (dishwashers and refrigerators). • Energy efficient LED light fixtures will be installed within the residences and office suites and for exterior lighting. • All residential units and business suites will incorporate energy efficient Low-E windows. • The parking garage will be designed for future electric vehicle charging station expansion. *Materials* • Durable, non-combustible materials, and fire-resistant roofing will be used. • Low/no VOC paints and coatings will be used in project construction and maintenance. • Low VOC caulks, construction adhesives, and sealants will be used in project construction and maintenance. *Site Planning & Design* • The proposed project will be equipped with secure bike lockers for residents and employees
• **LU 2.7.3 Transitions in Scale.** The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. (RDR)	The proposed project would include a single 31-story high-rise tower atop a 10-story podium. In compliance with the Capitol View Protection Ordinance (Section 17.216.860 of the Sacramento City Planning and Development Code), the podium structure would be set back approximately 90 feet from the center of Capitol Mall, and the tower section of the structure would be set back 140 feet from the center of Capitol Mall. The proposed project would include appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining office, commercial, residential, and entertainment uses.
• **LU 2.7.7 Buildings that Engage the Street.** The City shall require buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. (RDR)	The main pedestrian entry to the proposed building would be oriented toward Capitol Mall and centered on the block. The proposed project would feature ground level-retail and restaurant uses that would actively engage the public realm through appropriate setbacks, façade articulation, and transparency. The proposed project would include appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining office, commercial, residential, and entertainment uses.
• **LU 2.7.8 Screening of Off-street Parking.** The City shall reduce the visual prominence of parking within the public realm by requiring most off-street parking to be located behind or within structures or otherwise fully or partially screened from public view. (RDR/MSPS)	The proposed project would provide onsite parking within the proposed structure and which would be largely screened from public view.

TABLE 3-1
TOWER 301 PROJECT
CITY OF SACRAMENTO 2035 GENERAL PLAN—RELEVANT GOALS AND POLICIES

Applicable 2035 General Plan Goal/Policy	Discussion
Central City Community Plan Policies	
Land Use and Urban Design	
• **CC.LU 1.4 Office Development.** The City shall encourage public and private office development, where compatible with the adjacent land uses and circulation system, in the Central Business District, Southern Pacific Railyards, and Richards Boulevard area. (MPSP/JP)	The proposed project would construct a high-rise building with approximately 791,647 gross square feet of office space in the CBD. The proposed project would be compatible with adjacent uses, which include office and commercial uses and the downtown grid circulation system.
• **CC.LU 1.5 Central Business District.** The City shall improve the physical and social conditions, urban aesthetics, and general safety of the Central Business District. (*MPSP*)	The proposed project would be a distinctive, iconic structure in the CBD which would substantially improve the urban aesthetics of a presently vacant site. The proposed project would increase the downtown employee and residential population which would improve physical and social conditions and the general safety of the CBD.
Housing	
• **CC.H 1.1 Mixed-Use Buildings.** The City shall provide the opportunity for mixture of housing with other uses in the same building or on the same site at selected locations to capitalize on the advantages of close-in living. (RDR/MSPS)	The proposed project would include office, residential, restaurant, and retail uses in a single building and on a single block in the CBD.

The CCSP was prepared in accordance with Sacramento Planning and Development Code section 17.904.010 to facilitate implementation of the general plan within the Central City. The CCSP serves as a bridge between individual development projects and the City of Sacramento 2035 General Plan and the CCCP, customizing the planning process and land use regulations to the unique characteristics of the Central City. All subsequent development projects, zoning regulations, public improvements, and related activities within the CCSP area are required to be consistent with the CCSP.

The City's General Plan establishes land uses within the CCSP area, and provides an extensive policy framework that guides urban form and design. The General Plan Land Use and Urban Design policies address a variety of topics applicable to the CCSP area, including growth and change, urban form, neighborhoods, centers, corridors, employment uses, public/quasi-public uses, and open space, parks, and recreation uses.

The City's Planning and Development Code provides the zoning regulations for the CCSP area and establishes the framework through which the CCSP will be implemented. The Planning and Development Code allows for the establishment of a special planning district (SPD) for defined areas that the Planning and Design Commission and City Council have determined require specifically tailored provisions intended to positively benefit the area and its immediate surroundings. The Central City SPD was established to facilitate desired growth and revitalization in the Central City.

The Central City Urban Design Guidelines (CCUDG), which include the Central Core and Central Neighborhood Design Guidelines, set forth a long-term vision for the physical form and character of Sacramento's Central City, including the CCSP area. The CCUDG establish required and recommended design elements that are to be applied during the design and review of individual development projects and improvements. Concurrent with approval of the CCSP, the CCUDG were amended to ensure consistency with the goals and policies of the CCSP.

The CCSP anticipates construction and operation of new development (new buildings and new uses) combined with intensification of existing buildings and occupancy of currently vacant parcels or buildings. The CCSP is expected to result in 13,401 dwelling units and 7,173,044 square feet (sf) of non-residential use in the CCSP area. Goals and policies from the CCSP that are applicable to the proposed project are presented in **Table 3-2**.

TABLE 3-2
TOWER 301 PROJECT
CITY OF SACRAMENTO CENTRAL CITY SPECIFIC PLAN—RELEVANT POLICIES

Applicable CCSP Policy	Discussion
Land Use and Urban Form Policies	
• **LU.2.1 Critical Mass of Density and Intensity.** Encourage higher densities and intensities, greater building heights, housing choices, mixed use projects, amenities, pedestrian and bicycle oriented streetscapes and activities, and active ground floors within walking distance (10-minute walk or 1/2 mile) of the streetcar line and light rail stations to ensure a critical mass of residents and employees to support transit ridership.	The proposed project would develop a high-rise building in the CBD that would include high-density, high-intensity office and residential uses with ground-floor retail and restaurant uses. The project site is proximate to a multitude of transportation options, including light rail, passenger heavy rail, and buses. The project site is located adjacent to the anticipated pathway of the Sacramento Downtown Streetcar, which is planned run east and west across Capitol Mall and Tower bridge, to and from West Sacramento. The proposed project is designed to accommodate a proposed Streetcar platform on the east side of 3rd Street on the northwest side of the project site.
• **LU.4.2 High Quality Materials.** Encourage the use of high-quality building materials, detailing, and landscaping as defined by the Central City Design Guidelines.	The proposed project would use high-quality building materials, detailing, and landscaping as defined by the Central City Design Guidelines. The exterior of the proposed project would be a glass and aluminum curtain wall system designed to achieve a balance between daylighting, views, and energy-efficient performance.
• **LU.6.2 Varied Skyline.** Support a mixture of mid and high-rise buildings creating a varied and dramatic skyline.	The proposed project would be a distinctive, highly visible, iconic structure near the entrance to Capitol Mall. The proposed project would be the tallest building in the city and would be a prominent feature of the city skyline. The proposed project would serve as a landmark that would contribute to a varied and dramatic skyline.
• **LU.6.3 Housing Expansion and Integration.** Expand the supply of housing in the Central Business District, through the vertical and horizontal integration of residential with other uses.	The proposed project would include 100 residential units across 7 levels along with non-residential uses (office, retail, restaurant) which would expand the supply of housing in the CBD through the vertical integration of residential with other uses.
• **LU.6.6 Visual Identity.** Enhance the visual identity, landscaping, orientation of development, and unique gateway status of Capitol Mall.	The proposed project would be a distinctive, highly visible, iconic structure near the entrance to Capitol Mall. The proposed project would be the tallest building in the city and would be a prominent feature of the city skyline. The proposed project would serve as a landmark that would enhance and draw attention to the gateway status of Capitol Mall.
• **LU.7.3 New Mixed Uses.** Promote new mixed uses, including additional employment, retail, commercial, services, and residential uses compatible with the nearby neighborhoods.	The proposed project would develop mixed uses, including additional employment, retail, commercial, and residential uses compatible with the nearby neighborhoods.

Planning and Development Code

The City of Sacramento's Planning and Development Code (Sacramento City Code Title 17) is intended "[t]o implement the city's general plan through the adoption and administration of zoning laws, ordinances, rules, and regulations (§17.100.010(B)). To achieve this outcome, the PDC:

- regulates the use of land, buildings, or other structures;
- regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density; and
- regulates the physical characteristics of buildings, structures, and site development, including the location, height, and size of buildings and structures; yards, courts, and other open spaces; lot coverage; land use intensity through regulation of residential density and floor area ratios; and architectural and site design.

Zoning

The project site is zoned C-3-SPD, and the project does not propose to change the zone designation on the site. The C-3 (CBD) zone and Central City SPD, as defined in sections 17.216.800 through 17.216.880, and chapter 17.444 of the Sacramento Planning and Development Code, applies to an approximately 70-block portion of the Central City. The purpose of the C-3 zone is to provide for the most intense residential, retail, commercial, and office developments in the city. The maximum density is 450 dwelling units per net acre. There is no lot coverage requirement. The minimum and maximum floor area ratios (FAR) are established in the general plan. The C-3 zone is the City's only classification which has no height limit, aside from height limits imposed by the Capitol View Protection requirements (17.216.860) discussed below.

The C-3 designation provides for by-right mixed-use high-rise development and single-use or mixed-use development within easy access to transit (i.e., ground floor office/retail beneath residential apartments and condominiums) that includes the following:

- Office, retail, restaurant, service, cinema, fitness, hotel, and uses
- Multifamily dwellings (e.g., apartments and condominiums)
- Gathering places such as plazas, courtyards, or parks
- Compatible public, quasi-public, and special uses.

As defined in Chapter 17.400, Special Planning Districts Generally, of the Sacramento Planning and Development Code, the designation "SPD" appearing on official zoning maps means that the property is included in a special planning district and is subject to the requirements set forth in Chapter 17.400 and the chapter in Division IV, Special Planning Districts and Planned Unit Developments, adopted for the specific SPD. In this particular case, chapter 17.444.

As described above, the CCSP establishes the Central City SPD, which is designed to provide regulatory incentives to further encourage development consistent with the goals of the CCSP. These incentives include.

- Increased maximum height allowances in the General Commercial (C-2), Office Building (OB), and Residential Mixed Use (RMX) zones,
- Increases in the maximum density allowances in the OB and RMX zones,
- Reduced open space requirements for residential uses
- No open space requirements for the conversion of a nonresidential building to a multi-unit dwelling,
- Reduction of the adaptive reuse density requirement to 1 dwelling unit/350 square feet for listed historic resources, and
- Elimination of the 60-foot height threshold in the CBD that triggers commission-level site plan and design review.

An evaluation of the proposed project's consistency with the C-3-SPD zoning designation is provided below under *Consistency with Adopted Plans, Policies, and Zoning*.

Capitol View Protection Ordinance

Section 17.216.860 of the Sacramento City Code recognizes the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open-space resource. The ordinance establishes height restrictions, setback requirements, and parking regulations for development located near the State Capitol building and Capitol Park, including along Capitol Mall. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park. The project site is within the area that is subject to compliance with the ordinance.

The height limits for the ordinance are illustrated on a map that is Exhibit B of the ordinance. The proposed project is located outside the area subject to height restrictions.

The area subject to setback requirements in the ordinance are illustrated on a map that is Exhibit C of the ordinance. The project site is located within an area subject to setback requirements. As specified on Exhibit G of the ordinance, podium structures must be setback 90 feet from the centerline of Capitol Mall, and towers must be setback 140 feet from the centerline of Capitol Mall within the area subject to setback requirements.

The proposed project would construct an approximately 557-foot-tall, 41-story high-rise building. on the block bounded by 3rd, L, and 4th streets and Capitol Mall. The proposed structure would include a single 31-story high-rise tower atop a 10-story podium. The podium structure would be set back approximately 90 feet from the center of Capitol Mall and centered on the block. The tower section of the structure would be set back 140 feet from the center of Capitol Mall. The proposed project would comply with the setback requirements of the ordinance.

3.2.4 Land Use Evaluation

This section evaluates the proposed project for compatibility with existing and planned adjacent land uses and for consistency with adopted plans, policies, and zoning designations. Physical environmental impacts resulting from implementation of the proposed project are discussed in the applicable environmental resource sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting.

Compatibility with Existing and Planned Adjacent Land Uses

As described in Chapter 2, Project Description, the proposed project would construct an approximately 557-foot-tall, 41-story high-rise building that would include office, residential, restaurant, and retail uses on the block bounded by 3rd, L, and 4th streets and Capitol Mall. The proposed structure would include a single 31-story high-rise tower atop a 10-story podium. The proposed project would include approximately 791,647 gross square feet (GSF) of office space, 24,663 GSF of retail and amenity space, 100 residential units totaling 96,755 GSF, 1,304 vehicle parking spaces, and 234 bicycle parking spaces.

The predominant uses along the Capitol Mall are office, with some street-facing restaurant uses. Similar to the project site, the adjacent blocks to the north, south, and east are designated CBD in the 2035 General Plan and the CCCP, are zoned C-3-SPD, and include office, commercial, and restaurant uses. Farther east of the project site, there are additional office and commercial uses, including Downtown Commons and the Golden 1 Center.

The addition of a high-rise building that would include office, residential, restaurant, and retail uses would intensify but not materially change the pattern of land uses in the project vicinity. The project would be located in an area designated for the most intense residential, retail, commercial, and office developments in the city. Furthermore, it is not anticipated that operation of the proposed project would generate excessive noise, light, dust, odors, or hazardous emissions that could be considered incompatible with existing or planned adjacent land uses (see Sections 4.1, Aesthetics, Light, and Glare; 4.2, Air Quality; and 4.5, Noise and Vibration, for project impacts related to these topic areas). Implementation of the proposed project would reinforce existing land use patterns, and would not be incompatible with existing and planned adjacent land uses.

Consistency with Adopted Plans, Policies, and Zoning

Sacramento Area Council of Governments Blueprint and MTP/SCS

Based on the principles of the Blueprint, the goals of the 2016 MTP/SCS are to link land use and transportation facilities and programs in a way to provide long-term environmental and social benefits, including shortened commute times, reduced traffic congestion, less dependence on automobiles, improved air quality, reduced greenhouse gas emissions, reduced distances traveled between jobs and housing, and housing choices more aligned with the changing demographic of

the Sacramento region. While not a land use plan, the success of the MTP/SCS is based certain assumptions about land use and development.

The proposed project would provide residential and non-residential uses at the center of the region, in a location proximate to a multitude of transportation options, including light rail, passenger heavy rail, and buses. The project site is located adjacent to the anticipated pathway of the Sacramento Downtown Streetcar (Streetcar), which is planned run east and west across Capitol Mall and Tower bridge, to and from West Sacramento, before turning north on 3rd Street, in Downtown Sacramento. The proposed project is designed to accommodate a proposed Streetcar platform on the east side of 3rd Street on the northwest side of the project site.

The level of development assumed in the 2035 General Plan and 2035 General Plan Master EIR represent projected conditions in the year 2035, consistent with the horizon year of SACOG's projections for the MTP/SCS. Population projections in the 2035 General Plan and 2035 General Plan Master EIR were derived from SACOG's MTP forecast. Therefore, because the proposed project would be consistent with the 2035 General Plan and 2035 General Plan Master EIR, the proposed project would also be consistent with the SACOG MTP/SCS.

City of Sacramento 2035 General Plan

The project site is designated as CBD on the City of Sacramento 2035 General Plan Land Use and Urban Form Diagram. The CBD designation provides for mixed-use high-rise development and single-use or mixed-use development within easy access to transit (i.e., ground floor office/retail beneath residential apartments and condominiums), including office, retail, and service uses; multifamily dwellings (e.g., apartments and condominiums); gathering places such as plazas, courtyards, or parks; and compatible public, quasi-public, and special uses.

The proposed project would construct an approximately 557-foot-tall, 41-story high-rise building that would include approximately 791,647 GSF of office space, 24,663 GSF of retail and amenity space, 100 residential units totaling 96,755 GSF, 1,304 vehicle parking spaces, and 234 bicycle parking spaces. The proposed project would not change the land use designation or the existing use of the project site and would not require any General Plan Amendments in order to be approved by the City. As demonstrated in Table 3-1, the proposed project would be considered consistent with the goals and policies contained in the City's 2035 General Plan.

Central City Community Plan

The primary goal of the CCCP is to continue the revitalization of the Central City to provide a viable living, working, shopping, and cultural environment with a full range of day and night activities for residents, employees, and visitors. The CCCP land use designation for the project site is CBD. The proposed project would be consistent with and retain the existing land use designation as described in the CCCP. As demonstrated in Table 3-1, the proposed project would be considered consistent with the goals and policies contained in the CCCP.

Central City Specific Plan

As discussed above, the Central City SPD was established to facilitate desired growth and revitalization in the Central City. The proposed project would construct an approximately 557-foot-tall, 41-story high-rise building that would include approximately 791,647 GSF of office space, 24,663 GSF of retail and amenity space, 100 residential units totaling 96,755 GSF, 1,304 vehicle parking spaces, and 234 bicycle parking spaces. As discussed above, the proposed project would not change the land use designation and would not require any General Plan Amendments in order to be approved by the City. As discussed below, the proposed project would not change the C-3-SPD zoning designation of the project site and would not require any amendments to the City's Planning and Development Code in order to be approved by the City. As demonstrated in Table 3-2, the proposed project would be considered consistent with the policies contained in the CCSP.

City of Sacramento Planning and Development Code

The project site is zoned C-3-SPD, and the project does not propose to change the zone designation on the site. The purpose of the C-3 zone is to provide for the most intense residential, retail, commercial, and office developments in the city. According to Footnote 3 in Table LU 1 of the General Plan, residential development that is part of a mixed-use building shall comply with the allowed FAR range and is not subject to the allowed density range. As a result, only the minimum and maximum FARs contained in the general plan apply. According to the General Plan, the minimum and maximum FARs for parcels within the CBD are 3.0 and 15.0, respectively. The project would include approximately 792,000 square feet of office space, 96,800 square feet of residential space, and 24,700 of retail space on 2.4 acres, resulting in a FAR of 8.77. Therefore, the intensity of proposed project would comply with applicable standards for the site.

The C-3 zone is the City’s only classification which has no height limit, aside from height limits imposed by the Capitol View Protection ordinance. As discussed above, the proposed project is located outside the area subject to height restrictions of the Capitol View Protection ordinance, and the proposed project would comply with the setback requirements of the ordinance

The proposed project would not change the zoning designation of the project site and would not require any amendments to the City's Planning and Development Code in order to be approved by the City. For these reasons, the proposed project would be consistent with the City's Planning and Development Code.

3.3 Population, Employment, and Housing

This section evaluates the potential effects of the proposed project in relation to population, employment, and housing. This section compares the proposed project’s predicted population to the planned population in the 2035 General Plan in order to determine if the proposed project would induce substantial growth that is inconsistent with the approved land use plan for the area. This section also describes existing employment levels and the existing jobs-housing relationship

in the city and evaluates the potential for employment increases that would result from implementation of the proposed project to result in substantial changes to the jobs-housing relationship.

No comments pertaining to population, employment, and housing were submitted in response to the NOP.

3.3.1 Environmental Setting

Population

Regional Population

The counties that comprise the SACOG and the greater Sacramento region, El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties, have experienced steady growth over the past 18 years. The regional population increased a total of 29 percent between 2000 and 2018, from approximately 1,936,006 in 2000[3] to 2,500,667 in 2018.[4] SACOG predicts the regional population to increase to 2,472,567 by 2020 and 3,078,772 by 2036.[5]

City of Sacramento Population

Between 2000 and 2018, the City of Sacramento experienced a 23 percent increase in population. According to the California Department of Finance, the City's population was 407,018 in 2000 and 501,344 in 2018.[6] The City's share of the total population in Sacramento County has decreased substantially during that period, from 46.1 percent of the County in 2000[7] to 32.7 percent in 2018.[8]

Downtown Population

According to the U.S. Census Bureau, the Central City, which includes the CCSP area, the Railyards Specific Plan Area, and the River District, contained 32,655 residents as of the year 2000. The most recent American Community Survey (ACS) estimates show that the Central City averaged 32,488 residents.[9]

3 California Department of Finance, 2012. E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, with 2000 & 2010 Census Counts. Revised November 9, 2012.

4 California Department of Finance, 2018. E-4 Population Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. Released May 1, 2018.

5 Sacramento Area Council of Governments. 2016. Metropolitan Transportation Plan/Sustainable Communities Strategy. p. 22, Table 3.1. Adopted February 18, 2016.

6 California Department of Finance, 2018. E-4 Population Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. May 2018.

7 California Department of Finance. 2007. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. August 2007.

8 California Department of Finance, 2018. E-4 Population Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. May 2018.

9 Bay Area Economics. 2016. *Sacramento Downtown Specific Plan Draft Housing Market Analysis, Phase I and Phase II*. November. p. 5.

Employment

The Sacramento region is a hub for state government and related industries, health services, financial services, and local/regional serving retail. According to the City's 2013-2021 Housing Element, in 2008 there were 299,732 jobs in the Sacramento. By 2020 the number of jobs is expected to increase by 8 percent to 324,027, and by 2035 the number of jobs is expected to increase by another 20 percent to 390,112, for a total increase of 30 percent from 2008 to 2035. Sacramento is projected to add over 90,000 jobs from 2008 to 2035.

The Housing Element anticipates substantial growth in employment in the Central City between 2008 and 2035.[10] By 2020 the Central City is projected to experience a substantial increase in employment, adding 6,642 jobs from 2008 to 2020 (for a total of 121,450 jobs).[11] From 2020 to 2035, the Central City is projected to experience another substantial increase in, adding 31,386 jobs (for a total of 152,836 jobs).[12]

Housing

While the economic recession of 2008 caused a downturn in housing values and new home construction across the Sacramento region, in line with general statewide and national trends, the region has recently experienced a period of economic growth. However, housing values across the region are considerably lower than in the Bay Area. As such, Sacramento continues to remain a more affordable housing option for people working and commuting to other regions in northern California. According to the California Department of Finance, there were 194,537 housing units in the City of Sacramento in 2018 and a vacancy rate of 6.2 percent.[13]

Jobs-Housing Relationship

Jobs-housing relationship is used to describe the ratio of residences to jobs in a particular community or geographic area. Low jobs-housing ratio (i.e., few jobs for the number of households in the area) indicates that many workers commute out of their residence area to their place of employment. In areas with high jobs-housing ratio (i.e., many jobs for the number of households in the area), jobs need to be filled by workers from outside the area. A jobs-housing ratio of 1.0 reflects that there is one job available per household and is considered to be in "balance." Areas with high or low jobs-housing ratios are likely to generate longer home-to-work commutes.[14]

When assuming that the affordability of housing and the incomes of jobs in the local market are paired reasonably closely, if the quantity and proximity of housing units is proportionate to the quantity and proximity of jobs, the majority of employees would be able to work and reside in the

[10] City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-3.
[11] City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-15.
[12] City of Sacramento, 2013. City of Sacramento 2013-2021 Housing Element. Adopted December 17, 2013. p. H 3-15.
[13] California Department of Finance, 2018. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. May 2018.
[14] Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Chapter 9, Economic Vitality. p. 220. February 18, 2016.

same community. A more balanced relationship between jobs and housing can help reduce the number of vehicle trips and the overall vehicle miles traveled as a result of shorter commutes to employment within the same proximate residential areas. Such a reduction in vehicle trips and vehicle miles traveled would tend to reduce levels of air pollutant emissions (including greenhouse gas emissions) and would create less vehicular congestion on area roadways and intersections. It is important that the determination of the jobs-housing relationship focuses on whether housing in the community is affordable to local employees. The availability of an adequate housing supply, presenting a range of price levels that include prices that are reasonably affordable for local employees, can potentially reduce the commute mileage between homes and work sites.

The 2016 SACOG MTP/SCS evaluated the change in jobs-housing ratio between 2008 (considered to be a somewhat normal year in the regional economy) and the ratio projected for 2036 (see **Table 3-3**). Within the SACOG region, there were 969,838 jobs and 819,277 households in 2008, resulting in a jobs-housing ratio of 1.18. By 2036, the SACOG MTP/SCS projects there will be 1,327,279 jobs and 1,140,202 households resulting in a jobs-housing ratio of 1.16.[15]

TABLE 3-3
JOBS AND HOUSEHOLDS, 2008 AND 2036

	"Base" Jobs[1]		Total Jobs		Households		Jobs-Housing Ratio	
Geographic Area	**2008**	**2036**	**2008**	**2036**	**2008**	**2036**	**2008**	**2036**
SACOG Region	N/A	N/A	969,838	1,327,279	819,277	1,140,202	1.18	1.16
Sacramento County	N/A	N/A	626,155	831,171	511,402	699,811	1.22	1.19
Sacramento CBD/Riverfront Employment Center	99,243	133,026	109,719	144,559	17,523	46,211	6.26	3.13

NOTES:
1 "Base" jobs exclude retail and food service.
N/A = not available

SOURCES: Sacramento Area Council of Governments. 2016. 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy. Chapter 9, Economic Vitality. February 18, 2016; Kacey Lizon, Planning Manager, Sacramento Area Council of Governments, personal communication, April 14, 2016.

In 2019, there were approximately 244,789 employees in City of Sacramento, with 189,428 households.[16] This generates a jobs/housing ratio of 1.29, reflective of Sacramento's continuing role as the regional employment center, and demonstrating that employees commute from other neighboring communities in the region to work within the City.

15 Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Chapter 9, Economic Vitality. p. 220. Table 9.5. February 18, 2016.

16 City of Sacramento, 2019. City of Sacramento, Economic Development Department: Key Demographics. Available: http://www.cityofsacramento.org/Economic-Development/Why-Sacramento/Demographics-and-Market-Information/Key-Demographics. Accessed June 19, 2019.

3.3.2 Analysis

Population

It is anticipated that up to 13,401 new housing units would be built in the CCSP area over the next 20 years.[17] The proposed project would include 100 residential units. To determine the estimated population increase that would result from implementation of the proposed project, this analysis assumes average household size of 1.62 persons. This average household size is based on the fact that households in the CCSP area tend to be smaller than those of the City of Sacramento as a whole.[18] Using this factor, the projected population increase associated with the proposed project would be 162 persons. As discussed earlier in this section, population increases and decreases are not, in and of themselves, considered physical environmental effects. Physical environmental effects that would be a result of population growth that would result from the proposed project are examined in the appropriate environmental resource sections of this EIR.

Jobs-Housing Relationship

It is anticipated that the proposed project would result in approximately 4,500 full-time employees. Consequently, implementation of the proposed project would result in an increase in the projected imbalance between jobs and housing in the City. However, as noted in the 2035 General Plan Master EIR, over time, several factors, including recent demographic trends and ongoing housing and development patterns would likely result in a more balanced ratio of jobs and housing in the City, along with a reduction in vehicle trips and associated pollutant emissions and congestion on area roadways and intersections. Major infill projects, including the Railyards Specific Plan and the Township 9 development, as well as recently approved loft, condominium, and single-family residential projects in the CCSP area provide a wide range of housing types as well as housing and employment centers in close proximity to transit, bike lanes, and the network of sidewalks.[19]

[17] City of Sacramento, 2018. *Central City Specific Plan Environmental Impact Report*. Certified April 19, 2018. p. 2-11.
[18] City of Sacramento, 2018. *Central City Specific Plan Environmental Impact Report*. Certified April 19, 2018. p. 2-11.
[19] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015. p. 3-10.

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CHAPTER 4
Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction to the Analysis

This Environmental Impact Report (EIR) evaluates the potential physical environmental effects resulting from implementation of the proposed project. Some environmental issue areas that are typically considered under CEQA would not be affected by the proposed project and, pursuant to CEQA, are not further analyzed in this EIR. A discussion of those issues that were not further analyzed in the EIR can be found in the Initial Study in **Appendix C**.

4.0.1 Definitions of Terms Used in the EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the proposed plan:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of Significance used in this EIR include those standards provided by the City of Sacramento. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local regulations and ordinances.

- **Significant Impact:** A project impact is considered significant if the project would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined as "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."[1]

- **Potentially Significant Impact:** A potentially significant impact is identified where the proposed project may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the project or the affected environment. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

[1] State CEQA Guidelines, section 15382.

- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the proposed project would not exceed the applicable significance criterion.

- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.

- **Cumulative Impact:** Under CEQA, a cumulative impact refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."[2] Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the project's contribution is "cumulatively considerable."[3]

- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the State CEQA Guidelines defines mitigation as:

  a. Avoiding the impact altogether by not taking a certain action or parts of an action;

  b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;

  c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

  d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

  e. Compensating for the impact by replacing or providing substitute resources or environments.

4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, Aesthetics, Light, and Glare) that present for each environmental resource issue area the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment. Where required, potentially feasible mitigation measures are identified to lessen or avoid significant impacts. Each section includes an analysis of project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the proposed project's **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the proposed project and project alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the project. This setting establishes the baseline by which the proposed project and project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local

[2] State CEQA Guidelines, section 15355.
[3] State CEQA Guidelines, section 15130(a).

laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **significance criteria**, which identify the standards used by the City of Sacramento to determine the significance of effects of the proposed project. The significance criteria used for this analysis were derived from the City of Sacramento's established significance standards, which, in turn, reflect policies of the 2035 General Plan, as well as other criteria applicable under CEQA, including thresholds established by trustee and responsible agencies.

A **methods and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the proposed project, and is followed by an **impacts** and **mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a project to a physical environmental change, or in determining whether an impact is significant.

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the proposed project would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

Impacts and Mitigation Measures

Impact 4.X-1: Impact Statement.

A discussion of the potential impact of the project on the resource is provided in paragraph form. To identify impacts that may be site- or project element-specific, where appropriate, the discussion differentiates between construction effects and operational effects. A statement of the level of significance before application of any mitigation measures is provided in **bold**.

Mitigation Measure 4.X-1:

Recommended mitigation measure numbered in consecutive order. *OR*

Mitigation: None required.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included in **bold**.

Cumulative Impacts

An analysis of cumulative impacts follows the project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other past, present and reasonably foreseeable projects causing related impacts.[4]

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., the City of Sacramento, the Sacramento Valley Air Basin, other activity concurrent with project construction). In some instances, a project-specific impact may be considered less than significant, but when considered in conjunction with other cumulative projects or activities may be considered significant or potentially significant.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant and no mitigation of the project contribution is required.[5] The cumulative impacts analysis is formatted the same as the project-specific impacts, as shown above.

4 State CEQA Guidelines section 15355.
5 State CEQA Guidelines section 15130(a)(3).

4.1 Aesthetics, Light, and Glare

This section addresses the existing visual characteristics in and around the project site and considers potential changes to the visual conditions that would result from implementation of the proposed project.

The Environmental Setting of this chapter includes descriptions of existing visual characteristics of the project site and vicinity. Existing plans and policies relevant to urban design and visual resource issues associated with implementation of the proposed project are provided. The impact discussion evaluates potential impacts to aesthetic and visual resources resulting from implementation of the proposed project in the context of existing conditions based on analyses of photographs, site reconnaissance, and project data. Where significant impacts are identified, potentially feasible measures that could be undertaken to avoid or reduce the magnitude of those significant impacts are described.

No comments pertaining to aesthetics, light, and glare were submitted in response to the NOP.

4.1.1 Environmental Setting

The City of Sacramento is characterized by a downtown urban core surrounded by suburbs and agricultural land. To the east, on clear days, the foothills of the Sierra Nevada Mountains provide a backdrop to the visual setting of the City. Downtown Sacramento is framed by a grid pattern of bisecting streets. Buildings range from one- and two-story single-family residences to large high-rise office buildings. Buildings are clad in a multitude of materials, including metal, glass, wood, brick, and stone.

The City of Sacramento is located at the confluence of the Sacramento and American Rivers, which occurs at the northwest corner of the Central City. These river corridors create two of the primary natural scenic resources of the Central City area. The Sacramento River flows north to south and serves as the western boundary for much of the City. The American River flows westward on the northern boundary of the Central City and River District areas and meets the Sacramento River just west of Interstate 5 (I-5). The American River Parkway, an open space greenbelt/riparian corridor, extends 29 miles from the confluence of the Sacramento River east to Folsom Dam. The two rivers create a permanent visual break in the pattern of urban development and provide a scenic contrast to the urbanized Central City area.

Typical of the visual character of a downtown area of a city, the Central Business District (CBD) of Sacramento is characterized by larger multi-story buildings constructed of metal and glass. High-rise buildings in the CBD range in height from approximately 150 feet to 425 feet. Multi-story high rises in the CBD are constructed mainly of stone, brick, metal and glass, interspersed with parks and municipal uses. More recently constructed buildings tend to be taller than the older buildings. The CBD includes buildings of varying styles, from the 1920s Italianate masonry and terra-cotta facades, to the 1950s-era modern steel and glass clad exteriors, to more recently constructed postmodern buildings.

Sacramento's downtown skyline is visible from nearby locations, including the West Sacramento riverfront, the State Route (SR) 160 and Business 80 bridges over the American River, as well as from miles around the city, including from eastbound Interstate 80 (I-80) on the Sacramento-Yolo Causeway, from westbound I-80 east of the City of Roseville, from northbound I-5 between Elk Grove and Sacramento, from southbound I-5 in Natomas north of the downtown area, and from westbound US 50 as far east as El Dorado Hills. High-rise buildings are the distinctive features of the skyline.

The Central City is also characterized by the intense urban forest of street trees that line almost all streets. During summers the trees become a canopy of green leaves that shade the Central City most of the day. During winters these largely deciduous trees lose their leaves, with the trunk and branch structures becoming dominant features of the visual landscape.

In most areas within the City, surrounding development includes artificial light sources that provide ambient nighttime light in the vicinity. Headlights from motor vehicles contribute to the ambient light conditions. Some freeways in the City are landscaped. Such sections of freeways are improved by planting of lawns, trees, shrubs, flowers or other ornamental vegetation on at least one side and/or in the median of the freeway. None of the freeway segments within the City, including I-5 as it passes through downtown Sacramento, have been identified by the California Department of Transportation (Caltrans) as scenic.[1]

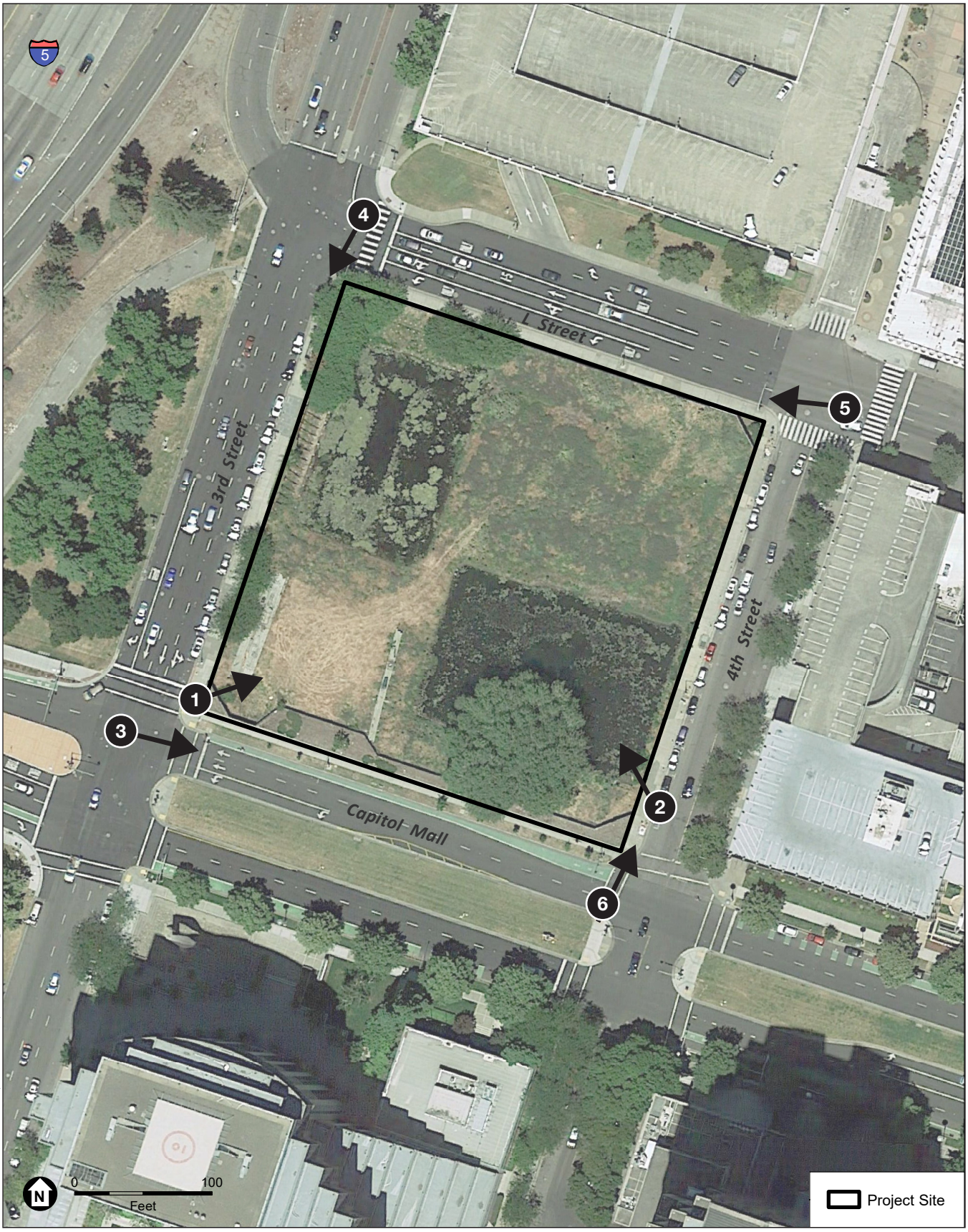
Project Site and Vicinity

An aerial view of the project site and the locations of photographic views included in subsequent figures are provided on **Figure 4.1-1**. Photographs of the project site and vicinity are provided on **Figure 4.1-2** through **Figure 4.1-4**.

The project site is located on the block bounded by 3rd, L, and 4th streets and Capitol Mall in the CBD. At present, the project site is not in use but contains foundational elements from a previous development effort on the site that was started but never completed. The project site has remained closed to the public. Screened chain-link fencing surrounding the perimeter of the project site largely prevents public views of the site interior, which has been subject to vegetative growth due to non-use (see Figure 4.1-2).

The project site is located at the entrance to the Capitol Mall Corridor, a wide boulevard between the Capitol and the Tower Bridge crossing of the Sacramento River. Views of Capitol Mall are characterized by the mostly tree-lined roadway, which includes two lanes each of west- and eastbound traffic, divided in the middle with a broad, turf-covered median strip. The views on Capitol Mall are accentuated by the large massing of mid-rise and high-rise buildings that line the street with a large uniform setback that makes the view of the corridor substantially wider and more open than the street right of way itself.

[1] California Department of Transportation, 2017. *California Scenic Highway Program*. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 3, 2019.



D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Google, 2017; ESA, 2018

Tower 301

Figure 4.1-1
Photo Location Map

ESA

Viewpoint 1: Project site. View facing northeast.

Viewpoint 2: Remnants of foundational piles in the southeastern quadrant of the project site from a previous uncompleted project. View facing northwest.

SOURCE: ESA, 2019

Tower 301

Figure 4.1-2
Viewpoints 1 and 2

Viewpoint 3: Capitol Mall and adjacent high-rise buildings with the southern fenced boundary of the project site on the left. View facing east.

Viewpoint 4: Facing south on 3rd Street from L Street with the western fenced boundary of the project site on the left and the Westamerica Bank office building in the background.

D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: ESA, 2019

Tower 301

Figure 4.1-3
Viewpoints 3 and 4

ESA

Viewpoint 5: Facing west on L Street from 4th Street with the northern fenced boundary of the project site on the left, the Downtown Plaza West parking structure on right, and Old Sacramento and the upper portion of the California Department of General Services (Ziggurat) building in West Sacramento in the background.

Viewpoint 6: Facing north on 4th Street from Capitol Mall with eastern fenced boundary of the project site on the left, 455 Capitol Mall building on the right, and the Downtown Plaza in the background.

SOURCE: ESA, 2019

Tower 301

Figure 4.1-4
Viewpoints 5 and 6

Visually prominent buildings in the vicinity of the project site include the Westamerica Bank building at 300 Capitol Mall, a 230-foot-tall postmodern building with green glass and light-brown-granite exterior; the Wells Fargo Center at 400 Capitol Mall, a 423-foot-tall postmodern, granite skyscraper with a light-brown façade; the 500 Capitol Mall building, a 420-foot-tall postmodern skyscraper with a light-brown-granite-and blue-glass curtain-wall façade; and the US Bank Tower at 621 Capitol Mall, a 403-foot-tall postmodern skyscraper with a steel, light-brown-granite, and blue-glass curtain-wall façade. The 100-foot-tall mid-century-modern 455 Capitol Mall building is located immediately east of the project site.

Immediately north of the project site, across L Street, the five-story, concrete, white-and-tan-colored Downtown Plaza West parking structure sits adjacent to the mid-century modern Macy's building, which also has primarily white and tan exterior elements. Immediately east of the Macy's building, the Golden 1 Center at 500 David J. Stern Walk is an indoor arena that is a prominent downtown landmark in the project vicinity. The building's multi-faceted façade rises approximately 100 feet above grade and is created from materials that include recycled aluminum, precast concrete, and glass.

Light and Glare

Introduction to Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Ambient light levels or illumination is measured in foot-candles. **Table 4.1-1** lists typical ambient illumination levels in foot-candles for exterior and interior lighting. "Horizontal" foot-candles measure light illumination on a horizontal surface, such as a sidewalk or parking lot; "vertical" foot-candles measure light illumination on a vertical surface.

TABLE 4.1-1
TYPICAL ILLUMINATION LEVELS IN FOOT-CANDLES

Light Source	Foot-Candles
Starlight	0.0002
Moonlight	0.02
Street Lighting	0.6-1.6
Office Lighting	70-150
Direct Sunlight	6,000-10,000

SOURCE: City of Sacramento, 2014. *Sacramento 2035 General Plan Background Report*. Public Review Draft, August 2014. Table 6-13, p. 6-122.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

Central City Lighting and Glare

The Central City is largely built-out, and a significant amount of artificial light and glare from urban sources already exists. The downtown area has a higher concentration of artificial light and reflective surfaces that produce glare than outlying residential areas due to the amount of artificial light associated with exterior building lights, lighted signs, street lights, roadways, signal lights, and parking area lights. Aside from streetlights, some of the most notable sources of nighttime light in the downtown skyline include colored light features on high-rise buildings such as the Bank of the West Tower at 500 Capitol Mall and the US Bank Tower at 621 Capitol Mall.

Although many of the buildings in the Central City are clad in non-reflective surfaces such as stone or terra cotta, the CBD contains a few notable sources of reflective glare, including several buildings with exteriors dominated by glass and/or mirrored glass, including the Westamerica Bank building at 300 Capitol Mall, the Wells Fargo Center at 400 Capitol Mall, the Bank of the West Tower, the US Bank Tower, and the Renaissance Tower at 801 K Street.

Finally, automobiles traveling along nearby and adjacent roadways and highways also contribute to nighttime sources of light and glare in the Central City area.

4.1.2 Regulatory Setting

Federal

There are no federal regulations pertaining to visual resources that are applicable to the proposed project.

State

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible

scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of State Scenic Highways.

According to the Caltrans list of designated scenic highways under the California Scenic Highway Program, there are no highway segments within the City of Sacramento that are designated scenic. SR 160 from the Contra Costa County line to the south limit of the City of Sacramento is the only officially designated state scenic highway near the City of Sacramento.[2] The project site is not visible from this portion of SR 160.

Local

City of Sacramento 2035 General Plan

The 2035 General Plan includes the following goals and policies that are relevant to the proposed project.

Land Use and Urban Design Element

Goal LU 2.4: City of Distinctive and Memorable Places. Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento's unique historic, environmental, and architectural context, and create memorable places that enrich community life.

Policy LU 2.4.1: Unique Sense of Place. The City shall promote quality site, architectural and landscape design that incorporates those qualities and characteristics that make Sacramento desirable and memorable including: walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles. (RDR)

Policy LU 2.4.2: Responsiveness to Context. The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento's climate, and consideration of cultural and historic context of Sacramento's neighborhoods and centers. (RDR)

[2] California Department of Transportation, 2017. *California Scenic Highway Program*. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 11, 2017.

Policy LU 2.4.3: Enhanced City Gateways. The City shall ensure that public improvements and private development work together to enhance the sense of entry at key gateways to the city. (JP)

Policy LU 2.4.4: Iconic Buildings. The City shall encourage the development of iconic public and private buildings in key locations to create new landmarks and focal features that contribute to the city's structure and identity. (RDR/MPSP)

Policy LU 2.4.5: Distinctive Urban Skyline. The City shall encourage the development of a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the city's tallest buildings, complemented by smaller urban centers with lower-scale mid- and high-rise development. (RDR/MPSP)

Goal LU 2.7: City Form and Structure. Require excellence in the design of the city's form and structure through development standards and clear design direction.

Policy LU 2.7.3: Transitions in Scale. The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. (RDR)

Policy LU 2.7.4: Public Safety and Community Design. The City shall promote design of neighborhoods, centers, streets, and public spaces that enhances public safety and discourages crime by providing street-fronting uses ("eyes on the street"), adequate lighting and sight lines, and features that cultivate a sense of community ownership. (RDR)

Policy LU 2.7.7: Buildings that Engage the Street. The City shall require buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking. (RDR)

Policy LU 2.7.8: Screening of Off-street Parking. The City shall reduce the visual prominence of parking within the public realm by requiring most off-street parking to be located behind or within structures or otherwise fully or partially screened from public view. (RDR/MSPS)

Goal LU 4.5: Urban Neighborhoods. Promote vibrant, high-density, mixed-use urban neighborhoods with convenient access to employment, shopping, entertainment, transit, civic uses (e.g., school, park, place of assembly, library, or community center), and community-supportive facilities and services.

Policy LU 4.4.1: Well-Defined Street Forms. The City shall require that new buildings in urban neighborhoods maintain a consistent setback from the public right-of-way in order to create a well-defined public sidewalk and street. (RDR)

Policy LU 4.4.2: Building Orientation. In buildings with nonresidential uses at street level, the City shall require that building facades and entrances directly face the adjoining street frontage and include a high proportion of transparent windows facing the street. (RDR)

Policy LU 4.4.3: Building Design. The City shall encourage sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through

careful use of building massing, setbacks, façade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. (RDR)

Urban Form Guidelines

The project site is designated CBD by the City of Sacramento 2035 General Plan.[3] The 2035 General Plan includes Urban Form Guidelines for the CBD designation, as presented below:

Central Business District

1. A mixture of mid- and high-rise buildings creating a varied and dramatic skyline with unlimited heights;
2. Lot coverage generally not exceeding 90 percent;
3. Buildings are sited to positively define the public streetscape and public spaces;
4. Building facades and entrances directly addressing the street and have a high degree of transparency;
5. An interconnected street system providing for traffic and route flexibility;
6. Vertical and horizontal integration of residential uses;
7. Public parks and open space areas within walking distance of local residents;
8. Paring is integrated into buildings or placed in separate structures;
9. Minimal or no curb cuts along primary streets;
10. Side or rear access to parking and service functions;
11. Broad sidewalks appointed with appropriate pedestrian amenities, including sidewalk restaurant/café seating;
12. Street design integrating pedestrian, bicycle, transit and vehicular use and incorporates traffic-calming features and on-street parking; and
13. Consistent planting of street trees providing shade and enhance character and identity.

Environmental Resources Element

Policy ER 7.1.3: Lighting. The City shall minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. (RDR)

Policy ER 7.1.4: Reflective Glass. The City shall prohibit new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building. (RDR)

[3] City of Sacramento, 2014. Sacramento 2035 General Plan Land Use and Urban Form Diagram. June 26, 2014.

Central City Community Plan

The City of Sacramento currently has ten adopted community plans that include policies and land use diagrams that pertain to the respective community plan areas. The project site is located within the Central City Community Plan (CCCP) area bounded by the Sacramento River on the west, the American River on the north, Business 80 and Alhambra Boulevard on the east, and parcels fronting southern edge of Broadway on the south. Community plans are part of the 2035 General Plan and are intended to supplement city-wide policies based on conditions or issues unique to the community plan area. The following policies from the CCCP are applicable to the proposed project:

Land Use and Urban Design

Policy CC.LU 1.2: Visual Qualities. The City shall improve the visual qualities of improvements, especially signing, building and yard maintenance, commercial developments and overhead utilities. (RDR)

Policy CC.LU 1.3: Interrelated Land Uses. The City shall provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community. (RDR/MPSP)

Central City Specific Plan

The Central City Specific Plan (CCSP) was prepared in accordance with Sacramento Planning and Development Code section 17.904.010 to facilitate implementation of the general plan within the Central City. The City's general plan establishes land uses within the CCSP area and provides an extensive policy framework that guides urban form and design. The following policies from the CCCP are applicable to the proposed project:

Land Use and Urban Form

Policy LU.4.2: High Quality Materials. Encourage the use of high-quality building materials, detailing, and landscaping as defined by the Central City Design Guidelines.

Policy LU.6.2: Varied Skyline. Support a mixture of mid and high-rise buildings creating a varied and dramatic skyline.

Policy LU.6.6: Visual Identity. Enhance the visual identity, landscaping, orientation of development, and unique gateway status of Capitol Mall.

Sacramento Central City Urban Design Guidelines

The Central City Urban Design Guidelines (CCUDG) direct future growth in the Central City Community Plan area. The CCUDG generally provide guidance in three areas: the urban design framework, the public realm, and the private realm. They establish a framework of urban design concepts intended to inform all decisions relating to the physical form and character of public and private development throughout the Central City. The CCUDG are intended to provide direction rather than impose prescriptive requirements. The City Commission or Director responsible for design review has the authority to waive individual guidelines for specific projects where it is found that such waiver will better achieve the design policy objectives than strict application of

the CCUDG. Key urban design framework concepts established for the whole of the Central City include:

- The Central City Skyline. High-rise towers should add visual interest to the skyline; that high-rise towers should reflect the role of the Central Core as the regional center of culture, commerce, and government; and that care is to be given to transitions from the Central Core to adjacent neighborhoods;

- Central City Gateways. Care should be taken to enhance the design of key entries to the Central City from freeways and on Capitol Mall;

- Primary Streets and the Street Grid. Protection and enhancement of the traditional street grid to improve connectivity around the Central City, including the re-connection of the Railyards/ River District via Railyards street network, and north-south streets such as 5th, 6th, 7th, and 10th streets; and design of streets so as to accommodate high traffic volumes without creating barriers to a safe, convenient, and attractive pedestrian and bicycle environment;

- Transit Streets and Transit-Oriented Development. Location of higher density transit-oriented development within one-quarter mile of transit stops, and emphasis on transit-friendly street design;

- A Pedestrian- and Bicycle-Friendly Central City. Designation and design of special streets as primary pedestrian and bicycle routes, providing connections among Central City neighborhoods and to the riverfront open space and trail system; and a focus on enhanced pedestrian environment on streets and in alleys;

- A Healthy Urban Forest. Protection and enhancement of the Central City's urban forest, maximizing shade coverage from street trees; recognition of the important role that the urban forest plays in the economic and social well-being, and sustainability of the Central City;

- Distinctive Urban Neighborhoods and Districts. Development that enhances existing and creates new neighborhoods and districts, such as the Railyards; high quality design that enhances the public realm and responds to the physical, historical and cultural context;

- Preserving Historic Resources. Recognition of the importance of the Central City's historic resources; protection of historic resources and features, and integration into new development; new development that positively responds and relates to the historic character of the Central City;

- Parks and Open Space. Enhancement of existing and provision of new parks to serve existing and future residents of the Central City; public streets as greenways that connect Central City neighborhoods to the riverfront and other major parks; provision of private open space and recreation facilities in high density residential projects; developing parks, trails, and other recreational amenities consistent with flood protection; balance in uses between public spaces and private development along the American and Sacramento River Corridors;

- Creating a Complete, Well-served Community. Plan for new accessible parks, schools, community centers, fire stations and other public facilities, as well as neighborhood retail and services, to meet the needs of the future residential population in the Central City;

- Active Streetscapes and Sidewalk Cafes. Design streets and alleys and adjacent development to promote active use, including sidewalk cafes;

- The Retail Environment. Promote retail development by requiring minimum retail frontages, identifying retail streets, and requiring ground-floor transparency to promote window-shopping; and

- A Well-defined Public Realm. Continuity of street-wall, with consistent setbacks and build-to lines that define the pedestrian realm for retail and commercial streets, and reflect the historic character for institutional and residential uses.

City of Sacramento Planning and Development Code (Title 17)

The City of Sacramento's Planning and Development Code (Sacramento City Code Title 17) is intended "[t]o implement the city's general plan through the adoption and administration of zoning laws, ordinances, rules, and regulations" (section 17.100.010(B)). To achieve this outcome, the Planning and Development Code:

- regulates the use of land, buildings, or other structures;

- regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density; and

- regulates the physical characteristics of buildings, structures, and site development, including the location, height, and size of buildings and structures; yards, courts, and other open spaces; lot coverage; land use intensity through regulation of residential density and floor area ratios; and architectural and site design.

Site Plan and Design Review

Pursuant to Chapter 17.808 of the City Code, with specific and limited exemptions described below, development in the City is subject to Site Plan and Design Review (SPDR). The intent of this process is to (1) ensure that the development is consistent with applicable plans and design guidelines; (2) is high quality and compatible with surrounding development; (3) is supported by adequate circulation, utility, and related infrastructure; (4) is water and energy efficient; and (5) avoids environmental effects to the extent feasible. The aspects of design considered in the SPDR process include architectural design, site design, adequacy of streets and accessways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations.

Pursuant to Chapter 17.808.160 of the City Code, the following development projects are exempt from the SPDR requirement: alterations to an existing building or structure that is not in a historic district and that does not substantially alter the exterior appearance of the building or structure, as determined by the director; an alteration to an existing site that does not significantly alter the functioning of the site with respect to traffic circulation, parking, infrastructure, and environmentally sensitive features, as determined by the director; secondary dwelling units; sidewalk cafes; convenience recycling facilities; and registered house plans (subject to site plan review, but not design review). For development projects located in a historic district or that involve a landmark, repainting of surfaces that were originally painted and the color scheme is

not a significant character-defining feature of the historic resource; routine nonabrasive cleaning and maintenance; and site plantings when plantings and landscape elements are not significant character-defining features of the historic resource are exempt from SPDR.

Through the SPDR process, the City has the authority to approve or require deviations from design and development standards to respond to site- and project-specific considerations. Deviations are subject to review and approval of either the City Design Director or the City Planning and Design Commission, depending on the nature of the deviation.

Depending on the nature of the proposal, SPDR can be conducted by staff, the City Design Director, or the Planning and Design Commission. The Planning and Design Commission review is required for certain large projects (more than 150 residential units or 125,000 square feet for non-residential or mixed use projects), projects more than 60 feet in height (except within the Central City Special Planning District), or where a deviation requires Commission review. City Design Director review is required where a project is not in substantial compliance with applicable design guidelines or requests a deviation. For projects taking place in a historic district or related to an historic landmark, SPDR is undertaken by the Preservation Commission or the City Preservation Director, as appropriate. All other projects not requiring review by the respective Commission or Director are reviewed by City staff.

Capitol View Protection Ordinance

Section 17.216.860 of the Sacramento City Code recognizes the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open-space resource. The ordinance establishes height restrictions, setback requirements, and parking regulations for development located near the State Capitol building and Capitol Park, including along Capitol Mall. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park. The project site is within the area that is subject to compliance with the ordinance.

The height limits for the ordinance are illustrated on a map that is Exhibit B of the ordinance. The proposed project is located outside the area subject to height restrictions.

The area subject to setback requirements in the ordinance are illustrated on a map that is Exhibit C of the ordinance. The project site is located within an area subject to setback requirements. As specified on Exhibit G of the ordinance, podium structures must be setback 90 feet from the centerline of Capitol Mall, and towers must be setback 140 feet from the centerline of Capitol Mall within the area subject to setback requirements.

The proposed project would construct an approximately 557-foot-tall, 41-story high-rise building. on the block bounded by 3rd, L, and 4th streets and Capitol Mall. The proposed structure would include a single 31-story high-rise tower atop a 10-story podium. The podium structure would be set back approximately 90 feet from the center of Capitol Mall and centered on the block. The tower section of the structure would be set back 140 feet from the center of Capitol Mall. The proposed project would comply with the setback requirements of the ordinance.

4.1.3 Analysis, Impacts, and Mitigation

Significance Criteria

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts to aesthetics may be considered significant if implementation of the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of public views of the site and its surroundings;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.
  - *Glare.* Glare is considered to be significant if it would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.
  - *Light*. Light is considered significant if it would be cast onto oncoming traffic or residential uses.

Issues not Discussed in Impacts

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As discussed in the Regulatory Setting above, the project site is located in an area subject to the requirements of the City's Capitol View Protection Ordinance, which establishes height restrictions, setback requirements, and parking regulations for certain areas of the CBD located near the State Capitol building and Capitol Park. As discussed above, the proposed project would be in compliance with the requirements of the Capitol View Protection Ordinance.

No other scenic vistas are present in the vicinity of the project site, which is located in a developed urban setting, and therefore the proposed project would not have an impact on a scenic vista. As described in the Regulatory Setting above, none of the freeway segments within the area of the project site has been designated as scenic. Thus, implementation of the proposed project would not damage scenic resources in the vicinity of a scenic highway. For these reasons, the first and third significance criteria listed above are not further addressed in this section of the EIR.

Methodology and Assumptions

The analysis of aesthetics involves a qualitative comparison of the existing built and natural environment to the future built and natural environment and evaluation of the visual changes that would result from implementation of the proposed project. Key view corridors were examined, and existing views to and from the project site were compared to those that would be expected to

occur in the future under the proposed project. In addition, the changes proposed in the project were evaluated in the context of adopted City urban design policies and regulations.

Impacts and Mitigation Measures

Impact 4.1-1: The proposed project could substantially degrade the existing visual character or quality of public views of the site and its surroundings.

The 2035 General Plan provides guidance that reflects the diverse nature of the built environment in Sacramento and the complex nature of urban design in the community. Policies such as LU 2.4.1 and LU 2.4.2 reflect Sacramento's traditional character and place a priority on design that "respects and responds to the local context." At the same time, policies such as LU 2.4.4 and LU 2.4.5 reflect the City's aspiration for iconic buildings and a distinctive skyline that creates landmarks and visually reinforces downtown Sacramento's role as the region's business and governmental core.

Changes in the visual character or quality of a site affect each individual differently, and thus to some extent are based on subjective and individual perspectives. In downtown Sacramento, the CCUDG represent an articulation of the community's goals and values surrounding urban design and architectural quality and create an objective framework in which to consider aesthetic changes which may otherwise be considered subjective. The CCUDG are intended "to ensure that proposed higher-density development also provides the qualities and amenities that will create an attractive, livable downtown with a lively mix of uses, walkable streets, an open and interesting skyline, and a high level of design expression." Accordingly, for the purposes of this analysis, the proposed project is considered in light of the CCUDG. Substantial compliance with the CCUDG is used as the measure of significance.

The proposed project would construct an approximately 557-foot-tall, 41-story high-rise building that would include office, residential, restaurant, and retail uses. The proposed structure would include a single, 31-story high-rise tower, atop a 10-story podium and a single subgrade level. Figure 2-4 provides a rendering the proposed structure. Major components of the proposed project would include an office tower with penthouse levels, south-facing office lobby, publicly accessible view deck, internal parking levels, loft offices, residential units, north-facing residential lobby, upper and ground-floor retail. Ground level uses, including the main office lobby, residential lobby, retail, parking, vehicle accesses, utilities, and site exterior are shown in Figure 2-6. Plans for the proposed basement, podium, and tower levels are shown in Figures 2-7 through 2-17.

As is shown in Figures 2-6 through 2-17, the podium portion of the structure would be the approximate length and width of the parcel, spanning approximately 294 feet, from north/south, and approximately 317 feet east/west. The podium structure would be set back approximately 90 feet from the center of Capitol Mall and centered on the block (see Figure 2-18). The 31-story tower portion of structure would be situated along an east-west axis atop the podium, with an east-west length of approximately 267 feet and a north-south width of approximately 92 feet. The

tower section of the structure would be set back 140 feet from the center of Capitol Mall. The main pedestrian entry to the proposed building would be oriented toward Capitol Mall and centered on the block.

Analysis

Views

The approximately 557-foot-tall Tower 301 building would be a highly visible structure during the day and especially at night when it would be accentuated by lighting. The building would be the tallest building in the Sacramento region, extending 134 feet higher than the 423-foot-tall Wells Fargo Center at 400 Capitol Mall, which is currently the tallest building in the region. The building would be visible in varying degrees from Capitol Mall, L, K, 3rd, and 4th streets, and from the surrounding region.

General Plan Policy Consistency

The City's 2035 General Plan includes various goals and policies aimed at achieving the goal of making the CBD the most intensely developed area of the City with increased density, height, and the inclusion of unique and iconic places. Goal LU 2.4 aims at creating a city of distinctive and memorable places while promoting community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento's unique historic, environmental, and architectural context, and create memorable places that enrich community life. Policy LU 2.4.1 seeks to create a unique sense of place while promoting quality site, architectural and landscape design that incorporates those qualities and characteristics that make Sacramento desirable and memorable including: walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles. Policy LU 2.4.4 encourages the development of iconic public and private buildings in key locations to create new landmarks and focal features that contribute to the City's structure and identity. While Policy LU 2.4.5 encourages the development of a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the City's tallest buildings, complemented by smaller urban centers with lower-scale mid- and high-rise development. Policy LU 4.4.3 encourages sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing, setbacks, façade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. The proposed project would be required to be consistent with the vision for the City detailed in the policies above.

Design Review

The proposed design of the proposed project would be subject to SPDR by the City using the criteria listed in the CCUDG, including the CCUDG direction that high-rise towers in the Central City should add visual interest to the skyline; that high-rise towers should reflect the role of the Central Core as the regional center of culture, commerce, and government; and that care is to be given to transitions from the Central Core to adjacent neighborhoods. The review of the project design is intended to ensure that the design is of the highest quality, commensurate with a project of this magnitude and visibility. Among the considerations for project design would be that pedestrian levels should be appropriate in scale and detailing to the surrounding area; that the

highest quality materials and detailing should be used on all elevations of the building; and that the proposed project should complement existing downtown high-rise development. Review would also consider the details of fenestration, the massing and planar changes of the building would create visual interest, and that the overall project provides a distinctive skyline with appropriate detailing and finish at the building top. Because the project would involve the construction of a new building that advances the City's adopted goals and policies, the visual changes associated with the project are not seen as adverse. Furthermore, the SPDR process would ensure that the proposed project would be of a high-quality design and that it would not substantially degrade the existing character or quality of the area or the project site.

Summary

As a result of the proposed project, the visual character of the project site would visually change, with the existing vacant lot replaced with an approximately 557-foot-tall building that would be the tallest building in the Sacramento region. The changes would be consistent with City policy regarding urban design in the project vicinity as articulated in the 2035 General Plan and the CCUDG. While the changes in the visual character of the project site would be dramatic, the analysis demonstrates that the building features and design would not be adverse within the context of the City's articulated aesthetic values. The building features and design of the proposed project also would not be adverse within the context of the City's articulated aesthetic values. For these reasons, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings, and this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 4.1-2: The proposed project would create a new source of substantial light.

Construction

Construction for the proposed project would take place during daylight hours, within a standard daily construction time window. Nighttime construction activities are not anticipated. Lighting within the construction site would be for security purposes only and would be focused on the project site so as to not be directly visible to nearby sensitive receptors residing in nearby housing units. Therefore, impacts related to construction lighting would be **less than significant**.

Operation

A detailed lighting and signage plan for the proposed project has not been provided to the City. The proposed project would include illuminated signage and a variety of lighting, including street lighting, sidewalk lighting, building perimeter lighting, emergency lighting, outdoor security lighting, and interior lighting that would be visible from outside the building. Building lighting and signage could result in brightly illuminated surfaces that could be directly visible from

adjacent uses or other affected light-sensitive uses (e.g., pedestrians, vehicles) and could result in substantial changes to existing artificial light conditions or interfere with off-site activities. In the absence of good design, the increased visibility could disturb or distract individuals observing the area from homes, offices, automobiles, or while walking as pedestrians on downtown streets.

The Sacramento 2035 General Plan includes Policy ER 7.1.3, which requires projects to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. As noted above, the proposed project lighting and signage could result in brightly illuminated surfaces that could disturb or distract individuals observing the area from homes, offices, automobiles, or while walking as pedestrians on downtown streets.

For the reasons discussed above, lighting associated with the proposed project could significantly affect the ambient nighttime light in the downtown area, including light spillover to nearby uses. This impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 4.1-2(a)

Exterior lighting included shall incorporate fixtures and light sources that focus light on-site to minimize spillover light.

Mitigation Measure 4.1-2(b)

The project applicant shall prepare and submit a conceptual signage and lighting design plan for review and approval by the City's Urban Design Manager. The City shall review and monitor the installation and testing of the lighting in order to ensure compliance with all City lighting regulations and these mitigation measures.

Mitigation Measure 4.1-2(c)

Project lighting shall not cause more than two foot-candles of lighting intensity or direct glare from the light source at any residential property.

Significance After Mitigation: Mitigation Measures 4.1-2(a) through 4.1-2(c) would ensure that new nighttime light from the proposed project would be designed and operated to avoid substantial disturbance of sensitive receptors. With the implementation of **Mitigation Measure 4.1-2(a) through (d)** listed above, this impact would be reduced to a **less-than-significant** level.

Impact 4.1-3: The proposed project could create a new source of glare.

Glare is caused by direct light sources as well as reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. At night, artificial lighting can cause glare from reflective surfaces. Glare can create hazards to motorists and nuisances for

pedestrians and other viewers. The effects of additional nighttime lighting have been previously considered under Impact 4.1-2.

While the proposed project would include glass as a primary exterior material, the exterior of the building is not proposed to be a monolithic plane of glass. The exterior of the tower would be a glass and aluminum curtain wall system comprised of staggered planes of recessed and non-recessed glass, and the exterior of the podium would include masonry panels that would frame the glass portions of the building exterior. Both of these design elements would substantially reduce or eliminate glare on adjacent properties, motorists, pedestrians, and other users. In addition, the project would be constructed to be consistent with the requirements of the CCUDG, which generally discourage the use of reflective surfaces in building facades. Furthermore, the Sacramento 2035 General Plan includes Policy ER 7.1.4, which prohibits new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building.

The proposed glare-reducing design elements of the building exterior combined with the proposed project's required adherence to the requirements of the CCUDG and the general plan would ensure that the proposed project would not create glare that could result in a public hazard or a substantial annoyance to nearby land uses, and the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

Impact 4.1-4: The proposed project could contribute to substantial cumulative degradation of the existing visual character or quality in the vicinity.

The geographic context for changes in the visual character of the proposed project vicinity is the CBD of downtown Sacramento. The CBD is characterized by a mix of retail/commercial, office, and residential uses housed in buildings of various heights. In addition to the proposed project, there are numerous approved and proposed development projects in the CBD that could be constructed and operational in the foreseeable future, each of which has undergone or will be required to comply with the City's Design Review process. Approved and proposed development projects near the project site include the Fruit Building (4th and J streets); Marshall Hotel (7th and L streets); 601 Capitol Mall; and Sacramento Commons (5th and O streets). In addition, the route of the proposed Downtown Riverfront Streetcar would run along 3rd Street, adjacent to the project site. Finally, a variety new housing and non-residential uses that would be developed in the CBD and greater Central City over a 20-year period under the CCSP.

The proposed project, in conjunction with proposed and approved development, would intensify the existing urban visual character of the CBD. However, the addition of cumulative development within the CBD would not degrade the existing visual character or quality in the vicinity. The proposed project would fill in the urban fabric of the vicinity and the designs would be consistent with the surrounding urban character of the area. Therefore, the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.1-5: The proposed project could contribute to cumulative sources of substantial light in the area.

Cumulative impacts related to light under buildout of the City's General Plan are analyzed in the Sacramento 2035 General Plan MEIR. Under general plan buildout, the geographic context for the analysis of cumulative visual resources impacts is the Policy Area, which includes the existing incorporated city limits plus a few small adjacent areas to the north and west. This cumulative impact analysis considers implementation of the proposed 2035 General Plan.

As previously discussed, Sacramento is an urbanized city and contains numerous existing sources of nighttime lighting. Existing development within the City of Sacramento as well as the City of West Sacramento and the remainder of Sacramento County outside of the city limits have resulted in a cumulative increase in nighttime lighting. The cumulative effect of this past development has resulted in a cumulative loss of available nighttime views resulting in a potentially significant cumulative effect. Future development would occur within the city within existing urban uses, which would already be subject to lighting from existing development and vehicle headlights. General Plan Policy ER 7.1.3 requires that misdirected, excessive, or unnecessary outdoor lighting be minimized. Compliance with existing City policy to limit excessive lighting would result in a **less-than-significant** cumulative impact.

Mitigation Measure

None required.

Impact 4.1-6: The proposed project could contribute to cumulative sources of glare.

The cumulative context for glare is the geographic area where glare that is generated by the proposed project is also exposed to glare from other cumulative projects. This would primarily include development in the vicinity of the proposed project along Capitol Mall, L, 3rd, and 4th streets, but would include any development on blocks surrounding the project site. It should be

noted that glare is a project-specific effect, caused by individual occurrences that do not necessarily lead to cumulative effects. The cumulative effects would typically be annoyance and awareness that glare is recurring in an area.

Sacramento is an urbanized area with high-rise buildings in the downtown area along with multi-story office buildings located along major commercial corridors that generate the primary source of glare. Glare from sunlight reflecting off of a glass surface could cause a public hazard or annoyance to motorists. At certain times of the day buildings with glass dominated facades can impact drivers within sight of them. However, projects of substantial size that could contribute to added glare in the City would be required to go through the City's Design Review process, and future projects would, in many cases, also be subject to CEQA review and may require further mitigation for glare impacts. In addition, General Plan Policy ER 7.1.4 prohibits new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building. Compliance with existing City policy would limit the amount of glare created in the project vicinity and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

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4.2 Air Quality

This section addresses the potential impacts of the proposed project on ambient air quality and its potential to expose people to unhealthful pollutant concentrations. This section also identifies mitigation measures to reduce the severity of any significant air quality impacts from the proposed project. Impacts related to greenhouse gases (GHG) are addressed in Section 4.4, Global Climate Change.

Comments on the NOP (see Appendix B) included a letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD) that referenced the applicable local regulations associated with demolition and construction. These issues have been addressed in this section.

The analysis included in this section was developed based on project-specific construction and operational features and assumptions, data provided in the *City of Sacramento 2035 General Plan*,[1] the *City of Sacramento 2035 General Plan Master Environmental Impact Report*,[2] and traffic information provided by the traffic consultant (see Appendix G). The impacts were assessed to be consistent with SMAQMD's *CEQA Guide to Air Quality Assessment in Sacramento County*.[3]

4.2.1 Environmental Setting

Air quality is affected by the emissions rate, type, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Wind speed, wind direction, and air temperature combined with topographic features such as mountains and valleys determine how air pollutant emissions affect local air quality.

Climate and Topography

Sacramento lies within the Sacramento Valley Air Basin (SVAB). The topographic features giving shape to the SVAB are the Coast Range to the west, the Sierra Nevada to the east, and the Cascade Range to the north. These mountain ranges channel winds through the SVAB, but also inhibit the dispersion of pollutant emissions. The SVAB, including Sacramento, is characterized by a Mediterranean climate that includes mild, rainy winter weather from November through March and warm to hot, dry weather from May through September.

During the summer, Sacramento Valley has an average high temperature of 92 degrees Fahrenheit (°F) and an average low temperature of 58°F. In the winter, the average high temperature is 58°F, and the average low is 40°F. The average annual rainfall is approximately 20 inches.

1 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.
2 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.
3 Sacramento Metropolitan Air Quality Management District, 2009. Guide to Air Quality Assessment in Sacramento County. December 2009. Available: www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. Accessed January 4, 2019.

The predominant annual and summer wind pattern in the Sacramento Valley is the full sea breeze, commonly referred to as Delta breezes. These cool winds originate from the Pacific Ocean and flow through the Carquinez Straits, a sea-level gap in the Coast Range. In the winter (December to February), northerly winds predominate. Wind directions in the Sacramento Valley are influenced by the predominant wind flow pattern associated with each season. During about half the days from July through September, however, a phenomenon called the "Schultz Eddy," a large isotropic vertical-axis eddy on the north side of the Carquinez Straits, prevents the Delta breezes from transporting pollutants north and out of the Sacramento Valley and causes the wind pattern to circle back south, all of which tends to keep air pollutants in the Sacramento Valley. This phenomenon's effect exacerbates the pollution levels in the area and increases the likelihood of violations of State and federal air quality standards.

The vertical and horizontal movement of air is an important atmospheric component involved in the dispersion and subsequent dilution of air pollutants. Without movement, air pollutants can collect and concentrate in a single area, increasing the associated health hazards. For example, inversions occur frequently in the SVAB, especially during autumn and early winter, and restrict the vertical dispersion of pollutants released near ground level.

Air Pollutants of Concern

Air pollutants of concern within the SVAB include certain criteria air pollutants and toxic air contaminants (TACs).

Criteria Air Pollutants

Criteria air pollutants are a group of six common air pollutants for which the United Stated Environmental Protection Agency (US EPA) has set ambient air quality standards (see Table 4.2.3). Criteria air pollutants include ground-level ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) in size fractions of 10 microns or less in diameter (PM_{10}) and 2.5 microns or less in diameter ($PM_{2.5}$), and lead. Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between nitrogen oxides (NO_X) and reactive organic gases (ROG). In addition to the criteria air pollutants identified by the US EPA, California adds four criteria air pollutants (visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride).

Criteria air pollutants of concern in the SVAB include ozone, CO, PM_{10}, and $PM_{2.5}$, as concentrations of these pollutants are above state and national ambient air quality standards (see Section 4.2.2). Sulfur dioxide, lead, visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride concentrations are well below state and national ambient air quality standards and are not air pollutants of concern in the SVAB. **Table 4.2-1** lists the health effects associated with the criteria air pollutants of concern.

TABLE 4.2-1
HEALTH AND ENVIRONMENTAL EFFECTS OF CRITERIA AIR POLLUTANTS OF CONCERN

Pollutant	Adverse Effects
Ozone	• People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure. • Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care. • Ozone affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas. In particular, ozone harms sensitive vegetation during the growing season.
Carbon Monoxide	• Breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain. • At very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death. • Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.
Particulate Matter	• Particulate matter contains microscopic solids or liquid droplets that are so small that they can be inhaled and cause serious health problems. Particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into your lungs, and some may even enter the bloodstream. Of these, particles less than 2.5 micrometers in diameter, also known as fine particles or $PM_{2.5}$, pose the greatest risk to health • Fine particles ($PM_{2.5}$) are the main cause of reduced visibility (haze) in parts of the United States, including many national parks and wilderness areas.
Nitrogen Dioxide	• Breathing air with a high concentration of NO_2 can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2. • NO_2, along with other oxides of nitrogen (NO_X), reacts with other chemicals in the air to form both particulate matter and ozone. Both of these are also harmful when inhaled due to effects on the respiratory system.

SOURCES: U.S. Environmental Protection Agency (US EPA), 2018. Ozone Basics. Available: https://www.epa.gov/ozone-pollution/ozone-basics#effects. Accessed January 4, 2019.
US EPA, 2018. Particulate Matter (PM) Basics. Available: https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#effects. Accessed January 4, 2019.
US EPA, 2016. Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution. Available: https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects. Accessed January 4, 2019.
US EPA, 2016. Basic Information about NO_2. Available: https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects. Accessed January 4, 2019.

Ground-Level Ozone

As discussed above, ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving the ozone precursors which are ROGs, also referred to as volatile organic compounds (VOC) by some regulating agencies, and NO_X. The main sources of ROG in the SVAB are the evaporation of solvents, paints, and fuels; the main sources of NO_X are combustion processes (including motor vehicle engines). Ozone is referred to

as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through a 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.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure of humans to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impaired central nervous system function, and angina (chest pain) in persons with serious heart disease. Very high concentrations of CO can be fatal.

Particulate Matter

PM is frequently classified by particle size, where PM_{10} consists of PM that is 10 microns or less in diameter and $PM_{2.5}$ consists of the subset of PM_{10} that is 2.5 microns or less in diameter (a micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fine particulate matter, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and state ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) has greater effects on health because these particles are small enough to be able to penetrate to the deepest parts of the lungs.

Nitrogen Dioxide

NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of 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.

Other Criteria Air Pollutants

Other criteria air pollutants include SO_2 and lead, which are not air pollutants of concern in the SVAB. SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of particulate matter, atmospheric sulfate, and

atmospheric sulfuric acid formation that could precipitate downwind as acid rain. The maximum SO_2 concentrations recorded in the project vicinity are well below federal and state standards.

Leaded gasoline (phased out in the United States beginning in 1973), lead based paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which puts children 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.

Toxic Air Contaminants

TACs are State of California designated airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances and may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. TACs of concern include diesel particulate matter (DPM) and asbestos.

Diesel Particulate Matter

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 and rail lines with diesel locomotive operations.

The California Air Resources Board (CARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans. It is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM. More than 90 percent of DPM is less than 1 µm in diameter, and thus is a subset of $PM_{2.5}$; therefore, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposures (see Table 4.2-1). DPM may also facilitate development of new allergies.

Regulation of diesel engines and fuels have decreased DPM levels by 68 percent since 1990. Furthermore, CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, even with increasing vehicle miles traveled (VMT).[4] Nonetheless, based on 2012 estimates of statewide exposure, DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime.

Asbestos

Asbestos is a fibrous mineral and used as a processed component of building materials. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung

[4] California Air Resources Board, 2016. Overview: Diesel Exhaust and Health. Available: https://www.arb.ca.gov/research/diesel/diesel-health.htm. Accessed January 4, 2019.

cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material. When building materials containing asbestos are disturbed, asbestos fibers may be released and suspended in ambient air. Asbestos is also naturally occurring in ultramafic rock (a rock type commonly found in California), but its occurrence at the project site has a low probability.[5]

Existing Conditions

The project site is located in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. The project site is generally bounded by 3rd Street to the west, 4th Street to the east, L Street to the north, and Capitol Mall to the south. The project site is within Sacramento's Central City. The project site has been previously developed but is currently unutilized and contains exposed piles from a previously approved project that was not completed.

Existing Ambient Air Quality

Nearby ambient air quality monitoring stations that are representative of the ambient air at the project site are located in Sacramento at 1309 T Street and at a monitor located on Bercut Drive. The Bercut Drive monitor provides the nearest representative measurement of NO_2 and CO, approximately 0.9 miles north of the project site. The T Street monitor measures and records concentrations of O_3, PM_{10}, and $PM_{2.5}$, and is located approximately 0.9 miles southeast of the project site. **Table 4.2-2** presents a three-year summary of air pollutant concentration data collected at these monitoring stations for O_3, PM_{10}, $PM_{2.5}$, NO_2, and CO, as well as the number of days the applicable standards were exceeded during the given year. National and state regulatory standards are discussed in detail in the Regulatory Setting Section 4.2.2 below.

As described in Table 4.2-2, ozone levels in the project vicinity have resulted in numerous violations of ambient air quality standards between 2015 and 2017. Concentrations of ozone in the project vicinity only exceeded the 1-hour state standard once, which occurred in 2017, but did exceed the 8-hour state and national 10 times each, during the 3-year study period.

Ambient air quality monitoring data for ozone indicates national standards were exceeded 4 times in 2015, 3 times in 2016 and 3 times in 2017. Monitoring data for PM_{10} in the project area suggest that the 24-hour state standard was exceeded at least once in 2016; however, the exact number of exceedance days is not available. Regarding $PM_{2.5}$, the study area was estimated to have exceeded the 24-hour national standard approximately three times in 2015 and six times in 2017. In 2016 the $PM_{2.5}$ 24-hour national standard was not exceeded. There were no exceedances of the national 24 hour standards for PM_{10} recorded during the 3-year study period.

[5] California Department of Conservation, 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. August 2000. Available: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf. Accessed January 7, 2019.

TABLE 4.2-2
SUMMARY OF AIR QUALITY MONITORING DATA (2015–2017)

Pollutant	National / State Standard	2015	2016	2017
Ozone				
Maximum 1-hour concentration, ppm	0.09 [a]	**0.092**	**0.094**	**0.107**
Number of days above State 1-Hour standard		0	0	1
Maximum 8-hour concentration, ppm	0.070 / 0.070	**0.077**	**0.075**	**0.078**
Number of days above National 8-Hour standard		**4**	**3**	**3**
Number of days above State 8-Hour standard		**4**	**3**	**3**
Nitrogen Dioxide (NO_2)				
Annual average concentration, ppm	0.053 / 0.030	0.018	0.013	0.013
Maximum 1-Hour concentration, ppm	0.100 / 0.18	0.053	0.052	0.061
Number of days above National 1-Hour standard		0	0	0
Number of days above State 1-Hour standard		0	0	0
Respirable Particulate Matter (PM_{10})				
Annual average concentration, µg/m^3	20 [a]	**22.6**	19.1	**23.8**
Maximum 24-Hour concentration (national/state), µg/m^3	150 / 50	57.8/**59.1**	50.3/**51.4**	149.9/**150.3**
Estimated number of days above National 24-Hour standard [c]		0	0	0
Estimated number of days above State 24-Hour standard [c]		NA	**1.1**	NA
Fine Particulate Matter ($PM_{2.5}$)				
Annual average concentration, µg/m^3	12.0 / 12	9.5	7.6	9.1
Maximum 24-Hour concentration, µg/m^3	35 [b]	**36.3**	24.4	**44.5**
Estimated number of days above National 24-Hour standard [c]		**3**	0	**6.1**
Carbon Monoxide (CO)				
Maximum 8-Hour concentration, ppm	9 / 9.0	0.9	1.3	1.2
Number of days above National or State 8-hour standard		0	0	0
Maximum 1-Hour concentration, ppm	35 / 20	1.3	1.6	1.9
Number of days above National or State 1-hour standard		0	0	0

NOTES: Number of days exceeded is for all days in a given year, except for particulate matter. PM10 and PM2.5 are monitored every three days. Ozone, NO_2, PM10, and $PM_{2.5}$ monitoring data from T Street Station (CARB 2017). Carbon monoxide monitoring data from Sacramento-Bercut Station (US EPA 2017). The CARB and US EPA use different methods to calculate the emissions for certain criteria air pollutants for comparisons to the state and national standards.

Bold values are in excess of applicable standard.
ppm = parts per million; µg/m^3 = micrograms per cubic meter; NA = No data or insufficient data.

a. State standard, not to be exceeded.
b. National standard, not to be exceeded.
c. Particulate matter sampling schedule of one out of every three days, for a total of approximately 122 samples per year. Estimated days exceeded mathematically estimates of how many days' concentrations would have been greater than the level of the standard had each day been monitored.

SOURCES: California Air Resources Board, 2017. Summaries of Air Quality Data*, 2015-2017*. Available: https://www.arb.ca.gov/adam/index.html. Accessed January 4, 2019;
U.S. Environmental Protection Agency, 2017. Air Data. Available: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=5f239fd3e72f424f98ef3d5def547eb5. Accessed January 4, 2019.

There have been no recorded exceedances of the state and national 1-hour and annual NO_2 standards and the state and national 1-hour and 8-hour CO standards during the 3-year study period.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Sensitive Receptors

Air quality does not affect individuals or groups within the population in the same way, and some groups are more sensitive to adverse health effects caused by exposure to air pollutants than others. 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.

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 compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Workers are not considered sensitive receptors because all employers are required to follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees. The nearest sensitive receptors to the project site consist of following residences:

- Clarendon House Apartment Building, located approximately 495 feet northwest of the project site;
- Governor's Square Apartment Building, located approximately 575 feet south of the project site;

- The Residences at the Sawyer complex, located approximately 840 feet northeast of the project site; and
- Bridgeway Towers, located approximately 870 feet southwest of the project site.

The nearest school is William Land Elementary School, approximately 4,500 feet southeast of the project site. A child day care center (Phoenix Schools Private Preschool) is located approximately 1,450 feet northeast of the project site.

Baseline Conditions

The Towers project site is generally bounded by 3rd Street to the west, 4th Street to the east, L Street to the north, and Capitol Mall to the south. The project site is within Sacramento's Central City. The project site has been previously developed but is currently unutilized and contains exposed piles from a previously approved project that was not completed.

4.2.2 Regulatory Setting

Federal

Criteria Air Pollutants

The US EPA is required by the federal Clean Air Act (CAA) to identify and establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The federal CAA identifies two types of NAAQS: primary and secondary. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The US EPA has set NAAQS for six principal pollutants, called criteria air pollutants. These criteria air pollutants include O_3, NO_2, SO_2, CO, PM, and lead. The original indicator for PM was total suspended particulates; currently the standards are in terms of PM_{10} and $PM_{2.5}$. **Table 4.2-3** presents the current NAAQS (and state ambient air quality standards) and provides a brief discussion of the principal sources for each pollutant.

The US EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the NAAQS had been achieved. The classification is determined by comparing actual monitoring data with the standards. "Unclassified" is defined by the federal CAA as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. Furthermore, an area may be designated attainment with a maintenance plan (also known as a maintenance area), which means that an area was previously nonattainment for a criteria air pollutant but has since been redesignated as attainment. These areas have demonstrated through modeling they have sufficient controls in place to meet and maintain the NAAQS.

TABLE 4.2-3
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND MAJOR SOURCES

Pollutant	Averaging Time	State Standard	National Standard	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment.
	8 hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hour [a]	9.0 ppm	9 ppm	
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hour	---	0.5 ppm [b]	
	24 hour	0.04 ppm	0.14 ppm	
	Annual Avg.	---	0.030 ppm	
Respirable Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 µg/m^3	---	
Fine Particulate Matter ($PM_{2.5}$)	24 hour	---	35 µg/m^3	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
	Annual Avg.	12 µg/m^3	12.0 µg/m^3	
Lead	Monthly Ave.	1.5 µg/m^3	---	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 µg/m^3	
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal power plants, petroleum production and refining
Sulfates	24 hour	25 µg/m^3	No National Standard	Produced by the reaction in the air of SO2.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	See PM2.5.
Vinyl chloride	24 hour	0.01 ppm	No National Standard	Polyvinyl chloride and vinyl manufacturing.

NOTE:
a A more stringent 8-hour carbon monoxide state standard exists around Lake Tahoe (6 ppm).
b Secondary national standard.

ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter.

SOURCES: California Air Resources Board, 2016. Ambient Air Quality Standards. Available: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Standards last updated May 4, 2016;
California Air Resources Board, 2009. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*. Available: http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm.

The Sacramento region's attainment status for the criteria air pollutants are summarized in **Table 4.2-4** (state designations are also provided). The Sacramento region is considered a federal

nonattainment area for ozone and $PM_{2.5}$ and as an attainment-maintenance area for the federal CO and PM_{10} standards.

TABLE 4.2-4
SACRAMENTO COUNTY ATTAINMENT STATUS

Pollutant and Averaging Time	Designation/Classification	
	State Standards	Federal Standards
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment/Severe
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment	Attainment/Maintenance*
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment/Moderate
Lead	Attainment	Unclassified/Attainment
Visibility Reducing Particles	Unclassified	No Federal Standard
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Vinyl Chloride	Unclassified	No Federal Standard

NOTE:
California Air Resources Board (CARB) makes area designations for ten criteria pollutants (O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, lead, visibility reducing particles, sulfates, and hydrogen sulfide. CARB does not designate areas according to the vinyl chloride standard.

* Effective October 28, 2013, the US EPA formally re-designated Sacramento County as attainment for the federal PM_{10} standard.

SOURCE: CARB, 2018. Area Designation Maps. Available: www.arb.ca.gov/desig/adm/adm.htm. Accessed January 8, 2019.

The federal CAA requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The US EPA has responsibility to review all state SIPs to determine if they conform to the mandates of the federal CAA and will achieve air quality goals when implemented.

Hazardous Air Pollutants

Federal laws use the term "Hazardous Air Pollutants" (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Currently, 187 substances are regulated as HAPs. The federal CAA requires the US EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. NESHAPs potentially applicable to the project include the National Emission Standard for Asbestos (40 CFR 61, Subpart M).

State

Criteria Air Pollutants

At the state level, CARB oversees California air quality policies and regulations. California had adopted its own air quality standards (California Ambient Air Quality Standards, or CAAQS) as shown in Table 4.2-2. Most of the California ambient standards tend to be at least as protective as NAAQS and are often more stringent.

In 1988, California passed the California Clean Air Act (CCAA) (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. The CCAA requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment. If an air basin (or portion thereof) exceeds the CAAQS for a particular criteria air pollutant, it is considered to be nonattainment of that criteria air pollutant until the area can demonstrate compliance. As indicated in Table 4.2-4, Sacramento County is classified as nonattainment and serious nonattainment for the 8-hour and 1-hour state ozone standards, respectively, and is nonattainment for the 24-hour and annual state PM_{10} standard.

Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807. A total of 243 substances have been designated TACs under California law; they include the 187 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify, quantify, and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Further regulations of diesel emissions by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-road Diesel Vehicle Regulation, and the New Off-road Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

In 2004, CARB adopted a measure to limit idling of diesel-fueled commercial motor vehicles. Heavy-duty diesel vehicles with a Gross Vehicle Weight Rating of 10,000 lbs. or heavier are prohibited from idling for more than 5 minutes within California's borders. Exceptions to the rule apply for certain circumstances.

Title 24 - California Building Code Standards

The Building Code Standards for Residential and Nonresidential Buildings specified in Title 24, Part 6 of the California Code of Regulations were established in 1978 in response to a legislative mandate to reduce California's energy consumption and make for development of healthier

buildings. The standards are updated approximately every three years to allow for consideration and possible incorporation of new energy-efficiency technologies and cleaner building methods. The current standards became effective on January 1, 2017.

The next update to the Title 24 energy efficiency standards (2019 standards) go into effect on January 1st, 2020. The updated Title 24 (California Building Code) requires that all new residential construction now install MERV 13 filters to reduce particulate impacts to indoor air quality. This regulation will greatly reduce $PM_{2.5}$ and DPM concentrations in all indoor areas within the proposed project.

Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the regional agency responsible for air quality regulation within Sacramento County. The agency regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources and can require operators of stationary sources to obtain permits, can impose emission limits, set fuel or material specifications, and establish operational limits to reduce air emissions. The SMAQMD regulates new or modified stationary sources of Criteria Air Pollutants and TACs.

All areas designated as nonattainment are required to prepare plans showing how the area would meet the air quality standards by its attainment dates. The following are the most recent air quality plans applicable to the area of the proposed project:

- Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan[6]
- SMAQMD's Triennial Report and Air Quality Plan Revision[7]
- PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County[8]
- $PM_{2.5}$ Maintenance Plan and Redesignation Request[9]
- 2004 Revision to the California State Implementation Plan for CO[10]

6 Sacramento Metropolitan Air Quality Management District, 2013. Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions). September 26, 2013. Available: www.airquality.org/ProgramCoordination/Documents/4)%202013%20SIP%20Revision%20Report%201997%20Std.pdf. Accessed July 10, 2017.

7 Sacramento Metropolitan Air Quality Management District, 2015. Triennial Report and Air Quality Plan Revision. May 28, 2015. Available: www.airquality.org/ProgramCoordinationDocuments11)%20%202015Triennial ReportandProgressRevision.pdf. Accessed July 10, 2017.

8 Sacramento Metropolitan Air Quality Management District, 2010. PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County. October 28, 2010. Available: www.airquality.org/Program Coordination/Documents/10)%20%20PM10%20Imp%20and%20MP%202010.pdf. Accessed July 10, 2017.

9 Sacramento Metropolitan Air Quality Management District, 2013. $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request for Sacramento $PM_{2.5}$ Nonattainment Area. October 24, 2013. Available: www.airquality.org/ProgramCoordination/Documents/9)%20%20PM2.5%20Imp%20and%20MP%202013.pdf. Accessed July 10, 2017.

10 Sacramento Metropolitan Air Quality Management District, 2004. 2004 Revision to the California State Implementation Plan for Carbon Monoxide. July 22, 2004. Available: www.airquality.org/ProgramCoordination/Documents/1)%202004%20CO%20Maintenance%20Plan.pdf. Accessed July 10, 2017.

The construction phase of the proposed project would be subject to the applicable SMAQMD regulations with regard to construction and stationary equipment, particulate matter generation, architectural coatings, and paving materials. Equipment used during construction would be subject to the applicable requirements of SMAQMD Regulation 2 (Permits), Rule 201 (General Permit Requirements); and Regulation 4 (Prohibitory Rules), Rule 401 (Ringelmann Chart/Opacity), Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter), Rule 405 (Dust and Condensed Fumes), Rule 420 (Sulfur Content of Fuels), Rule 442 (Architectural Coatings), and Rule 453 (Cutback and Emulsified Asphalt Paving Materials). While no demolition activities are likely, any such activities would be conducted in compliance with all SMAQMD rules associated with demolition and construction.

The operational phase of the proposed project would be subject to SMAQMD Rule 201, which requires any business or person to obtain an authority to construct and a permit to operate prior to installing or operating new equipment or processes that may release or control air pollutants to ensure that all SMAQMD rules and regulations are considered. Potentially applicable stationary pollutant sources that would be installed as part of the proposed project include multiple new boilers, natural gas burning fire pits, and a diesel emergency generator. A permit is required for all boilers, process heaters, and steam generators with a rated heat input capacity of 1 million British thermal units (Btu) per hour or greater, or boilers, process heaters, and steam generators of any size that are not fired exclusively on purchased quality natural gas, liquid petroleum gas, or any combination thereof. A permit is required if the aggregate rated heat input capacity of all boilers, process heaters, and steam generators used in the same process is 1 million Btu per hour or greater. SMAQMD Rule 414 applies to boilers rated less than 1 million Btu per hour.

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to air quality.

> **Goal ER 6.1: Improved Air Quality.** Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that affect climate change.
>
> > ***Policy ER 6.1.1: Maintain Ambient Air Quality Standards.*** The City shall work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet State and Federal ambient air quality standards in order to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution.
> >
> > ***Policy ER 6.1.2: New Development.*** The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides and particulate matter (PM_{10} and $PM_{2.5}$) through project design.
> >
> > **Policy ER 6.1.3: Emissions Reduction.** The City shall require development projects that exceed SMAQMD ROG and NO_X operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

Policy ER 6.1.4: Sensitive Uses. The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose appropriate conditions on projects to protect public health and safety.

Policy ER 6.1.10: Coordination with SMAQMD. The City shall coordinate with SMAQMD to ensure projects incorporate feasible mitigation measures if not already provided for through project design.

The Tower 301 Project would be consistent with policies ER 6.1.1, ER 6.1.2, and ER 6.1.3 because all recommended SMAQMD mitigation measures would be implemented during construction and operation, and the proposed project would comply (if applicable) with the SMAQMD's 15 percent emission reduction/mitigation guideline through the preparation of the Air Quality Mitigation Plan discussed in Section 4.2.3 below. All mitigation measures proposed would be implemented through coordination with the SMAQMD; therefore, the proposed project would be consistent with ER 6.1.4 and ER 6.1.10.

4.2.3 Analysis, Impacts and Mitigation

Significance Criteria

Impacts related to air quality are considered significant if the proposed project would result in the following:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading odors) adversely affecting a substantial number of people.

The SMAQMD has developed significance thresholds to help lead agencies determine whether a project may have a significant air quality impact. Projects whose emissions are expected to meet or exceed the recommended significance criteria will have a potentially significant adverse impact on air quality.

The SMAQMD has established mass emissions thresholds for ozone precursors, NO_X and ROG, PM_{10}, and $PM_{2.5}$ because the Sacramento region does not meet the state and federal ozone and state particulate matter (PM_{10} and $PM_{2.5}$) ambient air quality standards. Emissions of ozone precursors or PM from an individual project could contribute to an existing exceedance of the ozone standards. Construction activities are not likely to generate substantial quantities of CO; however, increased traffic congestion could result in CO hotspots (exceedance of the CO ambient air quality standards). **Table 4.2-5** presents the applicable SMAQMD thresholds of significance.

TABLE 4.2-5
SMAQMD CRITERIA AIR POLLUTANT THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction Phase	Operational Phase
Oxides of nitrogen (NO_X)	85 lbs/day	65 lbs/day
ROG (VOC)	None	65 lbs/day
PM_{10}	0 *	0 *
$PM_{2.5}$	0 *	0 *
CO	20 ppm (1-hour); 9 ppm (8-hour)	20 ppm (1-hour); 9 ppm (8-hour)

NOTE:
* If all feasible Best Achievable Control Technology/Best Management Practices are applied, then the threshold of significance is 80 lbs/day and 14.6 tons/year for PM10, and 82 lbs/day and 15 tons/year for PM2.5 for both construction and operational phases. Consequently, these thresholds are used to evaluate operational emissions.

SOURCE: Sacramento Metropolitan Air Quality Management District, 2015. Guide to Air Quality Assessment in Sacramento County. Chapter 2 Appendix (Updated May 2015). Available: www.airquality.org/LandUseTransportation/Documents/CH2Thresholds Table5-2015.pdf. Accessed January 14, 2019.

Specifically, the project would have a potentially significant adverse impact on air quality if emissions:

- Result in short-term (construction) emissions of NO_X above 85 pounds per day;
- Result in short-term (construction) emissions of PM_{10} above 0 pounds per day without implementation of all best management practices (BMPs) and above 80 pounds per day or 14.6 tons per year after implementation of all BMPs;
- Result in short-term (construction) emissions of $PM_{2.5}$ above 0 pounds per day without implementation of all BMPs and above 82 pounds per day or 15.0 tons per year after implementation of all BMPs;
- Result in long-term (operational) emissions of NO_X or ROG above 65 pounds per day;
- Result in long-term (operational) emissions of PM_{10} above 0 pounds per day without implementation of all BMPs and above 80 pounds per day or 14.6 tons per year after implementation of all BMPs;
- Result in long-term (operational) emissions of $PM_{2.5}$ above 0 pounds per day without implementation of all BMPs and above 82 pounds per day or 15.0 tons per year after implementation of all BMPs;
- Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm);
- Create objectionable odors affecting a substantial number of people; or
- Result in TAC exposures that cause a lifetime cancer risk exceeding 10 in 1 million for stationary sources, or substantially increase the lifetime cancer risk as a result of increased exposure to TACs from mobile sources.

Given that ground-level ozone formation occurs through a complex photo-chemical reaction between NO_X and VOCs in the atmosphere with the presence of sunlight, the impacts of ozone

are typically considered on a basin-wide or regional basis instead of a localized basis. SMAQMD has not established a significance threshold for ozone. The health-based ambient air quality standards for ozone are as concentrations of ozone and not as tonnages of their precursor pollutants (i.e., NO_X and VOCs). It is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or particulate matter. Because of the complexity of ozone formation and the non-linear relationship of ozone concentration with its precursor gases, and given the state of environmental science modeling in use at this time, it is infeasible to convert specific emissions levels of NO_X or VOCs emitted in a particular area to a particular concentration of ozone in that area. Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone.[11,12] Nonetheless, since project emissions would potentially exceed the numeric indicator for NO_X emissions, it is possible that project NO_X emissions could result in an increase in ground-level ozone concentrations in proximity to the project site or elsewhere in the air basin and impacts would be potentially significant. Therefore, mitigation measures would be required and are further discussed below.

As expressed in the *amicus curiae* brief submitted for the *Sierra Club v. County of Fresno* case (*Friant Ranch Case*),[13,14] the CEQA criteria pollutants significance thresholds from the air district were set at emission levels tied to the region's attainment status. They are emission levels at which stationary pollution sources permitted by the air district must offset their emissions and the CEQA evaluation of the project must identify any feasible mitigation measures. They are not intended to be indicative of any localized human health impact that a project may have. Therefore, the project's exceedance of the mass regional emissions threshold (i.e., pounds per day [ppd] NOx thresholds) from project-related activities does not necessarily indicate that the project will cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify ozone-related health impacts caused by NO_X or VOCs emissions at an individual project level. Therefore, it is infeasible to connect the project level NO_X emissions to ozone-related health impacts at this time.

11 South Coast Air Quality Management District, 2014. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

12 San Joaquin Valley Unified Air Pollution Control District, 2014. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

13 South Coast Air Quality Management District, 2014. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

14 San Joaquin Valley Unified Air Pollution Control District, 2014. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

Methodology and Assumptions

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction (short-term), the project would affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. Under operations (long-term), the project would result in an increase in emissions primarily due to motor vehicle trips and on-site stationary sources (such as the boilers). Other sources include minor area sources such as landscaping and use of consumer products.

Construction Impacts

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Inputs to the model include square footage of the new office building and the amount of parking in the garage.

Reasonable assumptions and default CalEEMod settings were used to estimate criteria air pollutant and ozone precursor emissions, which can be found in **Appendix D1**. Construction-related emissions of criteria air pollutants are then compared to SMAQMD's applicable regional significance thresholds.

The emissions generated from construction activities include:

- Exhaust emissions from fuel combustion for mobile heavy-duty diesel and gasoline-powered equipment (including construction equipment and employee vehicles);
- Particulate matter from soil disturbance and site preparation and grading activity (also known as fugitive dust); and
- Evaporative emissions of ROG from paving activity and the application of architectural coatings.

The primary TACs during construction would be DPM from construction equipment exhaust. DPM exhaust is a complex mixture of thousands of gases and fine particles commonly known as soot. The health risk resulting from exposure to DPM emissions from construction equipment was evaluated using air emission and dispersion modeling software as described below.

Construction Activity Health Risk

A health risk assessment (HRA) evaluated the risks to nearby receptors from exposure to TACs associated with the project. The HRA focused on construction emissions at the project site, which is considered a new but temporary source. The construction HRA focused on cancer risks, chronic health hazards, and $PM_{2.5}$ concentrations at residences located near the project site.

Consistent with SMAQMD Guidelines, the following analysis assesses potential health risk and hazard impacts at sensitive receptors located in the vicinity of the project site. Since the construction emissions associated with the project would represent a new emissions source, the potential health risk and hazard impacts are analyzed at the receptor that would be exposed to the maximum risk and hazard.

For construction activities, DPM exposure represents the primary health hazard. Again, DPM is a complex mixture of chemicals and particulate matter identified by the State as a TAC with potential cancer and chronic non-cancer effects. DPM emissions would be generated by the operation of off-road construction equipment (e.g., excavators, loaders, cranes, graders) and on-road diesel-fired heavy-duty vehicles. Although other exposure pathways exist (i.e., ingestion, dermal contact), the inhalation pathway is the dominant exposure pathway from DPM for both cancer risk and chronic non-cancer health effects. Consequently, this HRA only evaluates the inhalation cancer and chronic non-cancer effects of DPM inhalation.

A three-step process was used to estimate cancer risks and chronic health hazards of DPM exposure. The first step involved using the CalEEMod software program to estimate average annual diesel exhaust emissions during project construction. The second step involved using the AERMOD (version 18081) dispersion model to convert emissions to maximum annual DPM concentrations. The dispersion modeling used average annual DPM emissions, sensitive receptor grids, construction emission sources, and meteorological data collected from CARB Individual Station Files for Sacramento Executive Airport.[15] For this project, one source was included in the dispersion modeling:

- A conservative representation of the on-site construction equipment within the project site modeled as a rectangular area source with an internal vertical dimension of 1.4 meters.[16]

The above source was modeled with a nominal emission rate of one gram per second to determine the worst-case scenario from DPM emissions occurring at the project's sensitive receptor within a 1000-foot radius. The maximum impact or maximum exposed individual (MEI) was determined and its annual PM_{10} concentration resulting from the model was applied to the yearly DPM averages determined with CalEEMod to represent the "worst-case" exposure scenario. Four residential apartment complexes were modeled in AERMOD and The Clarendon House complex resulted in the MEI. Modeling inputs and assumptions of AERMOD can be found in Appendix D2. The third step applied the calculated MEI DPM concentration for each construction year to the Office of Environmental Health Hazard Assessment (OEHHA) methodologies[17] to calculate the potential cancer risk from the project's construction activities over the construction duration. OEHHA equations and the health impact calculations are detailed in Appendix D3.

Operational Impacts

Operation of the project would increase emissions of ozone precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$, from vehicle trips and area sources (e.g., landscape maintenance and consumer products such as cleaning products). Additional operational emissions include natural gas combustion from water heating (boilers) and from fire pits as well as occasional diesel

15 California Air Resources Board, 2015. Meteorological Files-Individual Station Files 5-Year Data Set from 1/1/2009 to 1/2/2014. Available: https://www.arb.ca.gov/toxics/harp/metfiles2.htm. Accessed April 2, 2019.

16 Bay Area Air Quality Management District, San Francisco Department of Public Health, San Francisco Planning Department, 2012. The San Francisco Community Risk Reduction Plan: Technical Support Documentation December 2012.

17 Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program – Risk Assessment Guidelines*, February 2015.

combustion emissions from an emergency generator. Operational emissions for project buildout were estimated using CalEEMod based on the proposed land uses (for area and stationary source emissions), trip generation rates, and VMT developed for the project. The land use designation selected in the model was general office building along with residential apartments mid-rise, retail strip mall, and enclosed parking with elevator.

Localized CO Concentrations

CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. Projects that would increase traffic volumes on surrounding roadways and/or degrade the existing level of service (LOS) would potentially increase CO concentrations at nearby intersections. Because CO is in a maintenance plan and the Tower 301 project would lead to an increase in traffic in the project area, it was determined CO needed to be analyzed for the purposes of completing a robust analysis. SMAQMD has developed screening criteria to analyze potential CO impacts and identify when site-specific CO dispersion modeling is necessary. The screening criteria are divided into two tiers; if the first tier of screening criteria is not met, then the second tier of screening criteria shall be examined. According to SMAQMD, a project would not result in a significant CO impact if one of the following tiers is met:[18]

1. First Tier
    a. Traffic generated by the project will not result in deterioration of intersection LOS or LOS E or F; and
    b. The project will not contribute to additional traffic to an intersection that already operates at LOS E or F.
2. Second Tier
    a. The project would not result in an affected intersection experiencing more than 31,600 vehicles per day;
    b. The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other location where horizontal or vertical mixing of air will be substantially limited; and
    c. The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The Tower 301 project has the potential to exceed several of these criteria at affected intersections. A screening-level modeling was completed for the intersections that did not meet the screening criteria to determine if they would violate either NAAQS or CAAQS. The CALINE4 dispersion model is the preferred method of estimating CO pollutant concentrations at sensitive land uses near congested roadways and intersections. For each intersection analyzed, CALINE4 uses traffic volumes, CO emission rates, and receptor locations to estimate peak hour CO concentrations. For this analysis, CO concentrations were calculated based on a simplified

[18] Sacramento Metropolitan Air Quality Management District, 2016. Guide to Air Quality Assessment in Sacramento County (Chapter 4). Available: www.airquality.org/LandUseTransportation/Documents/Ch4OperationalFINAL8-2016.pdf. Accessed January 16, 2019.

CALINE4 screening procedure and CO emissions rates for Sacramento County from the California Air Resources Board's Emissions Factors (EMFAC) 2014 model. The model is used to identify potential CO hotspots. The modeling methodology assumed worst-case conditions to provide a maximum, worst-case CO concentration. To ensure that an adequate margin of safety was used, the highest 1-hour and 8- hour CO readings from Sacramento County were used as the background concentration. The Baseline years 2022 and 2036 were selected for the baseline and cumulative analysis, respectively, in order to generate emission factors and emission estimates. Appendix D4 contains the CO modeling inputs and results.

Toxic Air Contaminants

Emissions of TAC during operation of the project would be primarily from idling diesel trucks at the loading dock. However, as discussed under Section 4.2.2 above, CARB's measure to limit idling of diesel-fueled commercial motor vehicles to a maximum of five minutes at any one location would limit impacts to air quality.

Siting New Sensitive Receptors Health Risk

Siting new receptors where they will be exposed to an existing TAC source, while not a CEQA impact, is a potential health risk consideration that should be analyzed and generally addressed in the conditional use permitting for the project.[19] By incorporating residential units, the proposed project is siting new sensitive receptors near a high-volume roadway (i.e. Interstate 5 [I-5]). The SMAQMD recommends evaluating strategies to reduce air pollution exposures[20] when considering construction projects of this nature outside of the CEQA process.

The Tower 301 project consists of office, retail, parking, and residential uses. The residential component of the proposed project will be less than ten percent of the property based on the proposed square footage and will be situated along the north and east sides of the building. By designing the building to have the residential units along 4th Street and L Street, the project is siting the new receptors in the furthest possible location away from the I-5 and also placing the majority (over 90 percent) of the structure as a barrier between the freeway and the residences.

Landscaping with street trees is planned along all four sides of the project site and would tie into the existing tree lined streetscape on 4th Street. Proposed street trees will consist of a variety of trees recommended by SMAQMD.[21] Additionally, ornamental trees and plantings would be provided throughout the public and outdoor work spaces. The vegetation included in the design of the Tower 301 project could potentially alter the pollutant transport and dispersion and is a recommended strategy for reducing air pollution exposure.

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19 Sacramento Metropolitan Air Quality Management District, 2018. Guide to Air Quality Assessment in Sacramento County (Chapter 5). Available: www.airquality.org/LandUseTransportation/Documents/Ch5TACFinal9-2018.pdf. Accessed January 16, 2019.

20 California Air Resources Board, 2017. Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways. Available: https://ww2.arb.ca.gov/sites/default/files/2017-10/rd_technical_advisory_final.pdf. Accessed April 10, 2019.

21 Sacramento Metropolitan Air Quality Management District, 2017. *Landscaping Guidance for Improving Air Quality near Roadways*. April 2017.

The Building Code Standards for Residential and Nonresidential Buildings specified in Title 24, Part 6 of the California Code of Regulations will require the Tower 301 project to comply with 2019 energy efficiency standards. As part of this standard, all new residential construction will now install MERV 13 filters to reduce particulate impacts to indoor air quality, which will further reduce the potential for air pollution exposure.

Issues or Potential Impacts Not Discussed Further

An odor analysis typically evaluates the potential for a project to generate odors and for the project to be affected by odors from nearby sources of odors. General land uses to be developed under the project are not typically considered sources of odors. Because there are no new odor sources and no impact would occur, odors will not be addressed further in this EIR.

Impacts and Mitigation Measures

Impact 4.2-1: Implementation of the proposed project could conflict with or obstruct implementation of an applicable air quality plan.

The *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (*2013 SIP Revisions*), which addresses attainment of the federal 8-hour ozone standard, and the *2014 Triennial Report and Plan Revision*, are the current plans required by US EPA and CARB and issued by SMAQMD to meet attainment. These plans need to demonstrate reasonable progress towards attainment as required by the SIP and CCAA. To demonstrate compliance in the project's location there needs to be appropriate analysis. In this case the appropriate analysis incorporates land use assumptions and travel demand modeling from the Sacramento Area Council of Governments (SACOG). To determine compliance with the applicable air quality plan, SMAQMD recommends, as inferred by the SIP, comparing the project's VMT and population growth rate to the SACOG growth projections included in the *Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS).[22]

SACOG is required to consider adopted local land use plans in the formulation of the land use forecast and growth projections in the MTP/SCS. The Tower 301 project would be consistent with the City of Sacramento's 2035 General Plan; therefore, the proposed project would be within the growth projections provided by SACOG and thereby consistent with the MTP/SCS.

In addition to the Tower 301 project's consistency with the SACOG 2016 MTP/SCS, the project's unmitigated operational emissions would not generate NO_X emissions that would exceed SMAQMD significance thresholds and would be considered less than significant for CEQA purposes.

Summary

For the Tower 301 project to meet the federally-enforceable SIP, the CCAA and local attainment plans, the project must demonstrate consistency with requirements related to ground-level ozone

[22] Sacramento Area Council of Governments, 2016. *Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted February 18, 2016.

precursors and PM. The proposed project would generate unmitigated operational emissions of ROG, NO_X, and PM that would be below SMAQMD's significance thresholds and would be considered operationally less than significant for CEQA purposes. This impact would be considered **less than significant**.

Mitigation Measure

None required.

Impact 4.2-2: Implementation of the proposed project would result in a net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

This impact analysis takes into consideration both short-term construction and long-term operational impacts in terms of baseline and project increases for criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The focus of this analysis is related to ground-level ozone precursors (NO_X and ROG) and particulate matter for which the SVAB is in non-attainment. While CO is in currently in attainment/maintenance status, it was also analyzed in terms of ensuring there would be no future exceedances of the both the NAAQS and CAAQS that would violate the maintenance plan and move the region into non-attainment.

Short-Term Construction Impacts

Construction-related emissions are considered short-term in duration, but nevertheless can represent a significant, adverse impact on air quality. Construction-related emissions arise from a variety of activities, including operation of heavy equipment, employee vehicles, excavation for infrastructure and building foundations, architectural coatings and paving.

The construction would begin with site preparation consisting of a geotechnical investigation, foundation investigation, soil sampling, and pot holing for utilities which would start December 2019. Construction is anticipated to be completed in 31 months by July 2022.

Emissions of ozone precursors (ROG and NO_X) are generated primarily by mobile sources and largely vary as a function of vehicle trips per day and the type, quantity, intensity, and frequency of heavy-duty, off-road equipment used. Typically, a large portion of construction-related ROG emissions also results from the application of asphalt and architectural coatings.

Construction-related fugitive dust emissions of particulate matter would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities could result in significant and adverse quantities of dust, and, as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction of the Tower 301 project.

Construction emissions were estimated for the Tower 301 project using the methods contained in SMAQMD's *Guide to Air Quality Assessment in Sacramento County.*[23] The CalEEMod model was used to quantify construction emissions from off-road equipment, haul trucks associated with imported and exported soils, on-road worker vehicle emissions, and vendor delivery trips. The unmitigated and mitigated construction emissions for the worst-case day for each construction year can be found in **Tables 4.2-6** and **Table 4.2-7**, respectively. Those tables compare emissions from the phased construction schedule to SMAQMD's NO_X, PM_{10}, and $PM_{2.5}$ construction thresholds which are appropriate for this analysis.

As shown in Table 4.2-6, maximum daily unmitigated construction NO_X emissions would exceed the SMAQMD significance thresholds in each year of construction, and unmitigated maximum daily and annual construction PM_{10} and $PM_{2.5}$ emissions would exceed the SMAQMD significance thresholds for each year of construction as it is zero for unmitigated emissions. The predominant construction activity associated with these emissions would be off-road diesel equipment and on-road haul trucks during construction of the Tower 301 project. Overall, the project would have a significant impact related to unmitigated construction emissions. There are SMAQMD-approved mitigation measures related to construction that are described in the mitigation summary below. Impacts will be reduced to less than significant through the implementation of these measures.

TABLE 4.2-6
UNMITIGATED PROJECT CONSTRUCTION EMISSIONS [1, 2]

Construction Year	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2019	**91**	**5**	**3**	**<1**	**<1**
2020	**90**	**21**	**12**	**2**	**1**
2021	**98**	**10**	**5**	**1**	**1**
2022	**89**	**11**	**5**	**1**	**<1**
SMAQMD Thresholds[3]	85	0	0	0	0
Maximum Emissions	**98**	**21**	**12**	**2**	**1**
Significant (Yes or No)?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

NOTES:
ppd = pounds per day; tpy = tons per year

1 Project construction emissions estimates were made using CalEEMod version 2016.3.2. See Appendix D1 for model outputs and more detailed assumptions.
2 Values in **bold** are in excess of the applicable SMAQMD significance threshold.
3 SMAQMD has established a zero emissions threshold for PM_{10} and $PM_{2.5}$ when projects do not implement SMAQMD's Best Available Practices (BMP).

SOURCE: ESA, 2019.

[23] Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment*. Adopted December 2009 and last updated September 2016.

TABLE 4.2-7
MITIGATED PROJECT CONSTRUCTION EMISSIONS [1, 2]

Construction Year	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2019	82	5	3	<1	<1
2020	81	21	12	2	1
2021	**88**	10	5	1	1
2022	80	11	5	1	<1
SMAQMD Thresholds	85	80	82	14.6	15
Maximum Emissions	**88**	21	12	2	1
Emissions with Tier 4 Engines[3]	9	2	1	<1	<1
Significant (Yes or No)?	No	No	No	No	No

NOTES:
ppd = pounds per day; tpy = tons per year

1 Project construction emissions estimates were made using CalEEMod version 2016.3.2. See Appendix D1 for model outputs and more detailed assumptions. Mitigated construction NO_X emissions account for a 10 percent reduction in off-road equipment emissions as a result of the implementation of Mitigation Measures 4.2-2(a) through Mitigation Measures 4.2-2(c).
2 Values in **bold** are in excess of the applicable SMAQMD significance threshold.
3 Tier 4 Engines reduce NO_X and PM emissions by approximately 90 percent as required by CFR Title 40, Section 1039.101

SOURCE: ESA, 2019.

CO is a localized pollutant of concern. CO is of less concern during construction because construction activities are not likely to generate substantial quantities of CO. Due to the temporary operation of equipment in any one area, construction of individual development or infrastructure projects pursuant to the project would not emit CO in quantities that could pose health concerns.

Long Term Operational Impacts

The Tower 301 project would increase long-term operational emissions due to motor vehicle trips and onsite area and energy sources. Since there are significance thresholds based on daily emissions, the operational pollutant emissions during an event day were modeled to represent a worst-case emissions scenario. The CalEEMod computer model was used to estimate operational emissions of ROG, NO_X, PM_{10} and $PM_{2.5}$ in the Baseline year (2022) and results are summarized on **Table 4.2-8**. Estimated emissions are compared to the SMAQMD significance thresholds. As shown in Table 4.2-8, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would not exceed SMAQMD's significance thresholds after the implementation of operational BMPs required by applicable regulations.

TABLE 4.2-8
TOWER 301 PROJECT OPERATIONAL EMISSIONS

Source	ROG (ppd)	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Area	22	< 1	< 1	< 1	<0.01	< 0.01
Energy	< 1	3	< 1	< 1	0.04	0.04
Mobile	7	36	31	8	3.92	1.08
Stationary	2	23	3	3	0.45	0.45
Total Emissions	32	62	34	11	4.42	1.57
SMAQMD Thresholds[3]	65	65	80	82	14.6	15
Significant (Yes or No)?	No	No	No	No	No	No

NOTES:
ppd = pounds per day; tpy = tons per year
1 Project operational emissions estimates were made using CalEEMod version 2016.3.2. See Appendix D1 for model outputs and more detailed assumptions.
2 Values in **bold** are in excess of the applicable SMAQMD significance threshold.
3 SMAQMD has established a zero emissions threshold for PM_{10} and $PM_{2.5}$ when projects do not implement their Best Available Practices.

SOURCE: ESA, 2019.

For operation of the Tower 301 project, traffic was analyzed to determine its potential effect on CO concentrations near surface streets and intersections in and around the area of the project site. The analysis presented in Section 4.6, Transportation, shows that four intersections would operate at LOS E or worse during the AM and/or PM peak hours. Of those four intersections, all would qualify under the Second Tier, which requires that the intersection experiences no more than 31,600 vehicles per hour, does not have a tunnel, parking garage, bridge, or underpass that would limit vertical or horizontal mixing near the intersection, and the vehicles types traveling through the intersection are not substantially different that the County average.[24] None of the four intersections operating at LOS E meet these criteria. With all intersections affected by the project qualifying for either First Tier or Second Tier screening, none would require CO modeling.

Therefore, the operation of the project would have a less-than-significant impact on local CO concentrations and no exceedances of the NAAQS or CAAQS for operational CO emissions.

Summary

Short-Term Impacts

SMAQMD has established a zero threshold for unmitigated emissions of PM_{10} and $PM_{2.5}$, requiring all construction projects to implement SMAQMD's *Basic Construction Emission Control Practices* to control PM_{10} and $PM_{2.5}$. With implementation of SMAQMD's BMPs, SMAQMD's peak daily and annual significance thresholds increase to 80 ppd or 14.6 tpy of PM_{10} and 82 ppd or 15 tpy of $PM_{2.5}$. Assuming implementation of such required practices, construction of the project would result in emissions of PM_{10} and $PM_{2.5}$ below the SMAQMD significance

[24] Sacramento Metropolitan Air Quality Management District, 2016. Guide to Air Quality Assessment in Sacramento County (Chapter 4). Available: www.airquality.org/LandUseTransportation/Documents/Ch4OperationalFINAL8-2016.pdf. Accessed January 16, 2019.

thresholds. However, construction of the Tower 301 project would generate unmitigated NO_X emissions that would exceed SMAQMD's thresholds. Because the project will be required to utilize Tier 4 engines, emissions of NO_X will be reduced by an additional approximately 90 percent and thus emissions will decrease far below the significance threshold. Therefore, construction of the project would result in a **less-than-significant** impact due to **s**hort-term NO_X emissions.

Mitigation Measure 4.2-2(a)

The applicant shall require all construction plans to include the following required SMAQMD Basic Construction Emission Control Practices:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- Pave all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads shall be laid immediately after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment shall be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Mitigation Measure 4.2-2(b)

The project applicant shall provide a plan for approval by the SMAQMD that demonstrates the heavy-duty off-road vehicles (50 horsepower or more) to be used 8 hours or more during the construction project will achieve a project wide fleet-average 10 percent NO_X reduction compared to the most recent California Air Resources Board (CARB) fleet average. The plan shall have two components: an initial report submitted before construction and a final report submitted at the completion.

- Submit the initial report at least four (4) business days prior to construction activity using the Sac Metro Air District's Construction Mitigation Tool.
- Provide project information and construction company information.

- Include the equipment type, horsepower rating, engine model year, project hours of use, and CARB equipment identification number for each piece of equipment in the plan. Incorporate all owned, leased and subcontracted equipment to be used.

- Submit the final report at the end of the job, phase, or calendar year, as pre-arranged with Sac Metro Air District staff and documented in the approval letter, to demonstrate continued project compliance.

Mitigation Measure 4.2-2(c)

Prior to the issuance of a building permit, developers shall quantify the construction emissions of NO_X. The applicant shall require all construction plans to include the following SMAQMD off-site fee mitigation:

- The project applicant shall pay into SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_X that exceed SMAQMD's daily emission threshold of 85 ppd. The project applicants shall coordinate with SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the applicable current SMAQMD Fee. The applicants shall keep track of actual equipment use and their NO_X emissions so that mitigation fees can be adjusted accordingly for payment to SMAQMD.

Significance After Mitigation: With implementation of **Mitigation Measures 4.2-2(a)**, **(b), (c),** and **4.2-3**, fugitive dust would be controlled, exhaust emissions would be reduced on-site, and mitigation fees would be provided to SMAQMD for project NO_X emissions that exceed the SMAQMD significance threshold. SMAQMD uses the fees to fund off-site projects and programs that would offset the project's NO_X emissions. Implementation of Mitigation Measures 4.2-2(a), (b), and (c) and 4.2-3 would reduce construction emissions from the project to levels shown in Table 4.2-7. Emissions of NO_X, PM_{10}, and $PM_{2.5}$ emissions would be reduced to levels below the respective thresholds. These measures would reduce project-related construction emissions of NO_X, PM_{10}, and $PM_{2.5}$ to a **less-than-significant** level.

Long Term Impacts

As shown in Table 4.2-8, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would not exceed SMAQMD's significance thresholds after the implementation of operational BMPs required by applicable regulations. With all intersections effected by the project qualifying for either First Tier or Second Tier screening, there are no potential violations of the NAAQS or CAAQS from operational CO emissions, and thus this impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 4.2-3: Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations.

Construction

The key drivers to exposure sensitivity are concentration of pollutants and duration of exposure. DPM represents the primary TAC of concern from construction activities. Construction of development under the Tower 301 project would generate DPM emissions due to operation of internal combustion engines in equipment such as loaders, backhoes, and cranes, as well as haul trucks.

Exposure of sensitive receptors within the area of the project site to DPM emissions is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to OEHHA, health risk assessments should be based on a 30-year exposure period.[25] However, such assessments should be limited to the period/duration of activities associated with the project. Modeling of health risk due to DPM exposure was completed and it was determined that exposure would exceed significance thresholds, in terms of Million Increase in Cancer Risk (MICR), when using the default Heavy-Duty construction fleet engine characteristics. It should be noted that the SMAQMD only has a cancer risk threshold for determining health risk significance for stationary sources. As a result, this analysis utilized the SMAQMD threshold for stationary sources to determine the health risk significance for construction sources, which is the appropriate CEQA significance level for this type of project.

Operation

As discussed previously, the project would result in only very limited operation period activities that would generate TAC emissions, including landscaping maintenance operations and emergency generator emissions as required. These activities either would not result in the emissions of TACs or would result in minor emissions for emergency operations only, and therefore have negligible associated health risks from the project's operation to existing sensitive receptors in the area.

Summary

Construction

Although construction activities of the Tower 301 project would constitute a small percentage of the total 30-year exposure period used for health risk evaluations, the health risk impact is above the 10 in one million risk threshold and is **potentially significant**.

[25] Office of Environmental Health Hazard Assessment, 2015. *Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

Mitigation Measure 4.2-3

The contractor shall utilize one of the following strategies to reduce the cancer risk related to TAC construction emissions to no greater than 10 people in one million.

- Use Tier 4 engines on all construction equipment; or
- Use Tier 3 engines equipped with Level 3 Diesel Particulate Filters (DPF) on all construction equipment; or
- Use a combination of Tier 4 engines and Tier 3 engines equipped with Level 3 Diesel Particulate Filters (DPF) on all construction equipment; or
- Use a combination of technological solutions to ensure that construction-related emissions do not exceed a cancer risk of 10 people in one million.

Significance after Mitigation: Mitigation Measure 4.2-3 would reduce the exposure of existing residents to TAC emissions for the construction duration of the proposed project.

US EPA Certified Tier 4 engines are now widely available for diesel-fired Heavy Duty construction equipment. Tier 4 engines are designed to have much improved fuel efficiency and reduce emissions of both NO_X and DPM to very low levels. Tier 4 engines that greatly reduce DPM emissions through fuel efficiency and emissions controls are now widely available and used throughout California. Additionally, Tier 3 engines are likely available where Tier 4 are not and are also effective at reducing DPM emissions. If upgraded engines, diesel particulate filters, or a combination of technological solutions are utilized in conjunction with a construction equipment plan during construction, DPM emissions, and the associated health risks, will be greatly reduced and are below the MICR and are determined to be **less than significant**. Modeled health risks associated with construction of development under the Tower 301 project are presented in **Table 4.2-9**.

TABLE 4.2-9
TOWER 301 PROJECT CONSTRUCTION HEALTH RISK

Source	Unmitigated Risk (people per million)	Mitigation Tier 4 Engines (people per million)
Construction Risk		
Cancer Risk	**66.54**	9.04
Hazard Index	0.11	0.01
SMAQMD Thresholds		
Cancer Risk	10	10
Hazard Index	1	1
Significant (Yes or No)?	Yes	No

NOTES:
1 Project construction emissions estimates were made using CalEEMod version 2016.3.2, AERMOD version 18081, and OEHHA cancer risk calculation methodologies. See Appendix D1, D2 and D3 for model outputs and more detailed assumptions.
2 Values in bold are in excess of the applicable SMAQMD significance threshold.
3 SMAQMD significance threshold is for stationary sources but is being applied to construction area sources as appropriate.

SOURCE: ESA, 2019.

Operation

The project would result in only very limited operation period activities, including landscaping maintenance operations and emergency generators when required. None of these activities result TACs being emitted in large quantity, or major increase in associated health risks from the project's operation. As a result, impacts associated with the exposure of sensitive receptors to substantial toxic air emissions from stationary source operations would be **less than significant**.

Cumulative Impacts

The geographic context for changes in the air quality environment due to development of the proposed project would be both regional and local. Ozone, PM_{10}, and $PM_{2.5}$ would be the primary pollutants of regional concern, which means that the cumulative context would be comprised of evaluating impacts within the SVAB. CO is a concern in terms of cumulative local impacts as CO is a SMAQMD maintenance pollutant with additional consideration given to ensure ambient concentrations stay within attainment levels.

Particulates (fugitive dust and fine particulate matter, including DPM) and TACs could result in localized impacts in close proximity to pollutant sources. In addition to the Tower 301 project, the other active cumulative construction projects in the immediate vicinity include the Fruit Building (4th and J streets); Marshall Hotel (7th and L streets); 601 Capitol Mall; and Sacramento Commons (5th and O streets). In addition, the route of the proposed Downtown Riverfront Streetcar would run along 3rd Street, adjacent to the project site.

As described above in Impact 4.2-1, the project would not conflict with or obstruct implementation of applicable air quality plans based on SACOG's future growth projections for the region, and thus, this impact is not discussed further in the cumulative analysis.

Impact 4.2-4: Implementation of the proposed project, in conjunction with other planned projects, could result in a cumulative net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Short-Term Cumulative Impacts

NO_X, PM_{10}, and $PM_{2.5}$ are the pollutants that SMAQMD has identified as the primary concerns from construction. Development of the Tower 301 project and other construction activities elsewhere in the SVAB could also contribute construction-related NO_X, PM_{10} and $PM_{2.5}$ emissions. As described in Impact 4.2-3, the proposed project would not result in substantial short-term emissions of NO_X, PM_{10} and $PM_{2.5}$ during construction. As a result, the proposed project's contribution to these cumulative emissions would not be considerable, and thus this impact would be **less than significant**.

Long-Term Cumulative Impacts

ROG, NO_X, PM_{10}, and $PM_{2.5}$ are the pollutants that SMAQMD has identified as the primary concerns from operation. Thus, all other mobile, area, and energy sources in the SVAB that would operate concurrently with the proposed project would contribute to cumulative operational-related ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions. As described in Impact 4.2-3, the Tower 301 project would not result in substantial long-term emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Cumulative traffic was analyzed to determine its potential to affect CO concentrations along surface streets near sensitive receptors in the vicinity of the project. A review of the traffic data shows that two intersections would operate at levels that would not qualify for First Tier or Second Tier screening during cumulative year 2036. **Table 4.2-10** shows the results of the cumulative CO modeling for the Tower 301 project. As shown in Table 4.2-10, there would be no exceedances of the CO 1-hour or 8-hour standard at either of the intersections. Thus, the project would result in a less-than-significant cumulative impact on local CO concentrations. As a result, the proposed project's contribution to these cumulative emissions would not be considerable, and thus this impact would be **less than significant**.

Mitigation Measure

None required.

TABLE 4.2-10
CUMULATIVE TOWER 301 PROJECT CARBON MONOXIDE CONCENTRATIONS AT AFFECTED INTERSECTIONS

Intersection	CO Concentrations	
	1-hour (ppm)	8-hour (ppm)
J Street / 3rd Street	3.94	2.78
Capitol Mall / Front Street	2.44	1.73
Threshold	20	9
Exceed Threshold?	No	No

NOTES:
ppm = parts per million
CO concentrations include the second high of the two most recent years (2017 and 2018) per SMAQMD Carbon Monoxide Dispersion Modeling Guidance (2009, rev 2014). The 1-hour CO and an 8-hour CO background concentration are 1.539 ppm and 1.1, respectively. The modeled 1-hour concentrations were converted to 8-hour concentrations using a persistence factor of 0.70. CALINE4 modeling results and additional assumptions are included in Appendix D4.

Impact 4.2-5: Implementation of the proposed project, in conjunction with other planned projects, could cumulatively expose sensitive receptors to substantial pollutant concentrations.

The SMAQMD considers the project-level threshold of significance for evaluating TACs generated by a project to also be applicable to the project's cumulative TACs. The evaluation of

health risks from TAC represents a local rather than regional analysis. Short-term TAC emissions associated with the construction of the proposed project were shown to be less than significant after mitigation. In addition, long term TAC emissions associated with the operation of the proposed project were found to be less than significant. For these reasons, TAC emissions associated with the proposed project would not be cumulatively considerable, and thus this impact would be **less than significant**.

Mitigation Measure

None required.

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4.3 Biological Resources

This section examines the potential impacts of implementation of the proposed project on biological resources and identifies mitigation measures to avoid or reduce those impacts, where appropriate. The discussion includes a summary of the current regulations relevant to biological resources potentially present within and near the project site.

Comments related to biological resources received subsequent to the issuance of the NOP for the proposed project included a request from the California Department of Fish and Wildlife (CDFW) to address impacts related to nesting and migrating birds, including bird collisions and wildlife disturbance. These issues have been addressed in this section.

The analysis is based on a review of potentially occurring special status-species,[1] wildlife habitats, vegetation communities, and aquatic resources. The sources of reference data reviewed for this evaluation included the following:

- City of Sacramento 2035 General Plan Update Draft Master EIR[2]
- Sacramento West[3] and the adjacent Sacramento East[4] U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles
- U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species that may occur in the proposed project location, and/or may be affected by the proposed project (**Appendix E**)[5]
- California Natural Diversity Database (CNDDB) list of special-status species occurrences within the Sacramento West and eight surrounding USGS 7.5-minute topographic quadrangles (Grays Bend, Taylor Monument, Rio Linda, Davis, Sacramento East, Saxon, Florin, and Clarksburg) (Appendix E)[6]
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants within the Sacramento West and eight surrounding USGS 7.5-minute topographic quadrangles[7]

1 Species that are protected pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines section 15380(b), are collectively referred to as "special-status species."

2 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Update Master Environmental Impact Report*. Certified March 3, 2015.

3 U.S. Geological Survey, 2018. Sacramento West USGS 7.5-Minute Topographic Quadrangle.

4 U.S. Geological Survey, 2018. Sacramento East USGS 7.5-Minute Topographic Quadrangle.

5 U.S. Fish and Wildlife Service, 2019. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Available: www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm. Accessed March 1, 2018. Updated March 6, 2019.

6 California Department of Fish and Wildlife. 2019. California Natural Diversity Database RareFind 5 personal computer program. Available: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed December 31, 2018, March 6, 2019, and June 6, 2019.

7 California Native Plant Society, Rare Plant Program, 2019. Inventory of Rare and Endangered Plants (version 8-02). Available: www.rareplants.cnps.org/. Accessed December 6, 2018, March 6, 2019, and June 6, 2019.

- Natural Resource Conservation Service Online Soil Survey[8]
- Central City Specific Plan Environmental Impact Report[9]
- A Manual of California Vegetation, Second Edition[10]
- A Guide to Wildlife Habitats of California[11]

An Environmental Science Associates (ESA) biologist conducted a reconnaissance-level survey of the project site on December 7, 2018. The survey consisted of mapping habitat types and documenting habitat for special-status species with the potential to occur within the project site. ESA biologists conducted an aquatic resources delineation of the project site on May 9, 2019.[12] The results of the delineation are summarized herein.

ESA coordinated with USFWS representative Kellie Berry via phone on May 20 and 28, 2019.[13] The purpose of the coordination was to discuss an elderberry shrub (*Sambucus nigra* ssp. *caerulea*) that recently established within the project site. The elderberry shrub lacks exit holes and occurs on disturbed uplands. Ms. Berry concurred that the elderberry likely became established from bird droppings or from the fill that had been imported for the previous project before construction ceased. Ms. Berry agreed that the single elderberry onsite is an isolated feature and occurs in disturbed uplands and, therefore, does not provide habitat for the federally listed valley elderberry longhorn beetle (*Desmocerus californicus dimophus*).

4.3.1 Environmental Setting

The project site is located within the Sacramento Valley floristic province of the Great Central Valley[14] (see Figure 2-1 in Chapter 2, Project Description). Historically, the region supported extensive marshes, riparian woodland intermixed with oak woodland, vernal pool complexes, and native grasslands. Intensive agricultural and urban development has resulted in substantial changes and conversions of these habitats. The remaining native vegetative communities exist now as isolated remnant patches within urban and agricultural landscapes.

8 Natural Resources Conservation Service, 2019. Web Soil Survey. Available: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 31, 2018 and March 6, 2019.
9 City of Sacramento, 2018. *Central City Specific Plan Environmental Impact Report*. Certified April 19, 2018. Prepared by Environmental Science Associates.
10 Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans, 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, California.
11 Mayer and Laudenslayer, Jr., 1988. A Guide to Wildlife Habitats of California. State of California Resources Agency, California Department of Fish and Wildlife. Sacramento, CA. Available: www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp. Accessed December 11, 2015.
12 Environmental Science Associates, 2019. Aquatic Resources Delineation for the Tower 301 Project, City of Sacramento, California.
13 Kelly Berry, U.S. Fish and Wildlife Service, Personal Communication with ESA Senior Biologist Kelly Bayne regarding the lack of habitat for VELB onsite. May 20 and 28, 2019.
14 Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors, 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley. p. 41.

The project site is located within an urban area bordered by paved roads on all sides. The Sacramento River is approximately 0.2 mile west of the project site.

Prior to December 2005, habitat types on the project site consisted of developed land comprised of a building, a paved parking lot, and ornamental landscaping.[15] Subsequent to that, the building within the project site was demolished for a previously authorized project (the Towers on Capitol Mall project), and the project site was excavated for the construction of subgrade levels and installation of foundational piles. Developed landscape areas were built at some point between December 2005 and July 2006. No further project elements were completed, and no work has been conducted since the project site was cleared in 2006. As a result, ruderal herbaceous vegetation, ornamental trees, and manmade water-filled depressions and a drainage swale have become established on the project site. The developed landscape areas remain intact.

Habitat Types

Habitat types within the project site include nonnative grassland, cottonwood grove, developed, manmade swale, and manmade seasonally water-filled depressions (**Figure 4.3-1**). **Table 4.3-1** summarizes habitat types by acreages.

TABLE 4.3-1
HABITATS PRESENT WITHIN THE PROJECT SITE

Habitat Type	Acres
Nonnative Grassland	1.42
Cottonwood Grove	0.09
Developed	0.08
Manmade Swale	0.02
Manmade Water-Filled Depression	0.78
Total	2.39[1]

NOTE:
1 GIS calculations may not reflect exact acreage of study area due to rounding.

Nonnative Grassland

Highly disturbed nonnative grassland occurs throughout the project site. Dominant vegetation is comprised of densely growing weedy nonnative species including Johnson grass (*Sorghum halepense*), milk thistle (*Silybum marianum*), filaree (*Erodium botrys*), yellow star-thistle (*Centaurea solstitialis*), wild oat (*Avena fatua*), cheeseweed (*Malva parviflora*), Bermuda grass (*Cynodon dactylon*), prickly lettuce (*Lactuca serriola*), and white sweetclover (*Melilotus albus*). Isolated trees occur within the nonnative grassland along the perimeter of the project site including tree of heaven (*Ailanthus altissima*), interior live oak (*Quercus wislizeni*), and willow (*Salix* sp.).

[15] Google Earth Pro V 7.1.2.2041. Imagery Dates ranging from June 11, 2005 to May 19, 2017. Accessed March 1, 2019.

SOURCE: Google, 2017; ESA, 2019

Tower 301

Figure 4-1
Habitat Map

ESA

Cottonwood Grove

A cottonwood grove occurs within the southern portion of the project site. Dominant vegetation includes Fremont cottonwood (*Populus fremontii* subsp. *fremontii*). The understory is sparsely vegetated with species similar to those identified in the nonnative grassland. Portions of the cottonwood grove contained standing water at the base of the trees during the December 2018 survey. The canopy of the cottonwood grove extends over the southern manmade water-filled depressions.

Developed

Developed areas occur along the southern perimeter and within the northeast corner of the project site. Developed areas include areas that had been landscaped as part of the previous project. A few ornamental landscape trees occur within the developed areas.

Manmade Depression

Two manmade water-filled depressions are within the project site. These water-filled depressions were created in dry lands as part of the previous project and are incidental to that construction activity. Standing water was present in the manmade water-filled depressions during the December 2018 survey. Dominant vegetation includes Bermuda grass, white sweetclover, nutsedge (*Cyperus eragrostis*), and curly dock (*Rumex crispus*) with scattered willow and Fremont cottonwood saplings.

Manmade Swale

A manmade upland swale was constructed along the north and east sides of the project site to connect to the two water-filled depressions. The swale was constructed in dry uplands as part of the previous project. The swale lacked ponded or flowing water during the December 2018 survey, and it does not have a defined bed and bank, ordinary high water mark, hydric soils, or hydrophytic vegetation. Dominant vegetation includes Bermuda grass. The manmade swale collects water during storm events and transports stormwater to the two water-filled depressions.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act (CWA). The manmade water-filled depressions and swale are not considered sensitive habitats since they were excavated in upland dry lands. The cottonwood grove within the southern portion of the project site is not considered a sensitive habitat since the understory either lacks vegetation or contains weedy nonnative vegetation.

State and Federal Protected Wetlands and Waters

A formal aquatic resources delineation was conducted within the project site. The delineation is considered preliminary until the USACE verifies the findings. However, as stated above, the manmade water-filled depressions and swale are not considered protected since they were excavated in upland dry lands as part of a previous project.

Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or by areas of human disturbance or urban development. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. The fragmentation of natural habitat can create isolated "islands" of vegetation and habitat that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity. The project site is not part of a major or local wildlife corridor/travel route because it does not connect two or more larger areas of natural habitat since the project site is a previously developed infill site entirely surrounded by urban development.

Special-Status Species

Special-status species are legally protected under the State and federal Endangered Species Acts or other regulations, or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are in the following categories:

1. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);
2. Species that are candidates for possible future listing as threatened or endangered under FESA (61 FR 40, February 28, 1996);
3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations 670.5);
4. Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
5. Animal species of special concern to the California Department of Fish and Wildlife;
6. Animals fully protected under Fish and Game Code (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
7. Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists (State CEQA Guidelines, Section 15380); and
8. Plants considered by the CDFW and CNPS to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2) as well as CRPR Rank 3 and 4[16] plant species.

[16] CRPR 3 and 4 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a CRPR 3 or 4 plant are significant even if individual project impacts are not. CRPR 3 and 4 plants may be considered regionally significant if, for example, the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CRPR 3 and 4 plants should be included in the special-status species analysis. CRPR 3 and 4 plants are also included in the California Natural Diversity Database Special Plants, Bryophytes, and Lichens List. [Refer to the current online published list available: www.dfg.ca.gov/biogeodata.].

A list of regionally occurring special-status species in the vicinity of the project site was compiled based on data in the CNDDB, USFWS, and CNPS lists (see Appendix E). A list of special-status species, their general habitat requirements, and an assessment of their potential to occur within the vicinity of the project site is provided in **Table 4.3-2**. The "Potential for Occurrence" category is defined as follows:

- **Unlikely:** The project site does not support suitable habitat for a particular species and/or is outside of the species known range;
- **Low:** The project site only provides limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project site;
- **Moderate:** The project site provides suitable habitat for a particular species; and
- **High:** The project site provides ideal habitat conditions for a particular species and/or known populations occur in the immediate area and/or within the project site.

Table 4.3-2 lists special-status animals with moderate to high potential to occur within the project site. The full list of species is presented in Appendix E. Of the species listed on the Sacramento West and surrounding eight quadrangles, no special-status plants and five special-status wildlife species have the potential to occur within or in the vicinity of the project site: grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and western pond turtle (*Emys marmorata*). Migratory birds and other birds of prey have the potential to nest within the nonnative grassland and trees within the project site and within the mature trees in the vicinity of the project site.

4.3.2 Regulatory Setting

Federal

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs.

Clean Water Act

The federal CWA was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States (U.S.). The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR AT THE PROJECT SITE

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the Project Site
Birds				
Ammodramus savannarum	Grasshopper sparrow	--/CSC/--	Frequents dense, dry, or well-drained grassland, especially native grassland. Nests at base of overhanging clump of grass.	**Moderate.** The nonnative grassland within the project site provides nesting habitat for this species.
Athene cunicularia	Burrowing owl	--/CSC/--	Forages in open plains, grasslands, and prairies; typically nests in abandoned small mammal burrows.	**Moderate.** The nonnative grassland within the project site provides nesting and wintering habitat for this species. Small mammal burrows and culverts were present within the project site.
Buteo swainsoni	Swainson's hawk	--/ST/--	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent populations. The CDFW considers five or more vacant acres within ten miles of an active nest within the last five years to be significant foraging habitat for Swainson's hawk.[a]	**Moderate.** While the trees within the project site provide marginal nesting habitat given the small size, the mature trees in the vicinity of the project site provide suitable nesting habitat. The 1.44 acres of nonnative grassland is not considered significant foraging habitat since it is less than 5 acres in size and is surrounded by developed areas.
Elanus leucurus	White-tailed kite	--/FP/--	Inhabits foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Forages in open grasslands, meadows, or marshes. Nests in trees with dense canopies.	**High.** The trees within and in the vicinity of the project site provide nesting habitat for this species.
Reptiles				
Emys marmorata	Western pond turtle	--/CSC/--	Inhabits ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.	**Moderate**. There are no CNDDB occurrences within 5 miles of the project site. Although no occurrences are documented within the vicinity, the manmade water-filled depressions provide aquatic habitat and the surrounding nonnative grassland provides upland habitat for this species.

KEY:
State: (CDFW)
ST = Listed as Threatened by the State of California
CSC = California Species of Special Concern
FP = CDFW Fully Protected Species

SOURCE:
a California Department of Fish and Game. 1994. *Staff Report Regarding Mitigation for Impacts to Swainson's Hawk in the Central Valley of California*.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Waters of the U.S. refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the U.S., before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of USACE and the Environmental Protection Agency (US EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations including Section 7 of the Federal Endangered Species Act and Section 106 of National Historic Preservation Act (NHPA). USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the NHPA have been met. In addition, USACE cannot issue or verify any permit until a water quality certification or waiver of certification has been issued pursuant to CWA Section 401.

There does not appear to be any features that would be regulated under Section 404 of the Clean Water Act within the project site. Under the 2015 Clean Water Rule, water-filled depressions created in dry land that are incidental to construction activities are not "waters of the United States" (Section 2 (iii)(E)), nor are ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary (Section 2(ii)(A)).

Section 401

Under CWA Section 401, applicants for a federal license or permits to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over the affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect State water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

State

California Endangered Species Act

Under the CESA, CDFW has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code [FGC] 2070). Sections 2050 through 2098 of the FGC outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the FGC prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for State-listed species. CDFW maintains a list of "candidate species" which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a

potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

Species of Special Concern

CDFW maintains a list of Species of Special Concern. Species of special concern include those whose declining population level, range, and/or because continuing threats have made the species vulnerable to extinction. The CEQA requires state agencies and local governments to disclose impacts to these species.

Fully Protected Species

Certain species are considered fully protected, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

Protection of Birds and Their Nests

Under Section 3503 of the FGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (together "Boards") are the principal State agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation..." (California Water Code section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface Waters of the State. Waters of the State determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a Clean Water Act Section 401 certification (in the case of the required USACE permit). The enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CFDW) have the ability to enforce certain water quality provisions in State law.

There does not appear to be any wetlands features on the project site that would be regulated under the Porter Cologne Act. Under new regulations adopted by the SWRCB imposing new requirements for permits to discharge dredged or fill material into waters and wetlands, wetland features are not considered waters of the state if they are less than an acre in size, are subject to ongoing operation and maintenance, and have not become a relatively permanent part of the natural landscape. The man-made water-filled depressions and swale on the project site meet these criteria.

Local

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan includes policies for both identification and preservation of biological resources (Policies ER 2.1.1 through 2.1.17) and the urban forest (Policies 3.1.1 through 3.1.9). Specifically, these policies address issues ranging from identification, retention, preservation, and public awareness of habitat areas, including open space, riparian areas, wetlands, annual grasslands, oak woodlands, and wildlife corridors. Policies relating to the urban forest focus on managing and enhancing the City's tree canopy and trees of significance.

City of Sacramento Tree Ordinance

City Code 12.56[17] provides provisions to protect City street trees. All removal, trimming, pruning, cutting, or other maintenance activities on any City street tree requires a permit from the director of the department of transportation pursuant to City Code 12.56.070. A City street tree is defined as any tree growing on a public street right-of-way that is maintained by the City. The Director may require, where appropriate, the replacement of street trees proposed for removal. In such case, the City is responsible for the full cost of tree removal and replacement.

Private protected trees are defined as:

- A tree that is designated by City council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property;
- Any native valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), interior live oak (*Q. wislizenii*), coast live oak (*Q. agrifolia*), California buckeye (*Aesculus californica*), or California sycamore (*Platanus racemosa*), that has a diameter at standard height of 12 inches or more, and is located on private property;
- A tree that has a DBH of 24 inches or more located on private property that:
  - Is an undeveloped lot; or
  - Does not include a single unit or duplex dwellings; or

[17] City of Sacramento. 2016. City of Sacramento Tree Ordinance. Ordinance Number 2016-0026. August 4, 2016.

- A tree has a DBH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

4.3.3 Analysis, Impacts and Mitigation

Significance Criteria

For purposes of this environmental document, an impact would be significant if any of the following conditions, or potential thereof, would result with implementation of the proposed project:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or the USFWS.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Issues not Discussed in Impacts

The project would not interfere with the movement of any native resident or migratory fish or wildlife species or with the movement of any native resident or migratory fish or wildlife species since the project site is an infill project that is completely surrounded by development. Therefore, this issue is not evaluated further in this EIR.

Conflicts with applicable habitat conservation plans or natural community conservation plans were evaluated and determined to result in no impact. Therefore, this issue is not evaluated further in this EIR.

The project would not adversely affect riparian habitat or other sensitive community identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS since none occur within the project site. Therefore, this issue is not evaluated further in this EIR.

Methodology and Assumptions

This section assesses the potential for the proposed project to adversely change biological resources within the project site. The impact analysis focuses on foreseeable changes to the

baseline condition and compares those changes to the significance criteria. Potential impacts are analyzed using information presented above regarding habitats present within and in the vicinity of the project site, and potential occurrence of special status and protected species.

In the impact analysis, three principal factors were considered: (1) magnitude of the impact (e.g., substantial/not substantial); (2) uniqueness of the affected resource (i.e., rarity of the resource); and (3) susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource). The evaluation of the significance considered the interrelationship of these three factors. For example, a relatively small magnitude impact to a State or federally listed species would be considered significant if the species is exceptionally rare or believed to be highly susceptible to disturbance. Conversely, a plant community such as annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be necessary to result in a significant impact.

Impacts and Mitigation Measures

Impact 4.3-1: Implementation of the proposed project could impact nesting special-status bird species, migratory birds, and raptors, including grasshopper sparrow, burrowing owl, Swainson's hawk, and white-tailed kite.

Migratory birds and other birds of prey that are protected under 50 CFR 10 of the MBTA and/or Section 3503 of the California Fish and Game Code could nest on or in the vicinity of the project site. Impacts associated with bird collisions following construction of the proposed building are not anticipated to be significant since the new building would be comparable with similar surrounding buildings in an urban environment and do not represent a change in the existing environment. However, if birds are nesting in the construction footprint and construction were to occur during the nesting season, direct mortality could result from removal or damage to eggs or young. The generally accepted nesting season extends from February 1 through August 31 (March 1 through September 15 for Swainson's hawk). The proposed project could affect migratory bird or raptor nests should they be present within the grassland or within the trees within or in the vicinity of the project site through direct mortality through removal of or damage to eggs or young or through nest abandonment. This would be a **significant impact**.

Mitigation Measure 4.3-1

a) Vegetation clearing operations, including initial grading and tree removal, shall occur outside of the nesting season that encompasses all birds (September 16 through January 31), to the extent feasible. If vegetation removal begins during the nesting season (February 1 to September 15), a qualified biologist shall conduct a preconstruction survey for active nests. The preconstruction survey shall be conducted within 5 days prior to commencement of ground disturbing activities. If the preconstruction survey shows that there is no evidence of active nests, then a letter report shall be submitted to the project applicant and the City for their records within 14 days of the survey and no additional measures are required. If construction does not commence within 5 days of the preconstruction survey, or halts for more than 5 days, an additional preconstruction survey is required.

b) If any active nests are located within the project site, an appropriate buffer zone shall be established around the nests, as determined by the biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged or the nest is determined to no longer be active. Buffer zones are typically 50 to 100 feet for migratory bird nests and 250 to 500 feet for raptor nests (excluding Swainson's hawk). If active nests are found within the vicinity of the construction areas, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist may reduce the buffer depending on the species and daily monitoring would be required to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied. A letter report documenting the monitoring activities shall be submitted to the project applicant and the City for their records within 14 days following the final monitoring event.

Additional Measures for Burrowing Owl

c) Due to the size of the project site, a single take avoidance survey shall be conducted between 14 days and 30 days prior to commencement of construction activities, in accordance with Appendix D of the CDFW's 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report). The survey area should include an approximately 500-foot (150-meter) buffer around the project site, where access is permitted. If the survey is negative, then a letter report documenting the results of the survey shall be provided to the project applicant and the City for their records within 14 days of the survey, and no additional mitigation is required.

d) If active burrows are observed within 500 feet of the project site, an impact assessment shall be prepared and submitted to the CDFW, in accordance with the 2012 Staff Report. If it is determined that project activities may result in impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat, the project applicant shall delay commencement of construction activities until the biologist determines that the burrowing owls have fledged and the burrow is no longer occupied. If this is infeasible, the project applicant shall consult with the CDFW and develop a detailed mitigation plan such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced. The mitigation plan shall be based on the requirements set forth in Appendix F of the 2012 Staff Report. No construction can commence until the CDFW has approved the mitigation plan.

Additional Measures for Swainson's Hawk

e) If construction activities are anticipated to commence during the Swainson's hawk nesting season (March 1 to September 15), a qualified biologist shall conduct a minimum of two preconstruction surveys during the recommended survey periods in accordance with the 2008 or more recent update to the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. All potential nest trees within 0.25 miles of the proposed project footprint shall be visually examined for potential Swainson's hawk nests, as accessible. If

no active Swainson's hawk nests are identified on or within 0.25-mile of the project site, a letter report documenting the survey methodology and findings shall be submitted to the project applicant and the City for their files within 14 days of the final survey and no additional mitigation measures are required.

f) If active Swainson's hawk nests are found within 0.25 miles of construction activities, a survey report shall be submitted to the CDFW, and an avoidance and minimization plan shall be developed for approval by the CDFW prior to the start of construction. The avoidance plan shall identify measures to minimize impacts to the active Swainson's hawk nest depending on the exact location of the nest. These measures may include, but are not limited to:

   i. Conducting a Worker Awareness Training Program prior to the start of construction;

   ii. Establishing a buffer zone and work schedule to avoid impacting the nest during critical periods. If possible, no work will occur within 200 yards of the nest while it is in active use. If work will occur within 200 yards of the nest, then construction will be monitored by a qualified biologist to ensure that no work occurs within 50 yards of the nest during incubation or within ten days after hatching;

   iii. Having a biological monitor conduct regular monitoring of the nest during construction activities; and

   iv. Allowing the biologist to halt construction activities until the CDFW is consulted if the biologist determines that the construction activities are disturbing the nest.

Significance After Mitigation: Mitigation Measure 4.3-1 would ensure that the project avoids or mitigates for impacts to nesting special-status birds, migratory birds, and raptors through clearing vegetation outside of the nesting season or conducting preconstruction surveys if vegetation clearing is anticipated during the nesting season and establishing a no-work buffer if birds are observed nesting in the vicinity of the construction footprint. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 4.3-2: Implementation of the proposed project could impact western pond turtle.

Although it is unlikely for western pond turtle to inhabit the project site given the lack of CNDDB occurrences within 5 miles of the project site, western pond turtle could be impacted by the project during vegetation clearing and initial grading, if they are present in the manmade seasonally water-filled depressions or in the nonnative grassland. This would be a **significant impact**.

Mitigation Measure 4.3-2

a) A qualified biologist shall conduct a preconstruction survey within 5 days prior to commencement of materials staging or ground disturbing activities. If the preconstruction survey shows that there is no evidence of western pond turtle, then a letter report shall be submitted to the project applicant and the City for their records within 14 days of the survey and no additional measures are required. If construction does not commence within 5 days of the preconstruction survey, or halts for more than 5 days, an additional preconstruction survey is required.

b) If western pond turtles are observed, the biologist shall relocate the species offsite to similar habitat on public lands within ten miles of the project site. In addition, the biologist shall monitor all staging and initial grading activities. The relocation work and monitoring shall be documented in a letter report to the project applicant and the City for their records within 14 days of the final monitoring work.

Significance After Mitigation: Mitigation Measure 4.3-2 would ensure that the project avoids or mitigates for impacts to western pond turtle through conducting preconstruction surveys, relocating any individuals to similar habitat on public land, and monitoring during staging and initial grading activities if any are observed. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 4.3-3: Implementation of the proposed project could have a substantial adverse effect on state or federally protected wetlands.

As previously discussed, the manmade water-filled depressions and ephemeral ditch/swale are not considered protected since they were excavated in upland dry lands for the purposes of constructing a building associated with a previous project. Therefore, impacts to these features are considered **less than significant**.

Mitigation Measure

None required.

Impact 4.3-4: Implementation of the proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Trees located within the boundaries of the project site may be regulated by the City of Sacramento (City) under the City of Sacramento Tree Ordinance listed in Chapter 12.56 of the Sacramento City Code. If regulated and proposed for removal, the proposed project could conflict with the City's tree ordinance. However, the applicant would be required to obtain a permit prior to removal and comply with the conditions of the permit. Therefore, impacts to trees are considered **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

Impact 4.3-5: Implementation of the proposed project, in combination with other development, could contribute to cumulative impacts on biological resources.

Because the project would be redevelopment of an infill site surrounded by urban land uses, the cumulative context for impacts to special-status species focuses on the Sacramento metropolitan area with additional context provided by the larger Sacramento Valley, based on species life history and extent of current habitat. Since the 1900s, development of the City of Sacramento and the larger Sacramento Valley has resulted in modifications of natural habitats, including but not limited to, the loss of wildlife habitat and open space areas due urban and agricultural development, and flood control development along the Sacramento and American rivers. However, because the project is located on a previously developed site and would be redeveloped on land with poor quality habitat, it would not have a significant impact on biological resources since it is an infill project completely surrounded by urban development. Therefore, cumulative impacts to biological resources is considered less than significant.

Mitigation Measure

None required.

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4.4 Global Climate Change

This section assesses the potential greenhouse gas (GHG) emissions and climate change effects of construction and operation of the proposed project and identifies potentially feasible mitigation measures where appropriate.

There were no NOP comment letters specific to GHGs and climate change.

The primary sources of data referenced for this section include:

- Project-specific construction and operational features described in Chapter 2, Project Description;
- State of California climate regulatory guidance;
- Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Guidelines;
- the City of Sacramento 2035 General Plan;[1] and

4.4.1 Environmental Setting

"Global warming" and "climate change" are common terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century. Natural processes and human actions have been identified as impacting climate. The International Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19th century however, increasing GHG concentrations resulting from human activity such as fossil fuel combustion, deforestation and other activities are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space – a phenomenon sometimes referred to as the "greenhouse effect". Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO_2, CH_4, and N_2O occur naturally and are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing,[2] natural gas leaks from pipelines and industrial processes and incomplete combustion associated with agricultural practices, landfills, energy providers and other industrial

1 City of Sacramento, 2015. *City of Sacramento 2035 General Plan*. Adopted March 3, 2015.
2 Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

facilities. Other human-generated GHGs include fluorinated gases such as SFCs, PFCs, and SF_6, which have much higher heat-absorption potential than CO_2, and are byproducts of certain industrial processes.

CO2 is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. For example, CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of approximately 30 and approximately 275 times that of CO2, which has a GWP of 1.[3]

In emissions inventories, GHG emissions are typically reported as metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in higher quantities and it accounts for the majority of GHG emissions in CO_2e, both from commercial developments and human activity in general.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations of CO_2). In 1994, atmospheric CO_2 concentrations were found to have increased by nearly 30 percent above pre-industrial concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, an increase in high ground-level ozone days, larger forest fires, and increased drought in some parts of the state. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences (as a result of sea level rise), impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. As the California Air Resources Board (CARB) *Climate Change Scoping Plan* noted, the legislature in enacting Assembly Bill (AB) 32 – The Global Warming Solutions Act, found that global warming would cause detrimental effects to some of the state's largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states as follows:[4] "The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening

[3] U.S. Environmental Protection Agency. *Understanding Global Warming Potentials*. Available: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

[4] California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. p. 10.

low coastal areas with inundation and serious damage from storms." AB 32 is discussed further below under Regulatory Setting.

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems. As temperatures and precipitation change, seasonal shifts in vegetation will occur; this could affect the distribution of associated flora and fauna species. The IPCC states that "a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21st century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species."5 Forest dieback poses risks for carbon storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in many ecosystems, are becoming more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems.[6]

Human Health Impacts

Climate change will likely increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.[7]

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2017 were approximately 50.9 billion metric tons of CO_2e per year.[8] This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

5 Intergovernmental Panel on Climate Change, 2014. Climate Change 2013: Impacts, Adaptation, and Vulnerability, Summary for Policymakers. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. pp. 14-15.

6 Intergovernmental Panel on Climate Change, 2014. *Climate Change 2014, Synthesis Report Summary for Policymakers, Fifth Assessment Report.*

7 U.S. Environmental Protection Agency, 2008. *Climate Change – Health and Environmental Effects.* Available: www.epa.gov/climatechange/effects/health.html#climate. Accessed June 19, 2012.

8 PBL Netherlands Environmental Assessment Agency, 2018. Trends in Global CO2 Emissions, 2018 Report.

U.S. Emissions

In 2015, the last emissions year reported on at the federal level, the United States emitted about 6,586.7 million metric tons of CO_2e. Of the four major emission sectors—residential, commercial, industrial, and transportation—transportation accounts for the highest fraction of GHG emissions (approximately 34 percent); these emissions are generated from direct fossil fuel combustion.[9]

State of California Emissions

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. Nitrous oxide emissions are also largely attributable to agricultural practices and soil management. Carbon dioxide sinks include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, and are two of the largest reservoirs of CO_2 sequestration. California produced approximately 429.4 million metric tons of CO_2e in 2016. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (23 percent), and the electric power sector (including both in-state and out-of-state sources) (16 percent).[10]

Existing Conditions

City of Sacramento Emissions

Based on the 2011 GHG inventory for the City of Sacramento, the transportation sector represents the largest source of GHG emissions, accounting for 52.2 percent of the City's annual emissions of 3.85 million metric tons of CO_2e. Electricity and natural gas use to operate, heat, and cool commercial, industrial, and residential buildings accounted for another 38.2 percent of annual CO_2e emissions. The other CO_2e emission sectors included in the inventory (with percent contributions reported in parentheses) were waste (8.2 percent), wastewater treatment (0.5 percent), water consumption (0.3 percent) and industrial specific sources (0.5 percent).[11]

Baseline Conditions

The project site is generally bounded by 3rd Street to the west, 4th Street to the east, L Street to the north, and Capitol Mall to the south. The project site is within Sacramento's Central City. The project site has been developed in the past but is presently unutilized and contains exposed piles from a previously approved project that was not completed.

9 U.S. Environmental Protection Agency, 2017. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015; Executive Summary, Table ES-2.* April 2017.

10 California Air Resources Board, 2018. *California Greenhouse Gas Inventory 2018 Edition of the GHG Emission Inventory Release (July 2018).* Available: https://www.arb.ca.gov/cc/inventory/data/data.htm.

11 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report*. Adopted March 3, 2015.

4.4.2 Regulatory Setting

Federal

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

The U.S. Supreme Court has held that the United States Environmental Protection Agency (US EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency* et al., twelve states and cities, including California, together with several environmental organizations sued to require the US EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and the US EPA had the authority to regulate GHGs.

On December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:[12]

- ***Endangerment Finding:*** The current and projected concentrations of the six key GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.

- ***Cause or Contribute Finding:*** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the US EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the US EPA to develop "…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy…." The Reporting Rule applies to most entities that emit 25,000 metric tons of CO_2e or more per year. Since 2010, facility owners must submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the US EPA to verify annual GHG emissions reports.

Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards

In 2014 the US EPA and the Department of Transportation's National Highway Traffic Safety Administration established a program that reduces GHG emissions and improves fuel economy for all new cars and trucks sold in the U.S. The program requires manufacturers to build a fleet that meets all federal and state requirements with an end target fuel economy of 54.5 miles per gallon by model year 2025.

[12] U.S. Environmental Protection Agency. 2016. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available: https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean.

State

In California, the legal framework for GHG emission reduction has come about through an incremental set of Governors' Executive Orders, legislation, and regulations put in place since 2002. The major components of California's climate change initiative are reviewed below.

California Environmental Quality Act and Senate Bill 97

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse physical environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to climate change. In turn, climate change has the potential to raise sea levels, alter rainfall and snowfall, affect habitat and create other adverse environmental effects.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

State CEQA Guidelines

The State CEQA Guidelines are embodied in the California Code of Regulations (CCR), Public Resources Code, Division 13, starting with Section 21000. State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. State CEQA Guidelines Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines Section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

> Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:
>
> (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
>
> (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
>
> (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
>
> (4) Measures that sequester greenhouse gases; and
>
> (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.[13]

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493, also known as the "Pavley" regulations (named for the bill's author, State Senator Fran Pavley), required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 CARB approved amendments to the CCR, adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight (GVW) rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of

[13] State CEQA Guidelines section 15126.4(a).

8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions were reduced approximately 24 percent between 2009 and 2016.

Because the Pavley regulations would impose stricter standards than those under the CAA, California applied to the US EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the US EPA granted the waiver.

Advanced Clean Cars Program

In January 2012, the CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into standards for vehicle model years 2017 through 2025. The program strengthens the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state.

The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.[14]

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive Order B-30-15

In 2015, Governor Brown issued Executive Order B-30-15, establishing a GHG reduction target of 40 percent below 1990 levels by 2030. This goal was set to make it possible to reach the ultimate goal of AB 32 to reduce GHG emissions 80 percent under 1990 levels by 2050.

Global Warming Solutions Act and the California Climate Change Scoping Plan

Assembly Bill 32

In 2006, the California legislature passed AB 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act.

[14] California Air Resources Board, 2017. *California's Advanced Clean Cars Midterm Review*, January 18, 2017. https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_summaryreport.pdf. Accessed February 14, 2019.

AB 32 requires CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Senate Bill 32 and Assembly Bill 197

Signed into law on September 8, 2016, SB 32 (Amendments to California Global Warming Solutions Act of 2006: Emission Limit) amends HSC Division 25.5 and codifies the 2030 target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by Executive Order B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels. SB 32 states the intent of the legislature to continue to reduce GHGs for the protection of all areas of the state and especially the state's most disadvantaged communities, which are disproportionately impacted by the deleterious effects of climate change on public health. The law amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030, while AB 197 includes provisions to ensure the benefits of State climate policies include disadvantaged communities.

Scoping Plan Provisions

Pursuant to AB 32, CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011[15]) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan relies on the requirements of SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

The *First Update to the Climate Change Scoping Plan* describes progress made to meet near-term emissions goals of AB 32, defines California's climate change priorities and activities for the next few years, and describes the issues facing the State as it establishes a framework for achieving air quality and climate goals beyond the year 2020.

On December 14, 2017, CARB approved the final version of California's *2017 Climate Change Scoping Plan* (2017 Scoping Plan Update), which outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels.[16] The 2017 Scoping Plan Update identifies key sectors of the implementation strategy,

[15] California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by CARB August 24, 2011. pp. ES-1 and 17.

[16] California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target*, November 2017.

which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. The CARB determined that the target Statewide 2030 emissions limit is 260 million metric tons of CO2e (MMTCO2e), and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO2e beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal represented by SB 32 and ensure achievement of the 2050 limit set forth by E.O. B-30-15.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions.[17] A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. AB 32 required CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program itself began in November 2012.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system.[18]

Senate Bill 375

In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, land use and housing allocations. SB 375 requires Regional Transportation Plans developed by the state's 18 metropolitan planning organizations to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. SB 375 would be implemented over the next several years. The Sacramento Area Council of Government's (SACOG) 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)* was adopted on February 18, 2016. SACOG's MTC/SCS calls for meeting and exceeding CARB GHG reduction goals from passenger vehicles and light-duty trucks of 7.6 percent by 2020 and 15.6 percent by 2035, where 2005 is the baseline year for comparison.[19]

[17] California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by CARB on August 24, 2011. pp. 18-20.
[18] California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by CARB on August 24, 2011. pp. 36-38.
[19] Sacramento Area Council of Governments, 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted February 18, 2016. p. 173.

Executive Order B-16-12

In 2012, Governor Brown issued Executive Order B-16-12, ordering that California's State vehicle fleet increase the number of zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. The executive order also requires that California target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

California Renewables Portfolio Standard

SB 1078 established the Renewables Portfolio Standard (RPS) in 2002, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from eligible renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, Executive Order S-14-08 expanded the state's RPS goal to 33 percent renewable power by 2020. In September 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified in April 2011 with SB X1-2. The updated RPS applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (see below) was signed in October 2015, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Most recently, SB 100, signed by Governor Brown on September 10, 2018, increases the RPS requirement to 60 percent eligible renewables by 2030 and 100 percent by 2045.

Senate Bill 350

SB 350 (Clean Energy and Pollution Reduction Act of 2015) was signed into law on October 7, 2015, establishing new goals for clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 requires the following:

- Increase California's renewable electricity procurement goal under the RPS from 33 percent by 2020 to 50 percent by 2030,
- Double existing building energy efficiency by 2030; and
- Facilitate the growth of renewable energy markets within the western U.S. by reorganizing the California Independent System Operator.

California Building Efficiency Standards – Title 24, Part 6

California's Energy Efficiency Standards for Residential and Nonresidential Buildings were established by the California Energy Commission in Title 24, Part 6 of the CCR. These standards mandate a reduction in California's energy consumption and are updated on a 3-year cycle to allow for innovation and incorporation of new energy efficient technologies and methods. Buildings for which an application for a building permit is submitted on or after January 1, 2017

must follow the 2016 standards.[20] Applications for building permits after January 1, 2020 would have to be compliant with the 2019 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards Code – CALGreen

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that establishes new sustainable building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions' building codes on January 1, 2011 and was most recently updated as the 2016 California Green Building Standards Code (effective January 1, 2017).[21]

For buildings providing more than 200 parking spaces, the 2016 CalGreen Code mandates that a minimum of 6 percent of the spaces be constructed to accommodate future electric vehicle charging stations.

To facilitate lowering the carbon intensity of commuting, bicycle parking provisions are a part of the planning and design category of CALGreen. Nonresidential buildings within the authority of California Building Standards Commission must comply with the CalGreen standards or meet the applicable local ordinance, whichever is stricter. Buildings anticipated to have tenant-occupants must provide long-term parking, specifically secure bicycle parking for at least 5 percent of tenant-occupant vehicular parking spaces. Non-residential buildings anticipated to generate visitor traffic are required to provide short-term anchored bicycle parking within 200 feet of the visitor entrance for at least 5 percent of new visitor motorized vehicle parking spaces. Additionally, long-term bike parking must be convenient from the street and must meet one of the following criteria:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

These provisions are an important part of the State's approach to encouraging and facilitating forms of commuting that are less GHG intensive and GHG-free in this case.

[20] California Energy Commission, 2015. California's Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6. Effective Date: January 1, 2017.
[21] California Building Standards Commission, 2016. California 2016 Green Building Standards Code, CalGreen California Code of Regulations, Title 24, Part 11. Effective Date: January 1, 2017.

California Integrated Waste Management Act and California Assembly Bill 341

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) in 1990, requiring all cities and counties to divert 50 percent of all solid waste from landfill facilities by January 1, 2000. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally-safe transformation and land disposal. AB 341 (Public Resources Code Division 30, Part 3, Chapter 12.8), which became law in 2011, established a new statewide goal of 75 percent diversion by 2020, and changed the way that the state measures progress toward the 75 percent recycling goal, focusing on source reduction, recycling and composting. AB 341 also requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The objective of the law is to reduce GHG emissions by diverting commercial solid waste into recycling programs and expand the opportunity for additional recycling services and recycling manufacturing facilities in California. Although AB 341 established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939.

California Assembly Bill 1826

AB 1826 (*Public Resources Code* Division 30, Part 3, Chapter 12.9, Commercial Organic Waste Recycling Law) became effective on January 1, 2016, and requires businesses (including commercial and public entities) and multi-family complexes (with 5 units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phases in the requirements on businesses with full implementation realized in 2019:

- **First Tier:** Commencing in April 2016, the first tier of affected businesses included those that generate eight or more cubic yards of organic materials per week.
- **Second Tier:** In January 2017, the affected businesses expanded to include those that generate four or more cubic yards of organic materials per week.
- **Third Tier:** In January 2019, the affected businesses are further expanded to include those that generate four or more cubic yards of commercial solid waste per week.

Local

City of Sacramento Zoning Code for Bicycle Requirements

The City of Sacramento's Zoning Code establishes bicycle parking requirements by both land use and parking district. According to the zoning code, office buildings located in urban districts require both short- and long-term bicycle parking. For short-term bicycle parking, one space is required per 20,000 gross square feet of building, and for long-term bicycle parking, one space is required per 6,667 gross square feet of building.

City of Sacramento Climate Action Plan (CAP)

The City of Sacramento CAP includes several initiatives to reach its goals of reducing community-wide emissions by 15 percent below 2005 levels by 2020, 38 percent below 2005 levels by 2030, and 83 percent below 2005 levels by 2050. These goals must be achieved with the addition of new residents living in the city and additional people working in the city. As

compared to 2005, by 2020 Sacramento expects an additional 116,400 people, 58,500 housing units, and 80,200 employees. On a per capita basis (including new residents), Sacramento will need to reduce its emissions to about 6.2 metric tons of CO_2e per person by 2020. This represents a 31 percent reduction from 2005 per capita emission levels (8.9 metric tons CO_2e per person).

The CAP outlines seven strategies to meet Sacramento's GHG reduction goals.[22] Those strategies include:

- Strategy 1: Sustainable Land Use – This strategy focuses on using land efficiently, while preserving the character of existing neighborhoods, by providing for complete neighborhoods that incorporate natural resources and green infrastructure.
- Strategy 2: Mobility and Connectivity – This strategy involves creating a multi-modal transportation network that increases the use of sustainable modes of transportation (walking, biking, and transit) and reduces dependence on automobiles.
- Strategy 3: Energy Efficiency and Renewable Energy – The third strategy increases the energy efficiency of existing and new buildings and maximizes the use and generation of renewable energy.
- Strategy 4: Water Reduction and Recycling – This strategy reduces the production, consumption, and disposal of waste materials, while encouraging reuse, recycling, and composting.
- Strategy 5: Water Conservation and Wastewater Reduction – This strategy encourages water conservation and management and wastewater treatment practices that reduce energy demand.
- Strategy 6: Climate Change Adaptation – This strategy plans for climate change risks and is designed to create resilient communities, economies, and environments.
- Strategy 7: Community Involvement and Empowerment – This strategy enlists the ideas and energy of residents and businesses to help achieve the City's climate action objectives.

For each of the seven strategies listed above, the CAP includes measures and actions that the City will use to reduce GHG emissions and adapt to climate change. Measures organize the specific programs, policies, and actions that the City will carry out to achieve its climate action strategies. Within each measure are the detailed actions that the City will take to implement the measures.

Sacramento 2035 General Plan and Greenhouse Gas Emission Reduction Strategies

The 2035 General Plan incorporated the City's Climate Action Plan strategies, measures, and actions that reduce GHG emissions into appropriate elements of the General Plan. Appendix B of the General Plan is entitled, "Climate Action Plan Policies and Programs." Most of the listed items are "supporting," which, in this context, means that no specific quantitative GHG emission reduction target was developed, but that the implementation of this policy or program would *support* the City's overall efforts to reduce local sources of GHG emissions.

[22] City of Sacramento, 2012. *Sacramento Climate Action Plan*. Adopted February 14, 2012. pp. i-xiv.

4.4.3 Analysis, Impacts and Mitigation

Significance Criteria

Appendix G of the CEQA Guidelines outlines significance criteria for the evaluation of impacts related to GHGs. The project would result in a significant impact on the climate if it would:

1. Generate(s) GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with and applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

GHG emissions are an inherently cumulative impact because no single project makes a significant contribution to climate change. The State CEQA Guidelines require the analysis of GHGs and potential climate change impacts from new development. Section 15183.5 of the State CEQA Guidelines states:

> [p]ublic agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

SMAQMD's currently adopted GHG thresholds of significance consist of a construction threshold (1,100 metric tons GHG/year), a land-use operational threshold (1,100 metric tons GHG/year) and a stationary source operational threshold (10,000 metric tons GHG/year). Up until 2016, the SCAQMD recommended 21.7 percent mitigation from a business-as-usual scenario for projects that exceeded the operational thresholds, but SMAQMD recommended suspending the use of business-as-usual analysis following the California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (Newhall Ranch case) in January 2016. Consistent with the recommendations of the Court in the Newhall Ranch case, SMAQMD encouraged local agencies in Sacramento to develop a CAP or greenhouse gas reduction plan that could be used programmatically to reduce GHG emissions and streamline CEQA review for development projects, per Section 15183.5 of the CEQA Guidelines.

In November 2018, the SMAQMD issued proposed new draft thresholds of significance for GHG emissions, in response to recent changes in legislation (e.g., SB 32) and CARB's adoption of the 2017 Scoping Plan Update, which recommends communities establish per-capita emissions targets that support the State's climate stabilization goal.[23] The SMAQMD's recommendations

[23] Sacramento Metropolitan Air Quality Management District, 2018. Draft Sacramento Metropolitan Air Quality Management District Greenhouse Gas Thresholds of Significance Update for Land Development Project

reiterate that if a project is subject to CEQA review and the proponent demonstrates the project is consistent with all applicable measures from an adopted CAP or GHG reduction plan that meets the requirements of CEQA Guidelines Section 15183.5, the proponent would qualify for CEQA streamlining of GHG analysis. Regarding quantitative thresholds for determining significance, SMAQMD recommends including a screening level for smaller projects and an efficiency metric for projects exceeding the screening level to determine significance of GHG emissions. The recommended screening level is 3,500 MT CO2e for smaller projects (which SMAQMD determined would capture 98 percent of the emissions from projects for review and potential mitigation). For projects exceeding the 3,500 metric tons GHG/year screening threshold, SMAQMD recommends comparing the project emissions to one of the efficiency metrics shown in **Table 4.4-1** to determine significance and the need to mitigate GHG emissions. Two build-out years are provided by SMAQMD, 2020 and 2036, which correspond with the data available from SACOG. Proponents would extrapolate the target emission thresholds for build out years falling between 2020 and 2036.

TABLE 4.4-1
SMAQMD RECOMMENDED LAND USE OPERATIONAL GHG THRESHOLDS OF SIGNIFICANCE

Year	MT CO2e/capita	MT CO_2e/service population
2020	5.90	4.16
2036	2.94	2.05

The City of Sacramento CAP qualifies under section 15183.5 of the State CEQA Guidelines as a plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. In addition, for informational purposes, the project's emissions are compared to the SMAQMD's proposed CEQA significance thresholds. For the project's first year of operation (2022), the per-service population threshold would be 3.85 MT CO_2e per year, which is based on a linear analysis between 2020 and 2036, as shown in Table 4.4-1.

Methodology and Assumptions

Project-related GHG impacts fall into two categories: short-term impacts due to construction, and long-term, on-going, impacts due to operations. Estimated construction- and operation-related emissions are presented below in **Table 4.4-2** and **Table 4.4-3**. This project is evaluated for its consistency with currently adopted State and local regulations intended to reduce GHG emissions, including the 2017 Scoping Plan Update, Executive Order B-18-12, the California Integrated Waste Management Act, and the City of Sacramento General Plan and Climate Action Plan.

Operational Emissions, November 28, 2018. Available: http://www.airquality.org/LandUseTransportation/Documents/11-28-18PublicDraftSMAQMDGHGThresholdsUpdate.pdf.

TABLE 4.4-2
PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS

Construction Year	CO_2e (MT/year)
2019	210
2020	2,313
2021	2,470
2022	338
Total Construction GHG Emissions	5,331
Emissions Amortized Over 25 Years	213

NOTES:
Project construction emissions were estimated using CalEEMod version 2016.3.2. See Appendix D1 for model outputs and more detailed assumptions.

CO_2e = carbon dioxide equivalent, MT = metric tons

SOURCE: ESA, 2019.

TABLE 4.4-3
PROJECT ANNUAL GREENHOUSE GAS EMISSIONS

Source	CO_2e (MT/year)
Area	2
Energy	4,726
Mobile	4,049
Stationary	5375
Waste	406
Water	377
Amortized Construction Emissions	213
Total Annual GHG Emissions (Operation + Construction)	**15,148**
Proposed Screening Threshold	3,500
Exceed Screening Threshold	**Yes**
Project Service Population[a]	4,662
Total Annual Emissions per Service Population	**3.25**
Proposed Service Population Threshold	3.85
Exceed Service Population Threshold	***No***

NOTES:
Project construction emissions were estimated using CalEEMod version 2016.3.2. See Appendix D1 for model outputs and more detailed assumptions.

CO_2e = carbon dioxide equivalent, MT = metric tons
a The residential portion of the project would have 162 residents while the non-residential component would include 4,500 employees.

SOURCE: ESA, 2019.

GHG emissions associated with the project were estimated for the construction phase and the operational phase using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is an approved emissions inventory software program that allows the user to

estimate criteria pollutant and GHG emissions from land use development projects. Project-specific information was used for modeling when possible, e.g., land use, construction schedule, area to be developed. Where project-specific data is unavailable, CalEEMod default construction equipment and worker trips were used which capture assumed values consistent with standard practice. Construction of the project was assumed to begin at the end 2019 and complete in 2022, when the project would become operational. Additional assumptions and model results are presented in Appendix D1. Construction emissions are amortized over the project life expectancy of 25 years, and added to operational emissions to provide an annual average for project GHG emissions.

Impacts and Mitigation Measures

Impact 4.4-1: Implementation of the proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Project Construction Greenhouse Gas Emissions

Construction-related emissions arise from a variety of activities, including: (1) grading, excavation, road building, and other earth moving activities; (2) travel by construction equipment and employee vehicles, especially on unpaved surfaces; (3) exhaust from construction equipment; (4) architectural coatings; and (5) asphalt paving.

Using the methods described above, construction GHG (CO_2e) emissions for the years 2019, 2020, 2021, and 2022 were estimated. Annual unmitigated construction emissions are presented in Table 4.4-2.

Project Operational Greenhouse Gas Emissions

Over the long-term, the project would result in an increase in GHG emissions primarily due to motor vehicle trips and onsite area and energy sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products). For this analysis, GHG emissions for the project were modeled for operational year 2022 using CalEEMod version 2016.3.2. Annual total emissions, which include operational emissions in addition to amortized construction emissions, are presented in Table 4.4-3.

Summary

The GHG emissions from the proposed project would be 3.25 MT CO_2e per year, which is less than SMAQMD's proposed per-service population significance threshold of 3.85; therefore, the GHG impacts on the environment would be considered **less than significant**.

Mitigation Measure

None required.

Impact 4.4-2: Implementation of the proposed project could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Consistency with Applicable Plans and Regulations

CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. As described below, the project would be consistent with the following plans and regulations:

- 2017 Scoping Plan Update,
- Executive Order B-18-12,
- The California Integrated Waste Management Act, and
- The City of Sacramento's 2035 General Plan and CAP.

Consistency with 2017 Scoping Plan Update

The 2017 Scoping Plan Update establishes the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The plan update details local actions that land use development projects and municipalities can implement to support the statewide goal. For project-level CEQA analyses, the 2017 Scoping Plan Update states that projects should implement feasible mitigation, preferably measures that can be implemented onsite. Many of the Tower 301 project features align with these actions and would contribute to direct and indirect reduction of GHG emissions.

The Scoping Plan Update incorporates a broad array of regulations, policies and state plans designed to reduce GHG emissions. Those that are applicable to the construction and operation of the project are listed in **Table 4.4-4**. Actions, plans and programs that are not under the control or influence of the project, such as the Cap-and-Trade program, are not included. As shown below, the project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, reduce waste generation, promote EV use, and reduce vehicle travel consistent with statewide strategies and regulations. As a result, the project would not conflict with applicable Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

Consistency with the California Integrated Waste Management Act

As required for all State agencies under the California Integrated Waste Management Act, the project would achieve a waste diversion rate of at least 50 percent, reducing the level of GHGs associated with solid waste.

TABLE 4.4-4
CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Energy and Water		
California Renewables Portfolio Standard (RPS)	SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.	**Consistent.** The project's electricity will be provided by SMUD. SMUD is required to comply with SB 100 and the RPS.
California Renewables Portfolio Standard and SB 350	SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the state to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	**Consistent.** The project's electricity will be provided through SMUD. SMUD is required to comply with both the RPS and SB 350 and will meet these standards.
CCR, Title 24, Part 6	Energy Efficiency Standards for Residential and Nonresidential Buildings.	**Consistent.** The project is designed to comply with the applicable Title 24 Building Energy Efficiency Standards.
CALGreen code, Title 24, Part 11	California's Green Building Standards (CALGreen) Code includes water efficiency requirements that apply to new public agency buildings.	**Consistent.** The project would include a commitment to achieve, at a minimum, the CALGreen Tier 1 water efficiency standards.
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.	**Consistent.** In addition to the commitment to CALGreen Tier 1 water efficiency standards, the project would be consistent with EO B-18-12, which requires State agencies to reduce agency-wide water use 20 percent by 2020, as measured against a 2010 baseline.
Mobile Sources		
Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)	In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2106) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030	**Consistent.** The standards would apply to all vehicles used by the employees and residents of the project, and to construction workers traveling to and from the site. The parking facility associated with the project would be constructed to accommodate future electric vehicle charging station, as required by CALGreen.

TABLE 4.4-4
CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Mobile Sources (cont.)		
SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. SACOG's MTC/SCS calls for GHG reductions from passenger vehicles and light-duty trucks of 7.6 percent by 2020 and 15.6 percent by 2035.	**Consistent.** The project would be consistent with SACOG MTP/SCS goals and objectives under SB 375 to implement "smart growth." The project would provide employment opportunities in close proximity to off-site residential and other job centers in the city of Sacramento where people can live and work and have access to convenient modes of transportation that provides options for reducing reliance on automobiles and minimizing associated air pollutant emissions. The project would also reduce VMT as a result of its urban infill location, with nearby access to public transportation within a quarter-mile of the project site, and its proximity to other destinations including off-site residential, retail, and entertainment.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341	The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	**Consistent.** The project would be served by a solid waste collection and recycling service that may include mixed waste processing, and that yields waste diversion results comparable to source separation and consistent with Citywide recycling targets. The City of Sacramento has a goal to achieve 75 percent waste diversion by 2020 and zero waste to landfills by 2040.

SOURCE: ESA 2019.

Consistency with the City of Sacramento General Plan and Climate Action Plan

As discussed above, the 2035 General Plan incorporated the City's Climate Action Plan strategies, measures, and actions that reduce GHG emissions. Those policies that are applicable to the construction and operation of the project are listed in **Table 4.4-5**. As shown below, the project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, reduce vehicle travel, and provide amenities that benefit residents of and visitors to the Central Business District (CBD) consistent with the City of Sacramento's policies. As a result, the project would not conflict with applicable General Plan and Climate Action Plan policies to reduce GHG emissions.

Summary

The GHG emissions from the Tower 301 project would have a **less-than-significant** impact because the proposed project would be consistent with each of the applicable criteria for determining consistency with the CAP.

Mitigation Measure

None required.

TABLE 4.4-5
CONSISTENCY WITH CITY OF SACRAMENTO GENERAL PLAN AND CLIMATE ACTION PLAN

General Plan Policy	Description	Consistency Analysis
Policy LU 5.6.3	**Mixed-Use Downtown Development.** The City shall support a mixed-use, vibrant Central Business District by encouraging innovative mixed-use development resulting in development consistent with Sacramento's commitment to environmental sustainability.	**Consistent.** The proposed project would develop a high-rise building that would include office, residential, restaurant, and retail uses on an infill site near downtown housing, commercial, and transit uses. As the project would be built on underutilized land and be located near transit uses, the project would be consistent with the City's commitment to environmental sustainability.
Policy LU 7.1.2	**Housing in Employment Centers.** The City shall require compatible integration of housing in existing and proposed employment centers to help meet housing needs and reduce vehicle trips and commute times, where such development will not compromise the City's ability to attract and maintain employment-generating uses.	**Consistent.** The proposed project would include 100 residential units within the City's CBD. The addition of these residential units would result in a slight decrease in daily VMT per service population within the Central City area under existing and cumulative conditions (See Section 4.6, Transportation for a more detailed discussion).
Policy M 5.1.5	**Motorists, Bicyclists, and Pedestrian Conflicts.** City shall develop safe and convenient bikeways, streets, roadways, and intersections that reduce conflicts between bicyclists and motor vehicles on streets, between bicyclists and pedestrians on multi-use trails and sidewalks, and between all users at intersections.	**Consistent.** Sidewalk improvements around the project site along the Capitol Mall, 3rd Street, 4th Street, and L Street frontages would comply with City standards for width and design. No alterations are proposed to existing City bicycle facilities including the dedicated bicycle lane on the North side of Capitol Mall.
Policy M 5.1.11	**Bike Facilities in New Developments**. The City shall require that major new development projects (e.g., employment centers, educational institutions, recreational and retail destinations, and commercial centers) provide bicycle parking (i.e., short-term bicycle parking for visitors and long-term bicycle parking for residents or employees), personal lockers, showers, and other bicycle-support facilities.	**Consistent.** Employee, resident, and short-term patron bicycle parking spaces would be provided on-site, including 176 long-term bicycle parking spaces in the subgrade parking level and 58 short-term bicycle parking spaces on the ground level of the parking garage.
Policy U 2.1.10	**Water Conservation Standards.** The City shall achieve a 20 percent reduction in per-capita water use by 2020 consistent with the State's *20x2020 Water Conservation Plan* (California Water Resources Control Board, 2010).	**Consistent.** The project would include a commitment to achieve, at a minimum, the CALGreen Tier 1 water efficiency standards.
Policy U 2.1.15	**Landscaping.** The City shall continue to require the use of water-efficient and river-friendly landscaping in all new development, and shall use water conservation gardens (e.g., Glen Ellen Water Conservation Office) to demonstrate and promote water conserving landscapes.	**Consistent.** Project landscaping would include plants that are drought tolerant, native to California or other Mediterranean climates, or other low water use species. High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers will be used.
Policy U 6.1.16	**Energy Efficiency Appliances.** The City shall encourage builders to supply Energy STAR appliances and HVAC systems in all new residential developments, and shall encourage builders to install high-efficiency boilers where applicable, in all new non-residential developments.	**Consistent** All residences will be equipped with Energy Star certified appliances (dishwashers and refrigerators). Energy efficient LED light fixtures will be installed within the residences and office suites and for exterior lighting.

SOURCE: ESA 2019.

4.5 Noise and Vibration

This section describes the existing noise environment near the project and evaluates the potential for construction and operation of the project to result in significant impacts associated with noise and vibration.

Comments related to noise and vibration received subsequent to the issuance of the NOP for the proposed project included a request from the California Department of Fish & Game to address noise impacts to wildlife. This section of the EIR addresses noise impacts with respect to human exposure. Impacts to wildlife, including potential noise impacts, if any, are addressed in Section 4.3, Biological Resources.

The analysis included in this section was developed based on data provided in the *City of Sacramento 2035 General Plan,*[1] the *City of Sacramento 2035 General Plan Master Environmental Impact Report,*[2] the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Manual,*[3] and Caltrans Transportation and Construction Vibration Guidance Manual.[4]

4.5.1 Environmental Setting

Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz, which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting

1 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.
2 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.
3 Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Manual*. September 2018.
4 California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual.* September 2013

follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 4.5-1**.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq}: the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: the instantaneous maximum noise level for a specified period of time.

L_{50}: the noise level that is equaled or exceeded 50 percent of the specified time period. The L_{50} represents the median sound level.

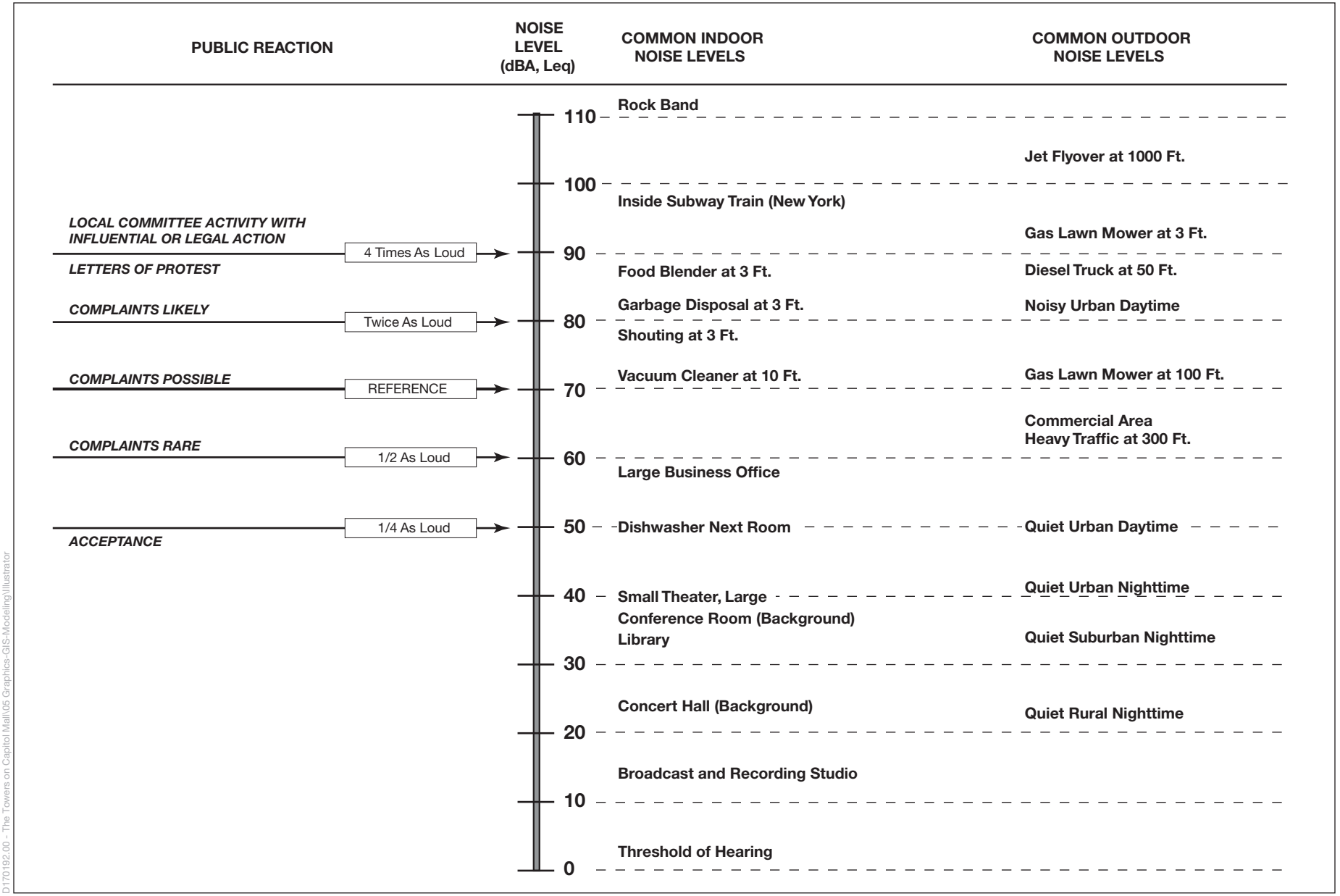
L_{90}: the noise level that is equaled or exceeded 90 percent of the specific time period. This is considered the background noise level during a given time period.

L_{dn}: also abbreviated DNL, it is a 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

CNEL: similar to DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dB "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location.[5]

[5] California Department of Transportation, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.



SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA

Tower 301

Figure 4.5-1
Typical Noise Levels

ESA

Effects of Noise on People

When a new noise is introduced to an environment, human reaction can be predicted by comparing the new noise to the ambient noise level, which is the existing noise level comprised of all sources of noise in a given location. In general, the more a new noise exceeds the ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
- outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- a change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- a 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

The perceived increases in noise levels shown above are applicable to both mobile and stationary noise sources. These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dB for hard sites and 7.5 dB for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dB (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dB for hard sites and 4.5 dB for soft sites for each doubling of distance from the reference measurement.

Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source.

Fundamentals of Vibration

As described in the FTA's *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling

sounds to be heard.[6] In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal, which is measured in inches per second. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

Existing Conditions

Existing Noise-Sensitive Land Uses

Noise sensitive land uses, where high noise levels can disrupt sleep, mechanical equipment, or other activities, or where long-term exposure can result in health effects, are typically defined as places where people sleep such as residences, hotels and hospitals, as well as institutional land uses where relative quiet is important during daytime and evening hours such as schools, libraries, places of worship, and care centers. Sensitive land uses located near the project site consist of multi-family residences. The nearest sensitive receptors to the project site consist of following residences:

- Clarendon House Apartment Building, located approximately 495 feet northwest of the project site;[7]

[6] Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Manual*. September 2018.
[7] While this is, by distance, is the closest receptor to the project site, it is located across I-5, the traffic on which tends to mask noise from other sources.

- Governor's Square Apartment Building, located approximately 575 feet south of the project site;
- The Residences at the Sawyer complex, located approximately 840 feet northeast of the project site; and
- Bridgeway Towers, located approximately 870 feet southwest of the project site.

Existing Noise Environment

The ambient noise environment surrounding the project site is primarily the result of vehicle traffic along Interstate 5 (I-5), L Street, 3rd Street, 4th Street and Capitol Mall. To quantify the existing ambient noise levels, ESA conducted a noise survey within and near the project. The noise survey began on January 22, 2019 and consisted of two 15-minute short-term and one 48-hour long-term noise measurements. The location of the short- and long-term noise measurements are shown in **Figure 4.5-2**. The long-term measurement was conducted on the project site in order to establish the exterior noise exposure for the proposed residential portion of the tower. The short-term measurements reflect the existing daytime noise levels at off-site sensitive residential receptors nearest to the project site that could be impacted by construction activities or operations. The results of the short- and long-term noise measurements are presented in **Tables 4.5-1** and **4.5-2**, respectively. The two short-term noise measurements were conducted using a Larson Davis 831 sound level meter (SLM) and the one long-term noise measurement was conducted using a Larson Davis LxT2 SLM. All SLMs were calibrated before and after the noise measurement survey.

TABLE 4.5-1
15-MINUTE SHORT-TERM AMBIENT NOISE MONITORING RESULTS

Monitor	Start time	L_{eq} (dBA)	L_{max} (dBA)	Primary Noise Source(s)
ST-1: 1451 3rd Street	11:19 a.m.	65	73	Traffic on 3rd Street and I-5
ST-2: 1128 2nd Street	11:20 a.m.	55	65	Traffic on I-5

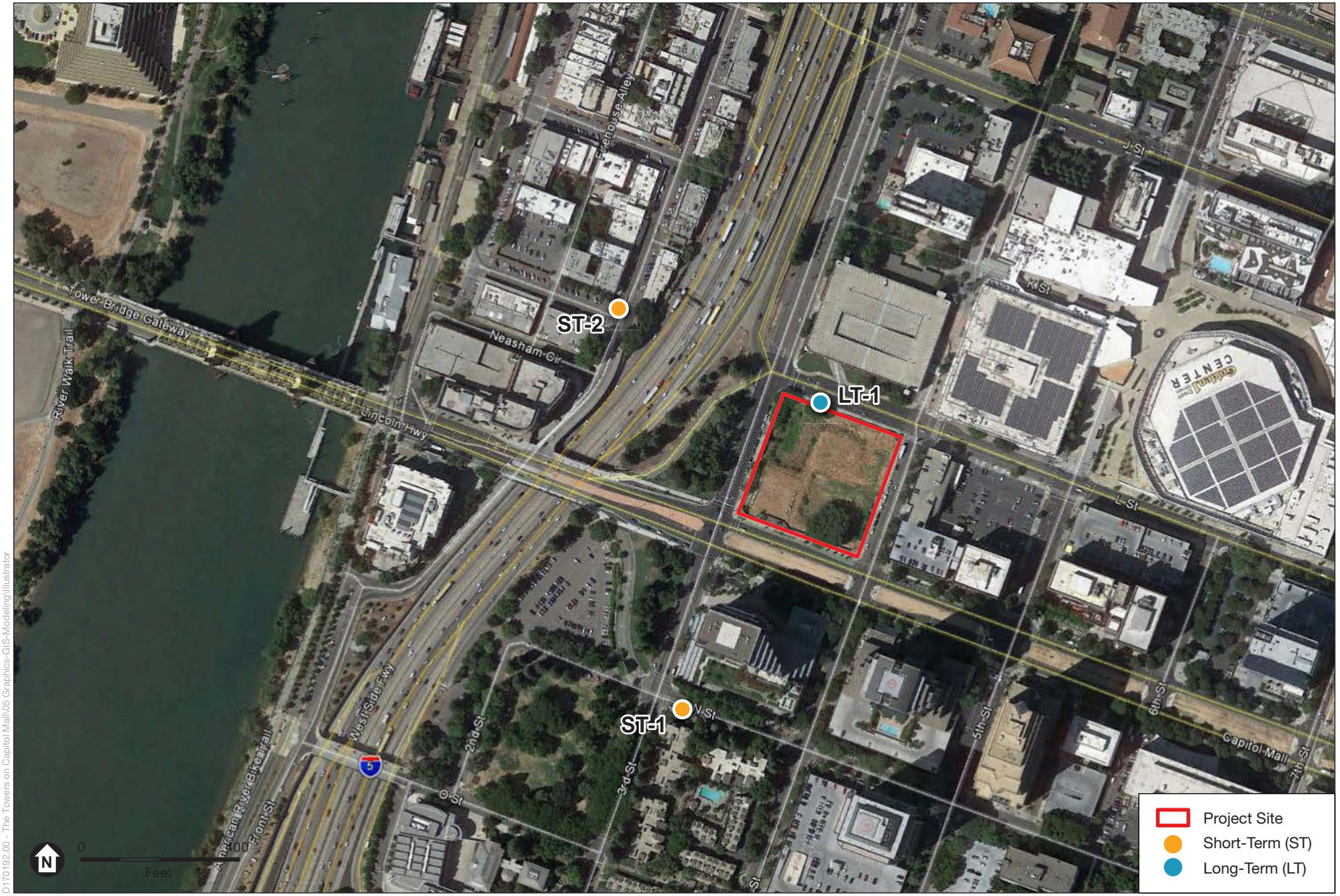
SOURCE: ESA, 2019.

TABLE 4.5-2
48-HOUR LONG-TERM AMBIENT NOISE MONITORING RESULTS

Monitor	Start Date & Time	24-hour L_{eq} (dBA)	L_{dn} (dBA)	L_{max} (dBA)
LT-1: Project Site[1]	1/22/19 11:00 a.m.	66	71	93

NOTES:
1 The primary noise sources at LT-1 consisted of vehicular traffic along 3rd Street and Interstate 5.

SOURCE: ESA, 2019.



SOURCE: Google Earth Pro, basemap, 2018; ESA, 2019

Tower 301

Figure 4.5-2
Short- and Long-Term Noise Measurements

ESA

Baseline Conditions

The project site consists of 2.39 acres of previously developed but currently unutilized land. Under baseline conditions, the project site would be exposed to vehicular traffic noise similar as those discussed under the Existing Conditions above.

4.5.2 Regulatory Setting

Federal

There are no federal regulations relevant to noise that would apply to this project.

State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dBA. The State pass-by standard for light trucks and passenger cars (less than 4.8 tons, gross vehicle rating) is also 80 dBA at 15 meters from the roadway centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in Title 24 of the California Code of Regulations (CCR).

The State of California updated its Building Code requirements with respect to sound transmission, effective January 2014. Section 1207 of the California Building Code (CCR, Title 24) establishes material requirements in terms of sound transmission class[8] rating of 50 for all common interior walls and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public area. The previous code requirements (before 2014) set an interior performance standard of 45 dBA from exterior noise sources. This requirement was reinstated in July of 2015. Title 24 standards are enforced through the City of Sacramento's building permit application and inspection process.

Local

City of Sacramento 2035 General Plan

The following noise and vibration-related goals and policies identified in the Environmental Constraints Element of the *City of Sacramento 2035 General Plan*[9] are relevant to the proposed project.

[8] The sound transmission class is used as a measure of a materials ability to reduce sound. The sound transmission class is equal to the number of decibels a sound is reduced as it passes through a material.

[9] City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

Goal EC 3.1: Noise Reduction. Minimize noise impacts on human activity to ensure the health and safety of the community.

Policy EC 3.1.1: Exterior Noise Standards. The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table 4.5-3** (Table EC 1 in the General Plan), to the extent feasible.

TABLE 4.5-3
EXTERIOR NOISE COMPATIBILITY STANDARDS FOR VARIOUS LAND USES

Land Use Type	Highest Level of Noise Exposure that is Regarded as "Normally Acceptable"[a] (L_{dn}[b] or CNEL[c])
Residential—Low Density Single Family, Duplex, Mobile Homes	60 dBA[d,e]
Residential—Multi-family	65 dBA
Urban Residential Infill[f] and Mixed-Use Projects[g]	70 dBA
Transient Lodging—Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings—Business, Commercial and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

NOTES:
a As defined in the *State of California General Plan Guidelines*, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements."
b L_{dn} or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.
c CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
d dBA or A-weighted decibel scale is a measurement of noise levels.
e The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
f With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
g All mixed-use projects located anywhere in the City of Sacramento.

SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015. p. 2-350.

Policy EC 3.1.2: Exterior Incremental Noise Standards. The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in **Table 4.5-4** (Table EC 2 in the General Plan), to the extent feasible.

Policy EC 3.1.3: Interior Noise Standards. The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour) for office buildings and similar uses.

Policy EC 3.1.4: Interior Noise Review for Multiple, Loud Short-Term Events. In cases where new development is proposed in areas subject to frequent, high-noise events (such as aircraft over-flights, or train and truck pass-by events), the City shall evaluate noise impacts on any sensitive receptors from such events when considering whether to

approve the development proposal, taking into account potential for sleep disturbance, undue annoyance, and interruption in conversation, to ensure that the proposed development is compatible within the context of its surroundings.

TABLE 4.5-4
EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES (DBA)

Residences and Buildings where People Normally Sleep[a]		Institutional Land Uses with Primarily Daytime and Evening Uses[b]	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

NOTES:
a This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
b This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015. p. 2-351.

Policy EC 3.1.5: Interior Vibration Standards. The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

Policy EC 3.1.6: Effects of Vibration. The City shall consider potential effects of vibration when reviewing new residential and commercial projects that are proposed in the vicinity of rail lines or light rail lines.

Policy EC 3.1.7: Vibration. The City shall require an assessment of the damage potential of vibration-induced construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites and require all feasible measures be implemented to ensure no damage would occur.

Policy EC 3.1.8: Operational Noise. The City shall require mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.

Policy EC 3.1.9: Compatibility with Park and Recreation Uses. The City shall limit the hours of operation for parks and active recreation areas in residential areas to minimize disturbance to residences.

Policy EC 3.1.10: Construction Noise. The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

Sacramento City Code (Noise Control Ordinance)

The Sacramento City Code includes noise regulations in Title 8 – Health and Safety, Chapter 8.68 – Noise Control (referred to generally as the Noise Control Ordinance). Of the regulations in Chapter 8.68, the following regulations would be applicable to the proposed project:

- Section 8.68.080 exempts certain activities from Chapter 8.68, including "noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure" as long as these activities are limited to between the hours of 7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. The use of exhaust and intake silencers for internal combustion engines is also required. Construction work can occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed 3 days. Section 8.68.080 also exempts noise from any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work from Chapter 8.68 requirements.

- Section 8.68.060 sets standards for cumulative exterior noise levels at residential and agricultural properties, including exterior noise standards of 55 dBA from 7:00 am to 10:00 pm, and 50 dBA from 10:00 pm to 7:00 am. Per Section 8.68.060(b), the allowable decibel increase above the exterior noise standards in any one hour are:

  1. 0 dB for cumulative period of 30 minutes per hour;
  2. 5 dB for cumulative period of 15 minutes per hour;
  3. 10 dB for cumulative period of 5 minutes per hour;
  4. 15 dB for cumulative period of 1 minutes per hour; or
  5. 20 dB not to be exceeded for any time per hour.

  In addition, per Section 8.68.060(c), each of the noise limits above shall be reduced by 5 dB for impulsive or simple tone noises, or for noises consisting of speech or music. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection (b) above, the allowable noise limit shall be increased in 5 dB increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

4.5.3 Analysis, Impacts and Mitigation

Significance Criteria

Appendix G of the CEQA Guidelines identifies potential significance criteria for the evaluation of impacts related to noise and vibration. The proposed project would have a significant impact related to noise and vibration if it would:

- Construction activities occur outside of the construction exempt hours found in Section 8.68.080 of the Sacramento City Code;

- Construction noise levels that result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

- Result in a substantial permanent increase in ambient exterior noise levels in the project vicinity that exceed standards in the City's 2035 General Plan or Noise Control Ordinance;
- Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to project operation;
- Expose sensitive land uses to operational noise levels in excess of the noise standards found in the Section 8.68.060 of the Sacramento City Code;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

Issues or Potential Impacts Not Discussed Further

The project is not located within an airport land use plan, or within two miles of a public airport or public use airport. The project site is located outside of the Airport Influence Area of Sacramento International Airport[10] and is well outside of the 65 CNEL noise contour for the Sacramento Executive Airport.[11] Additionally, the project is not located within two miles of a private airstrip; Sacramento Executive Airport is the closest airport and is located approximately 4.9 miles south of the project site. While there are three office towers south of the project site with apparent helicopter landing pads on their rooftops, none of these are identified as active heliports.[12] Thus, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further.

Methodology and Assumptions

Construction noise impacts are assessed relative to the increase in noise levels that could result from the operation of specified construction equipment compared to existing noise level conditions. Analysis of the project's temporary construction noise effects is based on specific estimates of construction equipment and duration of use from the project applicant. In all cases, the analyses accounted for attenuation of noise levels due to distances between the construction activity and the sensitive land uses in the site vicinity. Construction noise levels at nearby sensitive land uses that would be associated with the proposed project were estimated using the FHWA's *Roadway Construction Noise Model*.[13] The FTA's *Transit Noise and Vibration Impact Manual* provides guidelines for reasonable criteria for assessment of construction noise.[14]

[10] Sacramento Area Council of Governments, 2013. Sacramento International Airport Land Use Compatibility Plan. Map 1.
[11] Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, Sacramento Executive Airport Comprehensive Land Use Plan May 1998, Amended May 1999, Figure 7.
[12] AirNav.COM, Browse Heliports function. Available: https://airnav.com/airports/us/CA?type=H&use=R. Accessed March 27, 2019.
[13] Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model User's Guide*. January 2006.
[14] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018.

For the purposes of the assessment of potential vibration impacts, the methodology described in the Caltrans' *Transportation and Construction Vibration Guidance Manual* was used to evaluate project-related vibration effects to nearby sensitive land uses.[15] The Caltrans guidance manual focuses entirely on addressing vibration from construction activities. Impact pile driving is considered a continuous/frequent intermittent source.[16] Caltrans' guidance identifies that vibration levels from continuous/frequent intermittent sources in excess of 0.4 PPV (in/sec) would result in a severe human response. As for structural damage, an older residential and modern industrial building exposed to a vibration level of 0.3 PPV (in/sec) and 0.5 PPV (in/sec), respectively, could result in building damage.[17] The nearest historic structures located approximately 350 to the west of the project site, across I-5. Off-site sensitive receptors exposed to construction vibration levels that would exceed the later of these thresholds would be considered to result in a significant impact. Buildings that would be exposed to construction vibration levels that would exceed the former of these thresholds would also be considered to result in a significant impact.

Roadside noise levels were calculated for selected study street segments near sensitive land uses around the proposed project site areas based on information provided in the traffic analysis presented in Section 4.6, Transportation. The street segments selected for analysis are those expected to be most directly impacted by project-related traffic, which, for the purpose of this analysis, are the streets that are nearest to the proposed project site that also experience the highest traffic volumes. These streets are forecast to experience the greatest percentage increase in traffic generated by the proposed project. The noise levels are calculated using the FHWA's Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic volumes identified in the transportation and circulation study conducted for this SEIR (see Appendix G). Future traffic noise levels that are found to exceed the allowed City of Sacramento's exterior incremental noise impact standards (see Table 4.5-4) would result in a significant impact.

Non-transportation operational activities at the proposed project site including operation of heating, ventilation and air-conditioning systems (HVAC) units. Referenced noise levels generated during these operations (i.e., HVAC) were used to calculate a L_{eq} at the nearest sensitive receptor.

Impacts and Mitigation Measures

Impact 4.5-1: Construction of the project would generate noise that could conflict with City of Sacramento's noise standards.

Construction of the project would occur entirely within the City of Sacramento. Section 8.68.080 of the Sacramento City Code exempts construction activities provided all construction equipment

[15] California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual.* September 2013.
[16] California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual.* September 2013.
[17] California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance Manual.* September 2013.

are equipped with the appropriate exhaust and intake silencers for internal combustion engines and activities occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. The applicant proposes to construct 10 hours per day six days per week. Construction activities associated with site preparation, building construction or paving would occur within the allowed hours specified in the Sacramento City Code. Therefore, project-related construction activities would not conflict with the Sacramento City Code and potential conflicts with the City's noise standards would result in a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 4.5-2: Construction of the project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Noise levels from construction activity at nearby sensitive receptors would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as hoe-rams used for concrete demolition), which can be disruptive. **Table 4.5-5** shows typical noise levels produced by the types of construction equipment that would likely be used during the construction of the project.

The operation of each piece of equipment would not be constant throughout the day, as equipment would be turned off when not in use. Over a typical workday, the equipment would be operating at different locations and all the equipment would not operate concurrently at the same location of the proposed project. To quantify construction-related noise exposure that would occur at the nearest sensitive receptors, it was assumed that the two loudest pieces of construction equipment would operate at the closest location on the project site to the nearest off-site sensitive receptors.

The City of Sacramento does not contain noise level standards that are applicable to short-term construction activities in its general plan and city code. Although there are no applicable local policies or standards available to judge the significance of short-term daytime construction noise levels, the FTA's *Transit Noise and Vibration Impact Manual* has identified a daytime 1-hour L_{eq} level of 90 dBA as a noise level where adverse community reaction could occur at residential land uses. This noise level is used here to assess whether construction-related noise levels would cause a substantial temporary or periodic increase in ambient noise levels at sensitive receptor locations.

TABLE 4.5-5
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS
(50 FEET FROM SOURCE)

Type of Equipment	L_{max}, dBA	Hourly L_{eq}, dBA/% Use[1]
Auger Drill	84	77/20%
Bobcat	80	76/40%
Backhoe	80	76/40%
Concrete Mixer Trucks	79	75/40%
Concrete Pumps	81	74/20%
Dump Truck	77	73/40%
Grader	85	81/40%
Scraper	85	81/40%
Crane	85	73/16%
Dozer	85	81/40%
Forklift	85	78/20%
Hoe Ram	90	83/20%
Gradall	83	79/40%
Jackhammer	89	82/20%
Paver	85	82/50%
Roller	85	78/20%
Loader	80	76/40%
Welder	74	70/40%
Excavator	85	81/40%

NOTES:
1 Percent used during the given time period (usually an hour – hourly L_{eq}) were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: Federal Highway Administration, 2006. *FHWA Roadway Construction Noise Model*. January 2006.

As previously discussed, there are residences located approximately 495 feet northwest and 575 feet south of the project site. Assuming an impact hoe-ram and auger drill rig operating at the closest point to this residence using the Roadway Construction Noise Model, the closest residences to the project would be exposed to a noise level of 64 dBA L_{eq} or less, which would be below the applied 90 dBA L_{eq} threshold. Therefore, the worst-case temporary increase in ambient noise levels from construction would cause a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 4.5-3: Operation of the project could increase local traffic that could result in a substantial permanent increase in ambient exterior noise levels in the project vicinity or conflict with the City of Sacramento noise standards.

Most of the long-term noise that would result due to the implementation of the proposed Tower 301 project would primarily be generated by vehicle traffic on local roadways. The proposed project would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Using algorithms from the FHWA's *Traffic Noise Model Technical Manual* and the project traffic volumes provided by the 2019 Fehr & Peers traffic study, traffic noise levels were estimated for roadway segments near the project site under Baseline and Baseline plus Project conditions.[18] Roadway segments analyzed were selected based on proximity to the project site and the presence of noise-sensitive land uses. See Appendix F for noise modeling details. The segments analyzed and the associated results of the modeling are shown in **Table 4.5-6**. According to the City of Sacramento General Plan Policy EC 3.1.2, residences exposed to future traffic noise levels that exceeds the allowable incremental noise increases detailed in Table 4.5-4 is considered significant.

TABLE 4.5-6
BASELINE AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

	Traffic Noise Level, dBA, Ldn[1]			
Roadway Segment	**Baseline**	**Baseline plus Project**	**Incremental Increase**	**Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No)[2]**
3rd Street				
Capitol Mall to N Street	67	67	0	No
N Street to P Street	66	67	1	No
4th Street				
Capitol Mall to N Street	59	60	1	No
N Street to P Street	58	59	1	No
J Street				
3rd Street to 5th Street	66	66	0	No
L Street				
5th Street to 7th Street	65	65	0	No
Capitol Mall				
3rd Street to 4th Street	67	67	0	No
N Street				
3rd Street to 5th Street	60	60	0	No
5th Street to 6th Street	61	61	0	No

[18] Fehr & Peers, 2019. Draft Transportation Impact Analysis for the Tower 301 Project. March 2019.

TABLE 4.5-6
BASELINE AND PROJECTED L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level, dBA, Ldn[1]			
	Baseline	Baseline plus Project	Incremental Increase	Existing Sensitive Land uses Exposed to a Significant Increase in Traffic Noise? (Yes or No)[2]
P Street				
3rd Street to 4th Street	67	67	0	No
Q Street				
3rd Street to 4th Street	63	63	0	No

NOTES:
1 Noise levels were determined using methodology described in FHWA Traffic Noise Model Technical Manual. See Appendix K for Details
2 Existing land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Sacramento General Plan Policy EC 3.1.2 is considered a significant impact.

SOURCE: ESA, 2017

As shown in Table 4.5-6, none of the sensitive land uses along roadway segments analysis would be exposed to an increase in traffic noise that would exceed the City of Sacramento General Plan Policy EC 3.1.2. Therefore, the increase in vehicular traffic along local roadways would not result in the exposure of adjacent existing sensitive land uses to substantial traffic noise, and this increase would result in a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 4.5-4: Operation of the project could introduce new stationary noise sources that could conflict with the City of Sacramento noise standards.

The HVAC systems for maintaining comfortable temperatures within the proposed office buildings would consist largely of packaged air conditioning systems. The precise locations of HVAC systems are unknown at this time. Possible HVAC system locations would include street level and rooftops. HVAC units can generate sound power levels of 80 dBA which translates to a noise level of approximately 58 dBA L_{eq} at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations.[19]

19 Puron, 2005. *48PG03-28 Product Data*. pp. 10–11.

As discussed above, the closest sensitive land uses are located approximately 495 feet to the northwest and 575 feet to the south of the project site, and these distances would provide sufficient attenuation to reduce noise levels from the project's HVAC units to below the City of Sacramento's nighttime noise standard of 50 dBA L_{eq}. Additionally, traffic along I-5 would further mask HVAC noise at the sensitive receptors to the northwest and intervening structures would further attenuate noise at sensitive receptors to the south. Therefore, operation of HVAC units at the project site would not expose nearby sensitive land uses to substantial noise levels, and thus would result in a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 4.5-5: Operation of the project could result in interior noise levels of 45 dBA L_{dn} or greater at nearby residential uses.

Operational traffic as a result of the proposed project would increase traffic noise levels at existing land uses in the projects' vicinity, as described above in Impact 4.5-3. A typical building can reduce noise levels by approximately 25 dB with the windows closed.[20] Assuming an outdoor to indoor attenuation of 25 dB, residential buildings exposed to exterior noise level of 70 dBA L_{dn} would result in interior noise levels of 45 dBA L_{eq}. As shown in Table 4.5-6, the total roadway noise under baseline plus project conditions would not exceed the 70 dBA L_{dn} standard at existing residential uses on 3rd Street and N Street. Therefore, operation of the project would not generate traffic volumes along roadways within the Sacramento downtown area that would exceed the City of Sacramento's exterior noise standard to the extent that interior noise levels at existing residential uses adjacent to these roadway segments would increase above 45 dBA L_{dn}. Therefore, the proposed project would not result in residential interior noise levels of 45 dBA L_{dn} or greater caused by increases in traffic noise and the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.5-6: Construction of the proposed project could expose existing and/or planned buildings, and persons within, to vibration that could disturb people and damage buildings.

Since the operation of the project would not include any sources or activities that generate noticeable vibration, it is not expected that the operation of the proposed project would expose the nearest sensitive receptors or structures to vibration levels that would result in human annoyance

[20] U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March 1974.

or building damage. Therefore, only vibration impacts from onsite construction activities are evaluated.

The construction of the project would require the use of equipment or vehicles that could expose nearby sensitive receptors to vibrations levels that may result in an annoyance or building damage. According to the Caltrans' *Transportation and Construction Vibration Guidance Manual,* an exposure of vibration level of 0.4 "severe" human response PPV (in/sec) would result in a severe human response.[21] As for structural damage, an older residential and modern industrial building exposed to vibration level of 0.3 PPV (in/sec) and 0.5 PPV (in/sec), respectively, could result in building damage. [22] The threshold for damage to historic buildings is 0.25 PPV (in/sec). The nearest historic structures are located approximately 350 to the west of the project site, across I-5 in Old Sacramento Waterfront.

Ground-borne vibration from onsite equipment such as vibratory rollers used for compaction, hoe-rams used for demolition of concrete and auger drill rigs for pile installation phase could produce vibration at nearby sensitive receptors, including structures themselves. Typical reference vibration levels for a hoe-ram and an auger drill rig are listed below in **Table 4.5-7**. As shown in Table 4.5-7, the use of a vibratory roller would generate the highest vibration levels. Based on site visits, the nearest residence is located approximately 495 feet northwest of the project site and the nearest building is located is located approximately 76 feet east of the project site. Attenuated vibration levels at these receptors are shown in **Table 4.5-8**.

TABLE 4.5-7
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment/Activity	PPV at 25 ft (inches/second)[a]
Vibratory Roller	0.21
Hoe-ram	0.089

SOURCE: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment. May 2006, Table 12-2, p. 12-12.

TABLE 4.5-8
SUMMARY OF VIBRATION LEVELS AT SENSITIVE RECEPTORS DURING CONSTRUCTION

Receptor Type	Highest Vibration Source	PPV a 25 feet (inch/second)[1]	Distance to nearest Sensitive Receptor (feet)	Attenuated Vibration Level (PPV inch/second)
Closest Residence	Vibratory Roller	0.21	495	0.008
Closest Building	Vibratory Roller	0.21	76	0.06

SOURCE: Federal Transit Administration, 2018. Transit Noise and Vibration Impact Manual. September 2018.

21 California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual.* September 2013.
22 California Department of Transportation, 2013. *Transportation and Construction Vibration Guidance manual.* September 2013.

With respect to the potential for vibration-induced building damage, the nearest structure is 76 feet away and with operation of a vibratory roller at the project site may experience vibration levels of 0.06 PPV(in/sec), which would be well below the threshold of 0.5 PPV (in/sec) for modern structures. As stated in the Initial Study, there are no historical architectural resources or structures in the immediate project area and potential vibration impacts to historic structures would be less than significant. As shown in Table 4.5-8, the nearest residences and building would not be exposed to vibration levels that would result in either severe human reaction or building damage; and the impact of the proposed project with respect to vibration exposure would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The geographic context for changes in the noise and vibration environment due to development of the proposed project would be localized in an urban area of the City of Sacramento, as well as along roadways that would serve the project. In order to contribute to a cumulative construction noise impact, another project in close proximity would have to be constructed at the same time as the proposed project. There are numerous development projects in several locations near and within the proposed project, currently in the planning stages that could be constructed and operational in the foreseeable future. These include the Fruit Building (4th and J streets); Marshall Hotel (7th and L streets); 601 Capitol Mall; and Sacramento Commons (5th and O streets). In addition, the route of the proposed Downtown Riverfront Streetcar would run along 3rd Street, adjacent to the project site.

Impact 4.5-7: The project could result in exposure of people to cumulative increases in construction noise levels.

As previously discussed in Impact 4.5-2, due to the large distance between the project and nearest sensitive land use, project-related construction noise would not result in a substantial temporary increase in the existing ambient noise environment. Of the five cumulative projects identified above, the first three are located 1,000 feet or more from the receptors identified for the proposed project and are sufficiently distant to preclude a cumulatively considerable construction noise contribution. The Sacramento Commons project would be constructed approximately 400 feet east of the Governor's Square receptor at 3rd and N streets while the route of the Riverfront Streetcar would be constructed about 435 feet north of the Governor's Square receptor. As discussed in Impact 4.5-2, construction noise contribution from the proposed project would be 64 dBA or less which would be less than the monitored existing noise level at this receptor. Consequently, while construction noise of the adjacent Sacramento Commons project and Riverfront Streetcar project could potentially result in a significant noise impact at this receptor,

the contribution of noise from the proposed project would be less than cumulatively considerable, and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.5-8: The proposed project could contribute to cumulative increases in traffic noise levels.

On-road traffic associated with the full build-out of the proposed project would be the primary operational noise source that would contribute to the cumulative noise environment. Noise projections were made using traffic noise prediction equations found in the FHWA's *Traffic Noise Model Technical Manual* for Existing, Cumulative and Cumulative plus Project conditions using roadway traffic volumes.[23] The segments analyzed and results of the modeling are shown in **Table 4.5-9**.

Cumulative traffic noise level significance is determined by a two-step process. First, a comparison is made of the increase in noise levels between cumulative conditions with the proposed project and baseline conditions to incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). If the roadside noise levels would exceed this incremental threshold, a cumulative noise impact would be identified.

The second step of the cumulative roadside noise analysis (if a cumulative noise impact is predicted) is to evaluate if the contribution of the proposed project to roadside noise levels is cumulatively considerable. This second step (if necessary) involves assessing whether the proposed project contribution to roadside noise levels (i.e., the difference between cumulative conditions and cumulative plus project conditions) would exceed the incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). The roadway segments analyzed and the results of the noise increases resulting from modeling are shown in Table 4.5-9.

As can be seen in Table 4.5-9, none of the roadway segments analyzed under Cumulative plus Project condition would experience an increase in traffic noise levels over either the baseline or cumulative no project conditions that would exceed the incremental threshold established in the City of Sacramento's General Plan Policy EC 3.1.2 (Table 4.5-4). Consequently, the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

[23] Fehr & Peers, 2019. Draft Transportation Impact Analysis for the Tower 301 Project. March 2019.

TABLE 4.5-9
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

	Traffic Noise Level 50 feet from Center of Roadway, dBA, L_{dn}[1]						
Roadway Segment	**Baseline**	**Cumulative without Project**	**Cumulative with Project**	**Cumulative with Project incremental increase above Baseline Conditions**	**Cumulative with Project incremental increase above Cumulative without Project**	**Cumulatively Significant? (Yes or No)[2]**	**Project's Contribution Significant? (Yes or No?)[2]**
3rd Street							
Capitol Mall to N Street	67	67	67	0	0	No	No
N Street to P Street	66	67	68	2	1	No	No
4th Street							
Capitol Mall to N Street	59	58	59	0	1	No	No
N Street to P Street	58	59	59	1	0	No	No
J Street							
3rd Street to 5th Street	66	68	68	2	0	No	No
L Street							
5th Street to 7th Street	65	66	66	1	0	No	No
Capitol Mall							
3rd Street to 4th Street	67	68	68	1	0	No	No
N Street							
3rd Street to 5th Street	60	60	60	0	0	No	No
5th Street to 6th Street	61	64	64	3	0	No	No
P Street							
3rd Street to 4th Street	67	67	67	0	0	No	No
Q Street							
3rd Street to 4th Street	63	64	64	1	0	No	No

NOTES:
1 Noise levels were determine using methodology described in FHWA Traffic Noise Model Technical Manual
2 Existing sensitive land uses exposed to traffic noise that result in a noise increase greater than what is allowed in the City of Sacramento General Plan Policy EC 3.1.2 is considered a significant impact.

SOURCE: ESA, 2019

4.6 Transportation

This chapter analyzes the potential transportation impacts associated with the 301 Capitol Mall mixed-use high-rise project to the roadway, bicycle, pedestrian, and transit systems in the study area. This chapter presents the project-specific and cumulatively considerable impacts of each of these projects and recommends mitigation measures to lessen their significance. All supporting technical calculations and additional technical information can be found in Appendix G of the Draft EIR.

Comments related to transportation received subsequent to the issuance of the NOP for the proposed project included a request from the California Department of Transportation (Caltrans) and the Sacramento Metropolitan Air Quality Management District (SMAQMD). Caltrans recommended that the project participate in the Interstate 5 (I-5) Subregional Corridor Mitigation Program to address potential impacts to nearby freeways while SMAQMD recommended that the project join a Transportation Demand Management program to ensure that project residents and employees have the greatest opportunity to utilize sustainable modes of transportation. These issues are addressed in the analysis below.

Analysis Scenarios

The following scenarios are analyzed in this EIR:

- Existing Conditions – represents the baseline condition, upon which project impacts are measured.
- Existing-Plus-Project Conditions – reflects changes in travel conditions associated with implementation of the proposed project relative to the baseline condition.
- Cumulative-No-Project Conditions – reflects conditions for a cumulative (year 2036) scenario, which includes reasonably foreseeable land uses, planned transportation improvement projects, without proposed project implementation.
- Cumulative-Plus-Project Conditions – represents conditions for a cumulative (year 2036) scenario, which includes reasonably foreseeable land uses, planned transportation improvement projects, and proposed project implementation.

4.6.1 Environmental Setting

This section describes the environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. The baseline for this study represents conditions based on data collection and field observations conducted in October 2017 and November 2018. The environmental setting for transportation includes baseline descriptions for roadway, bicycle, pedestrian, and transit facilities.

Project Study Area

An extensive study area was developed based on collaboration between the EIR consultants and City of Sacramento staff. The following factors were considered when developing the study area:

the project's expected travel characteristics (including number of vehicle trips and directionality of those trips), primary travel routes to/from project vicinity, mode split, and other considerations. **Figure 4.6-1** shows the study area, project site, and 17 study intersections selected for analysis. The study area also includes bicycle, pedestrian, and transit facilities in the project vicinity.

Intersections

1. I Street/5th Street
2. J Street/3rd Street
3. J Street/5th Street
4. L Street/3rd Street
5. L Street/4th Street
6. L Street/5th Street
7. L Street/7th Street
8. Capitol Mall/Front Street
9. Capitol Mall/2nd Street
10. Capitol Mall/3rd Street
11. Capitol Mall/4th Street
12. Capitol Mall/5th Street
13. N Street/3rd Street
14. N Street/4th Street
15. N Street/5th Street
16. P Street/3rd Street
17. Q Street/3rd Street

Roadway Network

The study area is served by a system of gridded streets comprised of numbered north-south streets and lettered east-west streets, spaced approximately every 400 feet. Key roadways within this system that would serve trips associated with the proposed project are described, as follows:

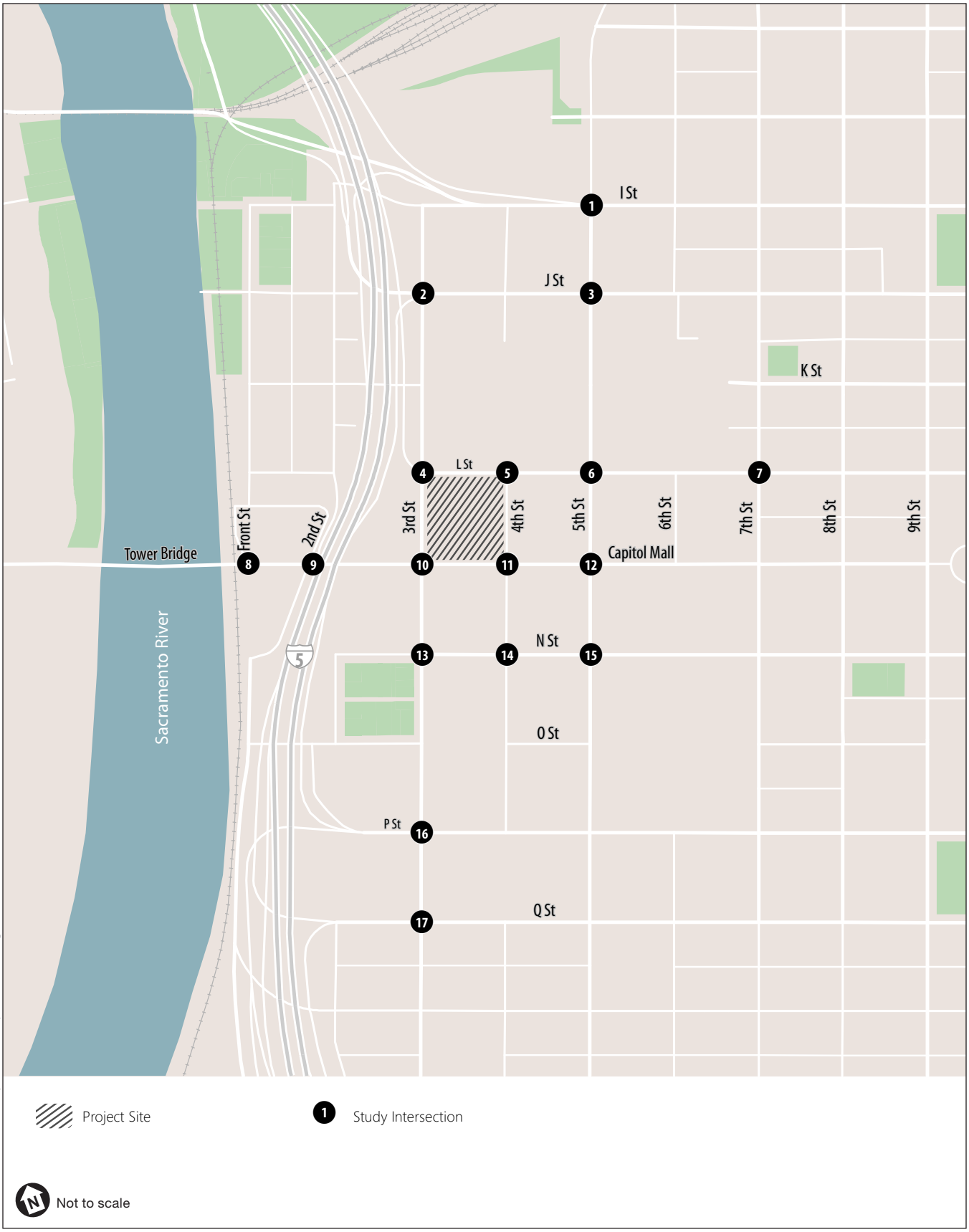
- **I Street** is a primary three-lane, one-way westbound roadway within the study area. Curbside parking is located on both sides of the roadway and there is a bike lane on the north side of the roadway. I Street provides access to both directions of I-5 as well as Old Sacramento.

- **J Street** is a primary, one-way eastbound roadway with a posted speed limit of 30 mph within the study area. It is generally a three-lane roadway with curbside parking on both sides of the roadway; however, the number of lanes and curbside parking varies on different segments. East of 4th Street there is a bike lane located on the south side of the roadway. J Street can be accessed from both directions of I-5 and the I Street bridge.

- **L Street** is a primary three-lane, one-way westbound roadway within the study area. Curbside parking is located on both sides of the roadway. The roadway connects to the I-5 on-ramps in the western portion of the study area.

- **Capitol Mall** is a primary four-lane east-west roadway with a posted speed limit of 30 mph in the study area. The availability of curbside parking varies along the roadway segments. Capitol Mall runs through the heart of downtown, leading from the Tower Bridge to the State Capitol. There are bike lanes with colored pavement on both sides of the roadway.

- **N Street** is a primary three-lane, one-way eastbound roadway within the study area. This three-lane roadway extends through Downtown Sacramento before transitioning to a two-lane, bidirectional roadway east of 21st Street. Curbside parking is located on both sides of the roadway.



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-1
Study Area

ESA

- **P Street** is a primary one-way westbound roadway within the study area and forms a couplet with Q Street. East of 9th Street, it is a two-lane roadway with curbside parking on both sides and a parking protected bike lane on the left side of the roadway. West of 9th Street, it transitions to a three-lane roadway with curbside parking located on both sides. The roadway connects to the I-5 on-ramps in the western portion of the study area.

- **Q Street** is a primary, one-way eastbound roadway within the study area, and forms a couplet with P Street. West of 8th Street, it is a three-lane roadway with curbside parking located on both sides; east of 8th Street, it transitions to a two-lane roadway. Q Street features a parking protected bike lane on the left side of the roadway east of 9th Street. The roadway originates from the I-5 off-ramps in the western portion of the study area.

- **Front Street** is a two-lane, north-south roadway located just east of the Sacramento River. North of Capitol Mall, the roadway runs through Old Sacramento and includes cobblestone paving and angled parking along most of the segment between J Street and Neasham Circle. A separate discontinuous segment of Front Street extends from south of Capitol Mall (accessed via 2nd Street) along the riverfront to Miller Park, located just south of Broadway.

- **2nd Street** is a two-lane, north-south roadway with parking on both sides. The roadway runs through Old Sacramento and connects I Street to Capitol Mall and the Tower Bridge.

- **3rd Street** is a primary roadway with a posted speed limit of 30 mph within the study area. North of L Street, 3rd Street is a two-way roadway that varies between three to five travel lanes. South of L Street, 3rd Street is a three-lane, one-way southbound roadway with curbside parking on both sides of the roadway.

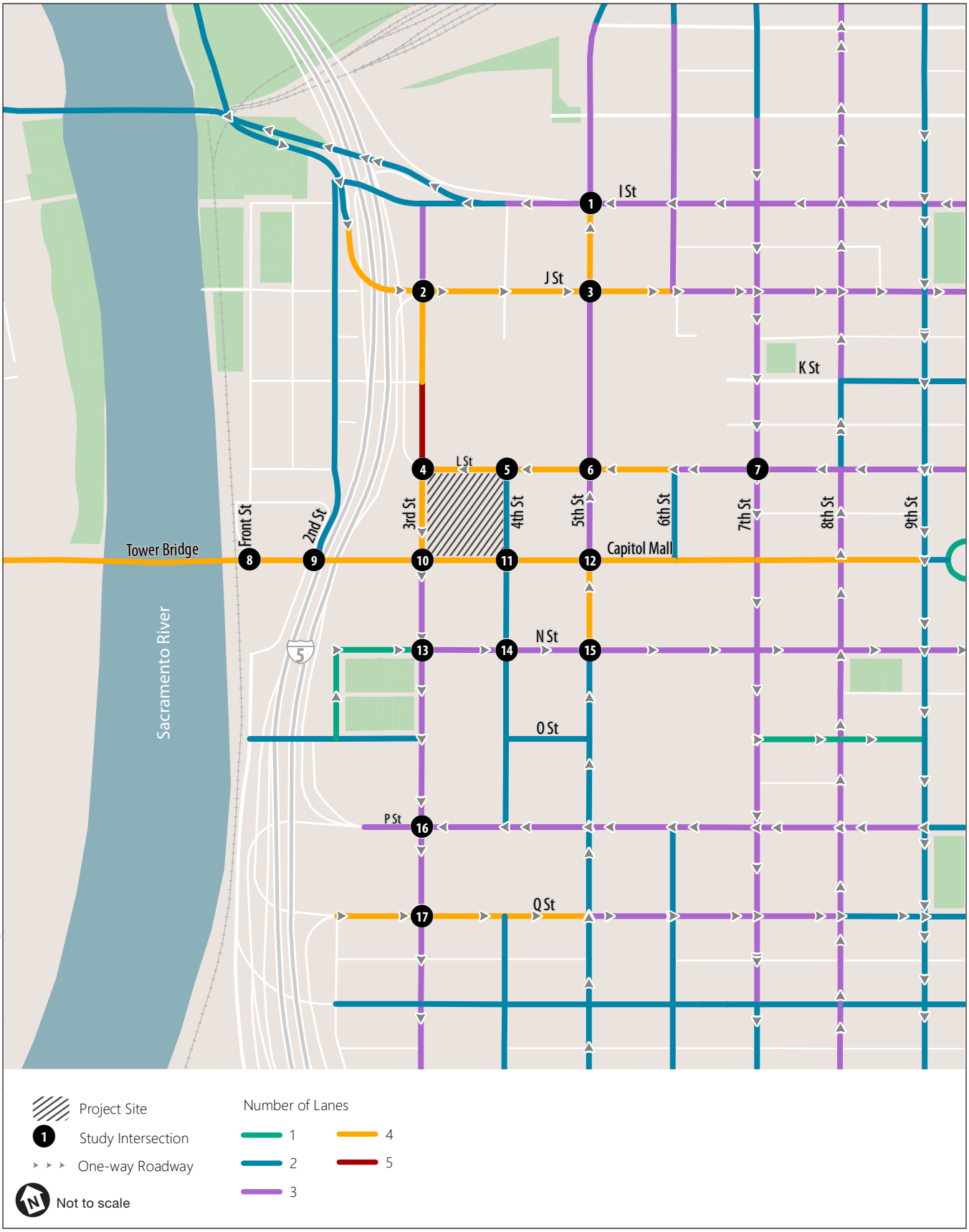
- **4th Street** is discontinuous, north-south roadway. It is generally a two-lane roadway with curbside parking on both sides of the roadway. In the vicinity of the project, 4th Street provides a continuous connection between L Street and P Street.

- **5th Street** is a primary roadway within the study area with a posted speed limit of 30 mph. North of L Street, it is generally a four-lane north-south roadway. South of L Street, 5th Street is generally a three-lane northbound roadway. Curbside parking and bike lanes are located on both sides of the roadway north and south of L Street within the study area.

- **7th Street** is a primary three-lane southbound roadway with a posted speed limit of 30 mph in the study area. Light rail runs along 7th Street north of O Street. Curbside parking is generally located on both sides of the roadway, but because of the light rail tracks, curbside parking north of O Street is discontinuous on the east side.

- **I-5** is a freeway that extends the length of California into Oregon and Washington. Within the study area, I-5 serves as a high-capacity link through Downtown Sacramento. Access to the study area is provided by off ramps on Q Street and J Street. Downtown traffic can access I-5 using on ramps located on P Street and L Street. Within the study area, I-5 varies between a six-lane and ten-lane freeway.

Figure 4.6-2 illustrates the existing study roadway facilities including the number and direction of travel lanes.



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-2
Existing Roadway Network

ESA

D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

Truck Routes

All federal and state highways within the City of Sacramento have been designated as truck routes by Caltrans, including I-5 and US 50 within the study area, and are included in the National Network for Service Transportation Assistance Act of 1982. The City identified 31 two-way streets as City truck routes in a 1983 resolution, in addition to all one-way streets. Refer to the City's website for a city-wide map of truck routes (at http://portal.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps). Within the study area, the following streets are considered City truck routes:

- 3rd Street
- 5th Street
- 7th Street
- I Street
- Capitol Mall
- P Street
- Q Street

Traffic Data Collection

Traffic counts were collected at the study intersections on Thursday, October 19, 2017 during the AM (7–9 AM) and PM (4–6 PM) peak periods. During all counts, weather conditions were generally dry. The counts conducted reflect typical peak period travel patterns in Downtown Sacramento when the Sacramento City Unified School District was in full session. The count data was supplemented with field observations on Thursday, November 8, 2018 to reflect updated roadway conditions on 5th Street between I Street and L Street, and vehicle queuing within the study area. In addition to collecting vehicle turning movements at the study intersections, all counts included pedestrian and bicycle activity.

Study Periods

Based on the traffic data collection, the AM and PM peak hours within most of the study area occurred from 7:45 to 8:45 AM and 4:30 to 5:30 PM, respectively. The AM and PM peak hours coincide with the expected peak commute times for office employees in Downtown Sacramento.

Roadway System

Traffic operations at all study intersections were analyzed under weekday AM and PM peak hour conditions using procedures and methodologies contained in the Highway Capacity Manual, 6th Edition[1] for calculating delay at intersections. These methodologies were applied using the SimTraffic software program, which considers the effects of lane utilization, turn pocket storage lengths, upstream/downstream queue spillbacks, coordinated signal timings, pedestrian crossing activity, and other conditions on intersection and overall corridor operations. Use of SimTraffic microsimulation analysis is appropriate given the presence of coordinated signal timing plans, close spacing of signalized intersections, and overall levels of traffic and peak hour congestion within the study area. Reported results are based on an average of 10 runs. The following procedures and assumptions were applied in the development of the SimTraffic model:

[1] Transportation Research Board, 2016. Highway Capacity Manual, 6th Edition.

- Roadway geometric data were gathered using aerial photographs and field observations.
- Peak hour traffic volumes were entered into the model according to the peak hour of the study area.
- The peak hour factor was set at 1.0 in accordance with City of Sacramento Traffic Impact Study Guidelines.
- The counted pedestrian and bicycle volumes were entered into the model according to the peak hour measurements.
- Signal phasing and timings were based on existing signal timing plans provided by the City of Sacramento and field observations.
- Speeds for the model network were based on the posted speed limits.

Level of Service Definitions

Each study intersection was analyzed using the concept of level of service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. **Table 4.6-1** displays the delay range associated with each LOS category for signalized and unsignalized intersections.

TABLE 4.6-1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Delay (Seconds/Vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high volume to capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0	> 35.0 to 50.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0	> 50.0

NOTES:
LOS at signalized intersections and roundabouts based on average delay for all vehicles. LOS at unsignalized intersections is reported for entire intersection and for minor street movement with greatest delay.

SOURCE: Transportation Research Board, 2016. Highway Capacity Manual, 6th Edition.

For signalized intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection. For side-street stop-controlled intersections, the delay and LOS for the overall intersection is reported along with the delay for the worst-case movement.

Existing Traffic Volumes

Figure 4.6-3 displays the existing AM and PM peak hour intersection traffic volumes, traffic controls, and lane configurations.

Existing Intersection Operations

Table 4.6-2 displays the existing peak-hour intersection operations at the study intersections.

All intersections currently operate at LOS C or better during the AM peak hour. During the PM peak hour, Intersection 4 (L Street/3rd Street) operates at LOS E, and Intersection 5 (L Street/ 4th Street) and Intersection 16 (P Street/3rd Street) operate at LOS F. Overall, the existing roadway system can be characterized as operating efficiently in the majority of the study area during both peak hours, benefitting from the coordinated traffic signal system along the primary commute corridors that connect Downtown to the regional freeway system. The highest vehicle delay and worst level of service occur closest to the freeway on-ramps during the PM peak hour as there is a high demand of traffic entering the freeway.

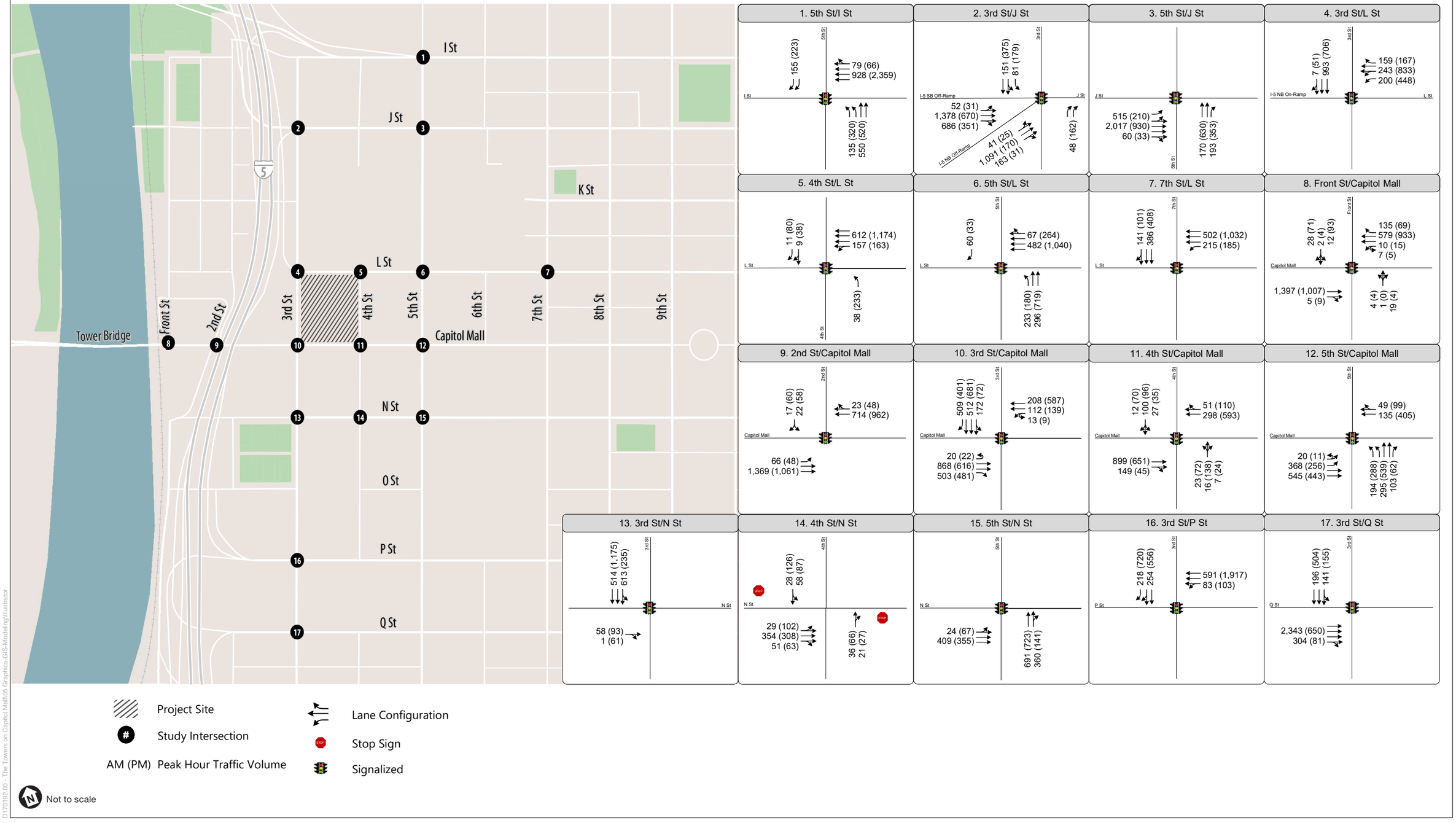
Existing Off-Ramp Queues

Table 4.6-3 displays the existing off-ramp queuing within the study are during the AM and PM peak hours. As shown, all study freeway off-ramp queues remain within the available storage area during the both peak hours.

Bicycle System

Figure 4.6-4 displays existing bicycle facilities in the study area. The following types of bicycle facilities serve the study area:

- Class I Multi-Use Off-Street paths – are paved trails that are separated from roadways and allow for shared use by both cyclists and pedestrians.
- Class II On-Street Bike Lanes – are designated for use by bicycles by striping, pavement legends, and signs. These also include buffered bike lanes (or "enhanced Class II" facilities) that provide additional separation between bike lanes and adjacent parking and/or travel lanes using striping (but do not include features to provide vertical separation – see Class IV below).
- Class III On-Street Bike Routes – are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width for bicyclists.
- Class IV Protected Bikeways– protected (or separated) bikeways improve upon buffered bike lanes by providing vertical separation between bike lanes and the adjacent travel lanes. Vertical separation can be provided with a variety of treatments, including concrete curb and gutter, landscaping, bollards or on-street parking. Protected bikeways can allow for one-way or two-way bicycle travel (i.e., cycle tracks).



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-3
Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

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TABLE 4.6-2
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing	
			Delay (seconds)	LOS[1]
1. I Street/5th Street	Signal	AM PM	11 33	B C
2. J Street/3rd Street	Signal	AM PM	32 22	C C
3. J Street/5th Street	Signal	AM PM	10 38	B D
4. L Street/3rd Street	Signal	AM PM	7 63	A E
5. L Street/4th Street	Signal	AM PM	21 81	C F
6. L Street/5th Street	Signal	AM PM	10 39	B D
7. L Street/7th Street	Signal	AM PM	8 12	A B
8. Capitol Mall/Front Street	Signal	AM PM	26 15	C B
9. Capitol Mall/2nd Street	Signal	AM PM	13 15	B B
10. Capitol Mall/3rd Street	Signal	AM PM	24 15	C B
11. Capitol Mall/4th Street	Signal	AM PM	16 15	B B
12. Capitol Mall/5th Street	Signal	AM PM	13 15	B B
13. N Street/3rd Street	Signal	AM PM	12 14	B B
14. N Street/4th Street	SSSC[2]	AM PM	2 (8) 4 (10)	A (A) A (B)
15. N Street/5th Street	Signal	AM PM	16 14	B B
16. P Street/3rd Street	Signal	AM PM	8 89	A F
17. Q Street/3rd Street	Signal	AM PM	22 14	C B

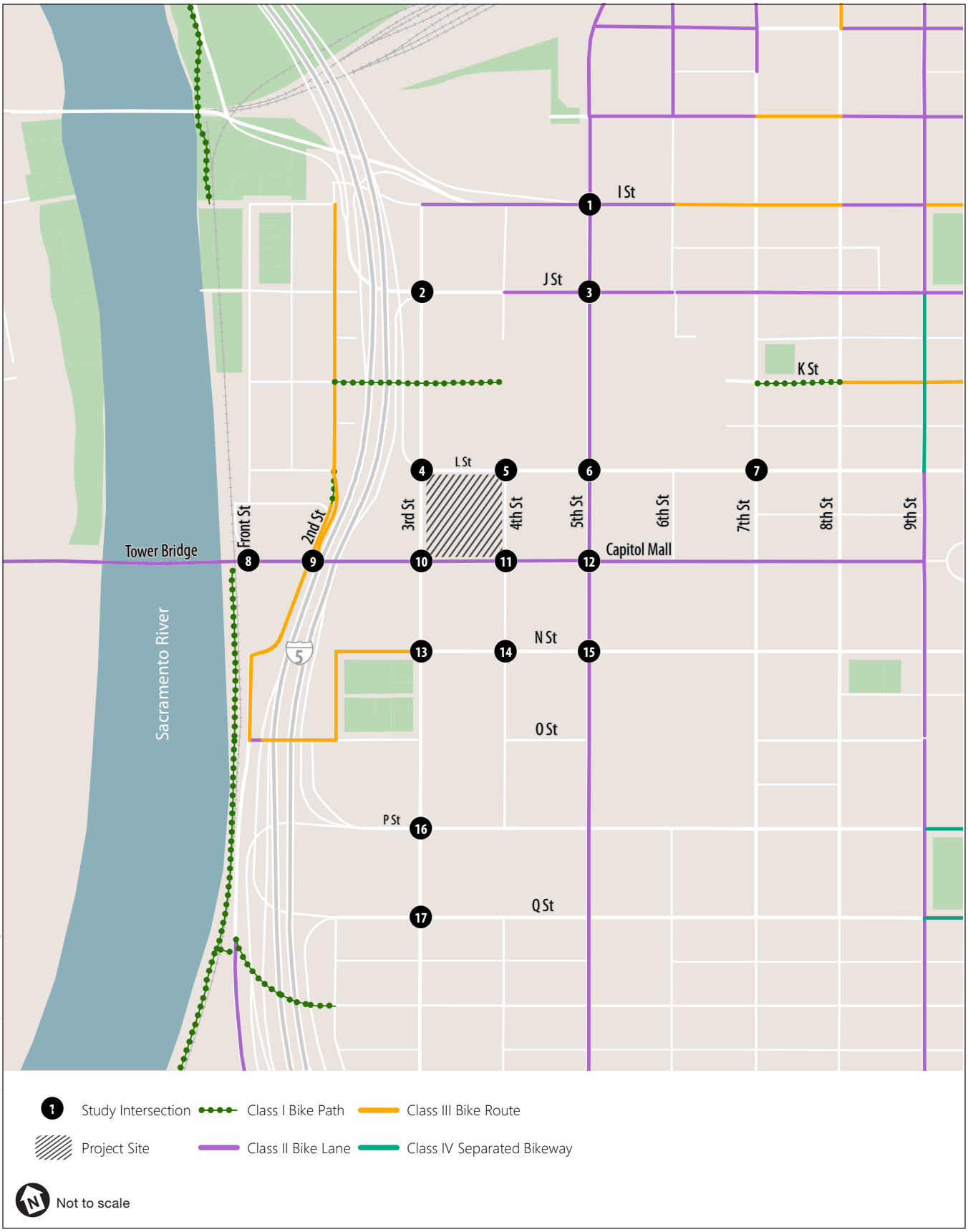
NOTES:

[1] LOS = Level of Service.

[2] SSSC = Side-street stop controlled

For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. All intersections were analyzed in SimTraffic.

SOURCE: Fehr & Peers, 2019



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-4
Existing Bicycle Facilities

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TABLE 4.6-3
OFF-RAMP QUEUING – EXISTING CONDITIONS

Location	Available Storage (feet)	Peak Hour	Existing
			Queue (feet)
Interstate 5 SB Off-Ramp at J Street (from J Street/3rd Street)	1,525	AM	825
		PM	300
Interstate 5 NB Off-Ramp at J Street (from J Street/3rd Street)	1,025	AM	400
		PM	125
Interstate 5 SB Off-Ramp at Q Street (from Q Street/3rd Street)	1,700	AM	275
		PM	125
Interstate 5 NB Off-Ramp at Q Street (from Q Street/3rd Street)	1,550	AM	275
		PM	125

NOTES:
The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. The I-5 NB off-ramp at Q Street is measured from the off-ramp terminal intersection to the gore point of the I-5 NB off-ramp and the US 50 WB to I-5 NB ramp.

Maximum queue length is based upon output from SimTraffic microsimulation software.

SOURCE: Fehr & Peers, 2019

The project site is served by a variety of bicycle facilities. Class II bike lanes exist along Capitol Mall in the east/west direction, and along 5th Street in the northbound direction. A few blocks to the west of the project site, the Sacramento River Bike Trail runs along the Sacramento River. To the east of the project site, enhanced Class II bike lanes exist along 9th Street between H Street and J Street with a striped buffer between the bike lane and travel lane, and 9th Street includes a Class IV parking protected bikeway between J Street and L Street.

The study area lies within the JUMP bike and scooter share service area. The bike share service currently operates throughout the Central City Core Area, as well as in neighboring areas including West Sacramento, Land Park, Oak Park, Tahoe Park, and East Sacramento. There are currently 500 shared bicycles and 100 shared scooters located in the City of Sacramento, with an additional 400 bicycles in the region. The shared bicycle and scooter fleet features electric assist technology up to a speed of 15 mph.

Pedestrian System

The high level of connectivity provided by the study area's gridded street system, concentration of land uses, and provision of consistent high-quality pedestrian facilities results in higher levels of pedestrian travel within the study area relative to other portions of the City.

Nearly all streets in the study area feature sidewalks on both sides of the roadway, and sidewalk widths typically range between 6 and 15 feet. Sidewalks are present on all streets adjacent to the project site (along 3rd Street, 4th Street, L Street, and Capitol Mall). No sidewalk exists along the west side of 3rd Street. Along Capitol Mall, sidewalks are separated from the roadway by landscaped planter strips. These streetscape features, including shade trees, increase pedestrian comfort.

Traffic signals within the study area operate on relatively short cycle lengths, and nearly all have automatic walk signals for pedestrians; combined, these features result in low levels of crossing delay for pedestrians.

Adjacent to the project site, marked crosswalks are provided on all approaches to intersections except for the south leg of the of the L Street/3rd Street intersection, the west leg of the L Street/ 4th Street intersection, and the west leg of the Capitol Mall/3rd Street intersection.

Transit System

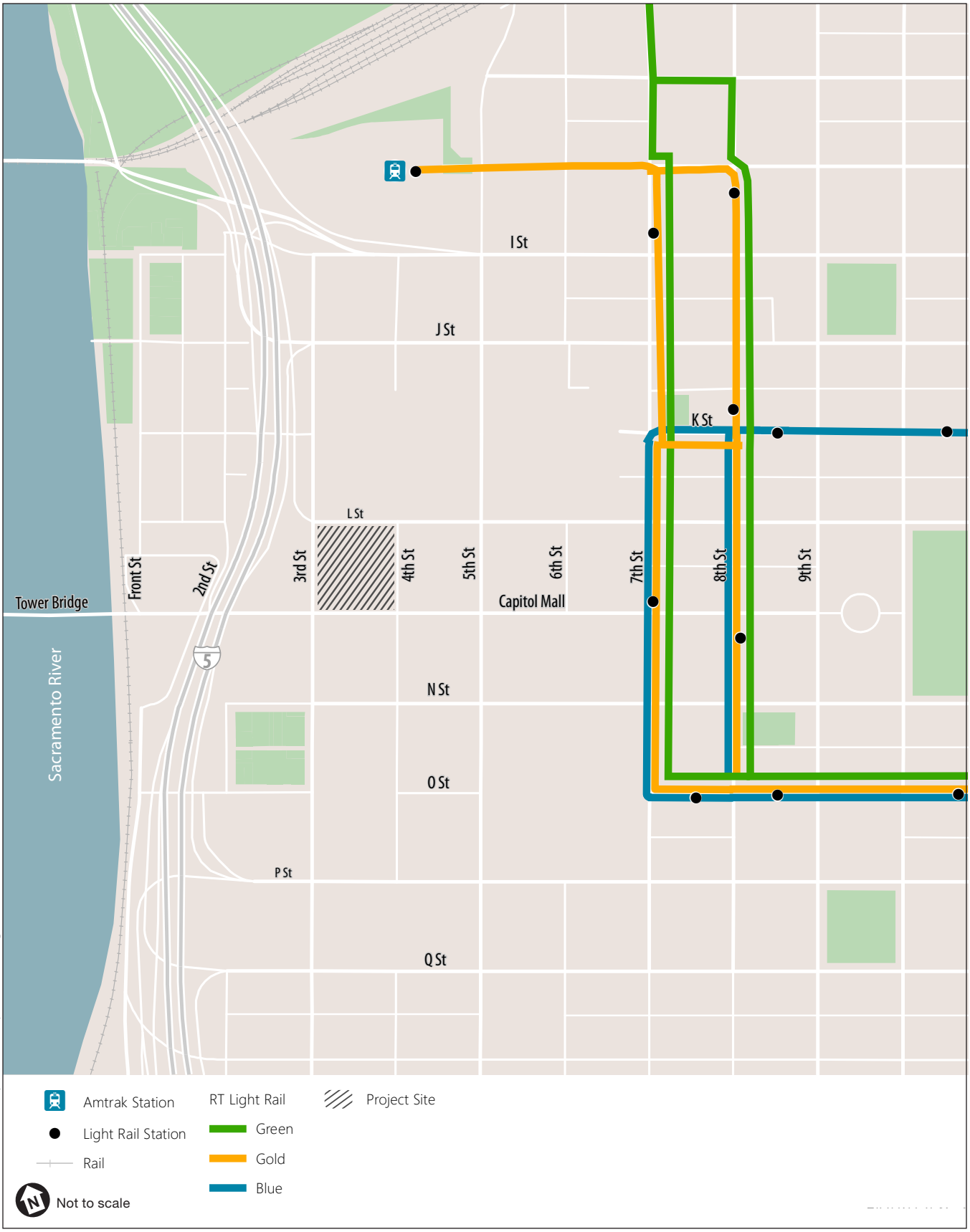
Local transit service within the study area is provided by Sacramento Regional Transit District (SacRT), which operates local bus routes and light rail service within Sacramento County, and by the Yolo County Transportation District (Yolobus), which operates local and commuter bus service within Yolo County and Downtown Sacramento.

Commuters to Downtown Sacramento may also travel by intercity rail. The Sacramento Valley Station is located Downtown, just north of I Street between 3rd Street and 5th Street, approximately three blocks north of the proposed project. This station is served by two long distance Amtrak routes and two Amtrak California regional routes: The Coast Starlight (Seattle-Portland-Sacramento-Los Angeles), the California Zephyr (Emeryville-Sacramento-Denver-Chicago), the San Joaquin (Sacramento-Bakersfield), and the Capitol Corridor (San Jose-Oakland –Sacramento-Auburn). The Capitol Corridor route carries the vast majority of the passengers using the Sacramento Valley Station. Amtrak's Fiscal Year 2017 National Fact Sheet lists the Sacramento Valley Station as 7th in the nation in total Amtrak ridership with over 1.07 million passengers annually. The RT Gold Line connects the Sacramento Valley Station to the region's light rail transit network, and the station is also served by Amtrak intercity buses and local RT buses.

The project site is located within a quarter mile of the 7th Street/Capitol Mall (Southbound) and 8th Street/Capitol Mall (Northbound) light rail stations. These stations are served by all three SacRT light rail lines. The Blue and Gold Lines operate on all weekdays and weekends, with 15-minute headways during peak and mid-day service and 30-minute headways during evenings (as well as during early morning service on weekends and holidays). The Green Line operates on 30-minute headways throughout the day on weekdays only.

- **Blue Line** – connects to Watt/I-80 Station to the north and Cosumnes River College Station to the south. The Blue Line operates from about 4 AM through 1 AM Monday through Friday, from about 4:30 AM through 1 AM on Saturday, and from about 5 AM through 11 PM on Sunday and holidays.
- **Gold Line** – connects to Sacramento Valley Station (Amtrak) in Downtown Sacramento to the west and Historic Folsom Station to the east. During weekdays, every other eastbound trip terminates at Sunrise Station. The Gold Line operates from about 4 AM through 12:30 AM Monday through Friday, from about 5 AM through 12:30 AM on Saturday, and from about 5 AM through 10:30 PM on Sunday and holidays.
- **Green Line** – connects 13th Street Station in Downtown Sacramento and Township 9 Station in the River District. The Green Line operates from about 6 AM through 9 PM Monday through Friday. No service is provided on Saturday, Sunday, or holidays.

Figure 4.6-5 shows the locations of existing rail transit service within the study area.



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SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-5
Existing Rail Transit Service

ESA

Multiple local bus routes provided by SacRT and Yolobus. These routes are described in **Table 4.6-4** below.

TABLE 4.6-4
LOCAL BUS SERVICE

Route	Weekday		Saturday		Sunday	
	Frequency (min)	Span	Frequency (min)	Span	Frequency (min)	Span
SacRT						
2 – Riverside (Riverside Blvd-Downtown)	60	5:30 AM-7:15 PM	N/A	N/A	N/A	N/A
6 – Land Park (Rush River-S Land Park- Downtown)	60	6:15 AM-7:45 PM	N/A	N/A	N/A	N/A
11 – Truxel Road (Natomas-Downtown)	30	6:00 AM-8:00 PM	60	7:15 AM-8:15 PM	N/A	N/A
15 – Rio Linda Blvd. – O Street (Wall/I-80-Downtown)	30	5:30 AM-9:00 PM	60	6:45 AM-9:15 PM	60	8:00 AM-9:15 PM
30 – J Street (CSUS-Downtown)	15	5:30 AM-10:15 PM	30	6:30 AM-9:15 PM	60	6:30 AM-9:15 PM
34 – McKinley (CSUS-McKinley-Downtown)	60	5:00 AM-7:00 PM	N/A	N/A	N/A	N/A
38 – P/Q Streets (University/65th-Downtown-River Oaks)	60	6:30 AM-9:00 PM	60	8:00 AM-8:45 PM	60	8:00 AM-6:30 PM
51 – Broadway-Stockton (Florin Mall-Downtown)	15	5:30 AM-10:30 PM	30	6:15 AM-10:45 PM	30	6:15 AM-9:30 PM
62 – Freeport (Rush River-City College-Downtown)	30	5:45 AM-9:30 PM	60	7:15 AM-10:00 PM	N/A	N/A
86 – San Juan-Silver Eagle (Marconi/Arcade-Downtown)	15	5:30 AM-9:15 PM	60	6:30 AM-8:45 PM	60	8:00 AM-6:30 PM
88 – West El Camino (West El Camino-Downtown)	30	5:45 AM-9:15 PM	60	6:15 AM-9:15 PM	60	8:15 AM-9:15 PM
Yolobus						
40 – West Sacramento Local (West Sacramento-Downtown)	60	5:45 AM-10:30 PM	60	7:15 AM-7:15 PM	60	8:45 AM-5:30 PM
41 – West Sacramento Local (West Sacramento-Downtown)	60	6:15 AM-8:15 PM	N/A	N/A	N/A	N/A
42A – Intercity Loop Clockwise (Dtwn -West Sac-Davis-Woodland-Airport)	60	4:30 AM-11:45 PM	60	6:30 AM-10:00 PM	60	6:30 AM-10:00 PM
42B – Intercity Loop Counter-Clockwise (Dtwn-Airport-Woodland-Davis-West Sac)	60	5:45 AM-11:00 PM	60	6:00 AM-11:00 PM	60	6:00 AM-11:00 PM
240 – West Sacramento/Sacramento Shuttle	60	5:30 AM-7:45 PM	60	7:15 AM-7:00 PM	60	8:15 AM-6:00 PM

SOURCES: Sacramento Regional Transit, 2019. Yolobus, 2019

Yolobus and several other agencies including Elk Grove Transit (e-tran), Roseville Transit, El Dorado Transit, Yuba-Sutter Transit, Placer County Transit, Folsom Stage Lines, the San Joaquin Regional Transit District, and Amador Regional Transit System offer commuter service into downtown Sacramento. These bus routes generally run only during the peak AM and PM commute periods, and serve employees commuting into Downtown Sacramento from throughout the greater Sacramento region. **Figure 4.6-6** displays the existing local bus and commuter bus routes within the study area.

4.6.2 Regulatory Setting

This section provides a discussion of applicable federal, state, and local regulations pertaining to transportation that may be applicable to the Proposed Project.

Federal

There are no applicable federal regulations that apply directly to the Proposed Project. However, federal regulations relating to the Americans with Disabilities Act (ADA), Title VI, and Environmental Justice relate to transit service.

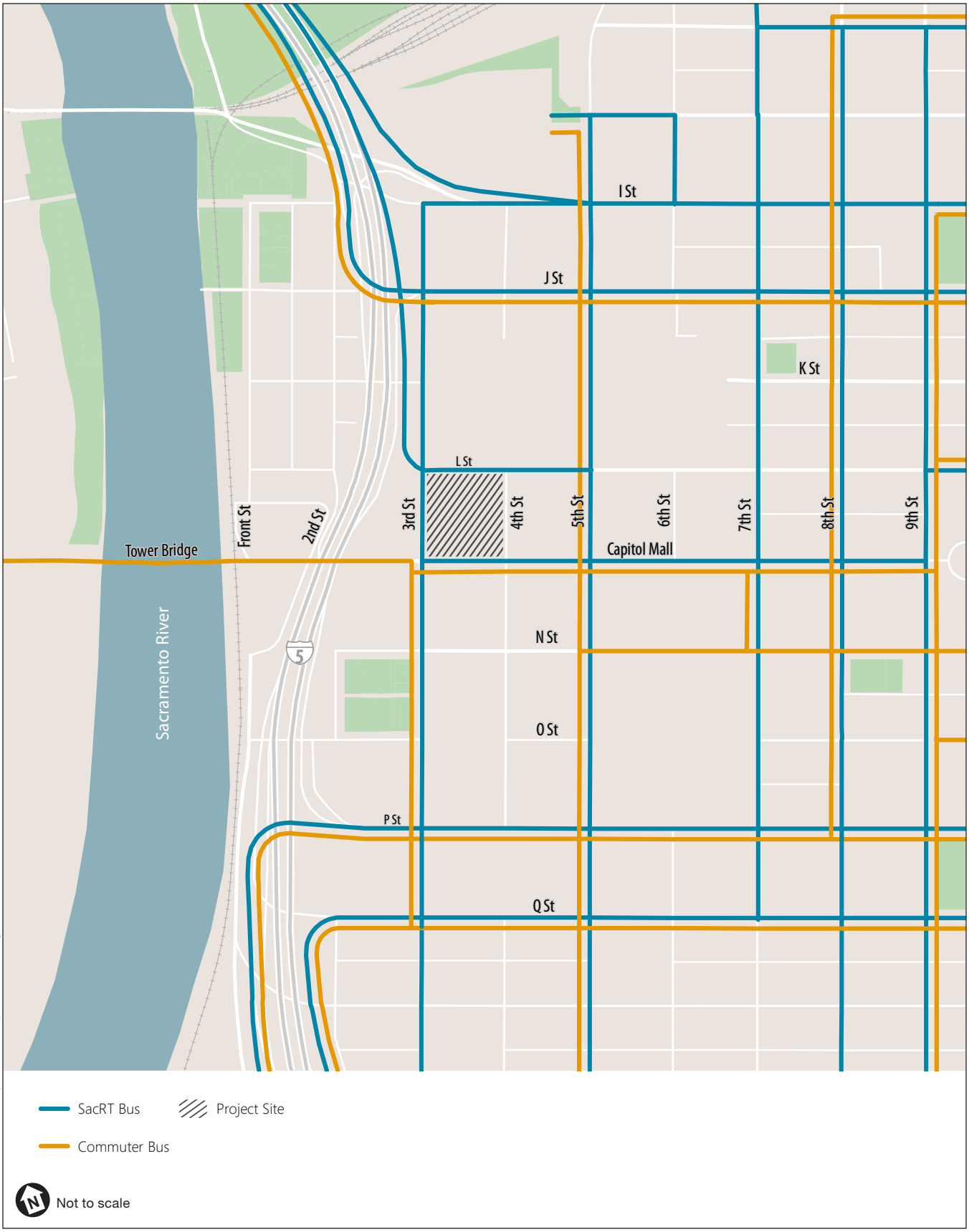
State

Interstate 5 Transportation Corridor Concept Report

In 2010, Caltrans released the Interstate 5 Transportation Corridor Concept Report (TCCR) that includes portions of I-5 within the study area. Page 4 of this report shows existing operations on I-5 within the study area as being at LOS F. The report also indicates a Concept LOS F for this corridor. The concept LOS represents the minimum acceptable service conditions over the next 20 years. The TCCR indicates that for existing LOS F conditions, no further degradation is permitted as indicated by the applicable performance measure.

Senate Bill 743

Senate Bill (SB) 743, passed in 2013, requires the California Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "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 pursuant to this division, except in locations specifically identified in the guidelines, if any." OPR submitted updated CEQA Guidelines to the State Natural Resources Agency for formal rulemaking to implement SB 743, and the proposed changes were certified by the State Natural Resources Agency in December 2018. The guidelines indicate that vehicle miles traveled (VMT) be the primary metric used to identify transportation impacts and local agencies will have an adoption grace period until July 1, 2020.



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-6
Existing Local and Commuter Bus Service

ESA

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As a component of the City of Sacramento's on-going General Plan 2040 update, the City is currently engaged in a process to update the transportation performance metrics and thresholds used to measure transportation system impacts of discretionary projects. However, in lieu of final compliance and implementation of SB 743, for the purposes of this document the transportation analysis evaluates transportation impacts using LOS. Modeling of VMT with and without the project is reported for informational purposes only.

Caltrans

Caltrans issued interim guidance on incorporating SB 743 into its policies and procedures in *Local Development – Intergovernmental Review Program*.[2] The high-level interim guidance document for District staff refocuses Caltrans' attention on local development project's VMT, appropriate transportation demand measures (TDM), and determining how to address multimodal operational issues.

Regional

Sacramento Area Council of Government (SACOG) is responsible for the preparation of, and updates to, the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG Board in 2016.

Local

City of Sacramento 2035 General Plan

On March 3, 2015, the City of Sacramento City Council adopted the 2035 General Plan. The Mobility Element of the City of Sacramento's 2035 General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following LOS policy is relevant to this study:

> ***Policy M 1.2.2: The City shall implement a flexible context-sensitive Level of Service (LOS) standard, and will measure traffic operations against the vehicle LOS thresholds established in this policy.*** The City will measure vehicle LOS based on the methodology contained in the latest version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. The City's specific vehicle LOS thresholds have been defined based on community values with respect to modal priorities, land use context, economic development, and environmental resources and constraints. As such, the City has established variable LOS thresholds appropriate for the unique characteristics of the City's diverse neighborhoods and communities. The City will strive to operate the roadway network at LOS D or better for vehicles during typical weekday conditions including AM and PM peak hour with certain exceptions mapped on Figure M-1 (and listed in the actual General Plan document).
>
> A. Core Area (Central City Community Plan Area) – LOS F allowed

[2] California Department of Transportation, 2016. *Local Development – Intergovernmental Review Program.*

B. Priority Investment Areas – LOS F allowed

C. LOS E roadways (11 distinct segments listed). LOS E is also allowed on all roadway segments and associated intersections located within ½ mile walking distance of a light rail stations.

D. LOS F roadways (24 distinct segments listed)

E. If maintaining the above LOS standards would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation and/or implement vehicle trip reduction measures as part of a development project or a city-initiated project. Additionally, the City shall not expand the physical capacity of the planned roadway network to accommodate a project beyond that identified in Figure M4 and M4a (2035 General Plan Roadway Classification and Lanes).

According to Figure M1 (Vehicle Level of Service Exception Areas) of the 2035 City of Sacramento General Plan, the study area is situated within one of the three Priority Investment Areas. Additionally, the study area is also located with the Core Area, which is bounded by the Sacramento River, American River, Broadway, and Alhambra Boulevard. All study intersections are located within Core Area as well as within a Tier 1 Priority Investment Area.

The following policies from the City of Sacramento's 2035 General Plan are also applicable to this study:

Policy M 1.1.1: Right-of-Ways. The City shall preserve and manage right-of-ways consistent with: the circulation diagram, the City Street Design Standards, the goal to provide Complete Streets as described in Goal M 4.2, and the modal priorities for each street segment and intersection established in Policy M4.4.1: Roadway Network Development, Street Typology System.

Policy M 1.2.3: Transportation Evaluation. The City shall evaluate discretionary projects for potential impacts to traffic operations, traffic safety, transit service, bicycle facilities, and pedestrian facilities, consistent with the City's Traffic Study Guidelines.

Policy M 1.2.4: Multimodal Access. The City shall facilitate the provision of multimodal access to activity centers such as commercial centers and corridors, employment centers, transit stops/stations, airports, schools, parks, recreation areas, medical centers, and tourist attractions.

Policy M 1.3.1: Grid Network. To promote efficient travel for all modes, the City shall require all new residential, commercial or mixed-use development that proposes or is required to construct or extend streets to develop a transportation network that is well-connected, both internally and to off-site networks preferably with a grid or modified grid-form.

Policy M 1.3.2: Eliminate Gaps. The City shall eliminate "gaps" in roadways, bikeways, and pedestrian networks. To this end:

a. The City shall construct new multi-modal crossings of the Sacramento and American Rivers.

b. The City shall plan and pursue funding to construct grade-separated crossings of freeways, rail lines, canals, creeks, and other barriers to improve connectivity.

c. The City shall construct new bikeways and pedestrian paths in existing neighborhoods to improve connectivity.

Policy M 1.3.3**: **Improve Transit Access. The City shall support the Sacramento Regional Transit District (RT) in addressing identified gaps in public transit networks by working with RT to appropriately locate passenger facilities and stations, pedestrian walkways and bicycle access to transit stations and stops, and public rights of way as necessary for transit- only lanes, transit stops, and transit vehicle stations and layover.

Policy M 2.1.2: Sidewalk Design. The City shall require that sidewalks wherever possible be developed at sufficient width to accommodate all users including persons with disabilities and complement the form and function of both the current and planned land use context of each street segment (i.e. necessary buffers, amenities, outdoor seating space).

Policy M 2.1.4: Cohesive and Continuous Network. The City shall develop a pedestrian network of public sidewalks, street crossings, and other pedestrian paths that makes walking a convenient and safe way to travel citywide. The network should include a dense pattern of routes in pedestrian-oriented areas such as the Central City and include wayfinding where appropriate.

Policy M 3.1.12: New Facilities. The City shall work with transit providers and private developers to incorporate transit facilities into new private development and City project designs including incorporation of transit infrastructure (i.e., electricity, fiber-optic cable, etc.), alignments for transit route extensions, new station locations, bus stops, and transit patron waiting area amenities (i.e. benches, real-time traveler information screens).

Policy M 3.1.14: Direct Access to stations. The City shall ensure that development projects located in the Central City and within ½ mile walking distance of existing and planned light rail stations provide direct pedestrian and bicycle access to the station area, to the extent feasible.

Policy M 3.1.15: Light Rail Extensions and Enhancements. The City shall support the extension of light rail service to Sacramento International Airport, further extension in South Sacramento, and other improvements to facilities such as the 65th street, Royal Oaks, and Swanston stations.

Policy M 3.1.16: Streetcar Facilities. The City shall support the development of streetcar lines and related infrastructure and services in the Central City and other multi-modal districts.

Policy M 4.2.1: Accommodate All Users. The City shall ensure that all new roadway projects and any reconstruction projects designate sufficient travel space for all users including bicyclists, pedestrians, transit riders, and motorists except where pedestrians and bicyclists are prohibited by law from using a given facility.

Policy M 4.2.2: Pedestrian and Bicycle-Friendly Streets. In areas with high levels of pedestrian activity (e.g., employment centers, residential areas, mixed-use areas, schools), the City shall ensure that all street projects support pedestrian and bicycle travel. Improvements may include narrow lanes, target speeds less than 35 miles per hour, sidewalk widths consistent with the Pedestrian Master Plan, street trees, high-visibility

pedestrian crossings, and bikeways (e.g. Class II and Class III bike lanes, bicycle boulevards, separated bicycle lanes and/ or parallel multi-use pathways).

Policy M 4.2.5: Multi-Modal Corridors. Consistent with the Roadway Network and Street Typologies established in this General Plan, the City shall designate multi-modal corridors in the Central City, within and between urban centers, along major transit lines, and/or along commercial corridors appropriate for comprehensive multimodal corridor planning and targeted investment in transit, bikeway, and pedestrian path improvements if discretionary funds become available.

Policy M 4.4.4: Traffic Signal Management. To improve traffic flow and associated fuel economy of vehicles traveling on city streets, the City shall synchronize the remaining estimated 50 percent of the city's eligible traffic signals by 2035, while ensuring that signal timing considers safe and efficient travel for all modes.

Policy M 5.1.2: Appropriate Bikeway Facilities. The City shall provide bikeway facilities that are appropriate to the street classifications and type, number of lanes, traffic volume, and speed on all rights-of-way.

Policy M 5.1.3: Continuous Bikeway Network. The City shall provide a continuous bikeway network consisting of bike-friendly facilities connecting residential neighborhoods with key destinations and activity centers (e.g., transit facilities, shopping areas, education institutions, employment centers).

Policy M 5.1.5: Motorists, Bicyclists, and Pedestrian Conflicts. The City shall develop safe and convenient bikeways, streets, roadways, and intersections that reduce conflicts between bicyclists and motor vehicles on streets, between bicyclists and pedestrians on multi-use trails and sidewalk, and between all users at intersections.

Policy M 5.1.6: Connections between New Development and Bicycle Facilities. The City shall require that new development provides connections to and does not interfere with existing and proposed bicycle facilities.

Policy M 5.1.7: Bikeway Requirements. The City shall provide bike lanes on all repaved and/or reconstructed arterial and collector streets to the maximum extent feasible. The appropriate facility type for each roadway segment shall be consistent with the Roadway Network and Street Typologies defined in this General Plan.

Central City Specific Plan

In April of 2018, the City of Sacramento adopted the Central City Specific Plan (CCSP) that establishes a future vision for the Sacramento Central City area, which includes the site of the proposed project. The following policies from the CCSP Mobility section apply to this study.

Policy M.1.1: Neighborhood Connections. Improve connections between the Central City and surrounding neighborhoods, especially for walking, bicycling, and transit trips.

Policy M.1.2: Commercial Corridors. Enhance commercial corridors for safe walking and bicycling while accommodating both through and local traffic.

Policy M.1.3: Grid Connectivity. Preserve and enhance the high level of connectivity provided by the street grid for all travel modes.

Policy M.1.4: Curb Cuts for Driveways. Discourage new curb cuts for driveways for properties with adequate alley access.

Policy M.1.5: Complete Streets. Promote two-way travel, support use of smart technologies to improve mobility, support pilot projects to test out mobility options, and encourage convenient and affordable transit options.

Policy M.1.6: Riverfront Connections. Integrate the Riverfront into the grid through improved connections, emphasizing visibility, wayfinding, and enhanced pedestrian and bicycle routes that highlight the riverfront destination.

Policy M.2.1: Safe Travel Modes. Target safe mobility for all travel modes, working in concert with the Vision Zero Action Plan and the Council-adopted goal of zero traffic fatalities and serious injuries by 2027.

Policy M.2.2: Neighborhood Streets. Ensure neighborhood streets are places where people feel safe to walk and bike.

Policy M.3.1: Minimize Conflicts. Promote safety and efficiency for all travel modes by prioritizing modes by block, minimizing conflicts between competing modes on high volume (transit, bike, motor vehicle) routes.

Policy M.3.2: Balanced Network. Reduce the number of lanes dedicated to automobiles in order to regain right-of-way for other modes to balance the network

Policy M.4.1: Bicycle Network Projects and Improvements. Pursue bicycle network projects and improvements that accomplish the following objectives:

a. Fill gaps in the existing bicycle network by adding new facilities through travel lane reductions and conversions.

b. Provide new buffered and/or protected bike lanes.

c. Complete the bicycle network between the Sacramento and American Rivers consistent with adopted plans.

d. Establish a more complete Low Stress Bicycle Network with appropriate crossing treatments at high volume streets.

Policy M.5.1: Pedestrian Network Projects and Improvements. Pursue pedestrian network projects and improvements that accomplish the following objectives:

a. Streetscape projects for commercial/transit streets to improve conditions for walking.

b. Improve connections between the Central City and surrounding neighborhoods (“Connector Street Enhancements”).

c. Provide new sidewalks where they don’t currently exist (“Gap Projects”).

d. Increase sidewalk capacity in areas with high pedestrian volumes (“Activity Center Enhancements”).

e. Shaded sidewalks and improved street lighting.

Policy M.5.2: Walkability. Preserve a high level of walkability across the grid by minimizing pedestrian delay at intersections.

Policy M.6.1: Transit Connectivity. Promote transit connectivity with transit stops and stations that facilitate attractive and convenient transfers between light rail, streetcar, bus services, and that support active transportation connections.

Policy M.6.2: Regional Transit Hub. Preserve and strengthen the role of the Central City as the hub of the regional transit system.

Policy M.6.3: Transit Network Expansion. Support transit network expansion and improvement and coordinate transit planning and operations between transit operators serving the Central City.

Policy M.6.4: Streetcar. Promote visibility and access to the streetcar line, light rail stations and other key public transit facilities through enhanced pedestrian and bicycle connections, lighting, and wayfinding signage.

Policy M.6.5: Transit Vehicle Movement. Prioritize transit vehicle movement over the private automobile on blocks with high transit vehicle volumes, high transit ridership, or high levels of transit delay, implementing exclusive lanes and priority signalization per the preferred transit network (Figure 3.9-2).

Policy M.6.6: Development Density and Active Frontage. Encourage dense development with active ground floor frontage adjacent to transit stations.

Policy M.6.7: Transit Stop Structures. Ensure that transit stop structures are transparent to provide visibility to and support vibrant and inviting storefronts.

Policy M.6.8: Streetcar Station Design. Ensure streetcar station design that provides a comfortable environment for waiting passengers without compromising the pedestrian and bicycle travel way. A clear pedestrian path should be available when transit is present.

Policy M.6.9: Sidewalks as Streetcar Station Platforms. Allow sidewalks to serve as station platforms provided that the needs of both the streetcar passengers and pedestrians not utilizing the streetcar service are reasonably accommodated.

Policy M.6.10: On-Street Parking Minimization. Locate streetcar stops and design length of streetcar platforms that minimize reduction of on-street parking where possible.

Policy M.6.11: Access to Transit Stations. Support safe and convenient pedestrian and bicycle access to/from light rail and streetcar stations while minimizing conflicts between travel modes.

Policy M.7.1: High Speed Rail. Advance City engagement with high speed rail planning, emphasizing integration with other transportation modes in the Central City.

Policy M.7.2: Rail Stations. Partner with transit agencies in the planning and development of appropriate rail stations, in conjunction with developing intercity rail services.

Policy M.7.3: Regional Rail. Promote the Central City as a regional rail destination connecting Sacramento with the Bay Area, the Central Valley, base of the Sierras and north.

Policy M.8.1: Minimize Impacts to On-Street Parking. Minimize impacts to on-street parking, including residential permit parking, resulting from development with reduced parking requirements.

Policy M.8.2: Electric Vehicle Parking and Charging. Ensure availability of public infrastructure for Zero Emission Vehicles to support multi-family and daytime users, including publicly accessible charging in the right-of-way.

Policy M.8.3: Flexible On-street Curb Space. Promote flexible use of on-street curb space and loading areas in commercial corridors, prioritizing different uses by time of day.

Policy M.8.4: Stand-alone Surface Parking Lots. Prohibit new stand-alone surface parking lots and encourage the conversion of existing parking lots to uses that support transit ridership.

Policy M.8.5: Centralized Parking Structures. Facilitate the development of centralized parking structures to promote shared parking, optimize the use and efficiency of parking areas, and support a "park once" strategy.

Policy M.8.6: Lined Parking Structures. Encourage concealed parking structures that are wrapped with active uses along the street.

Policy M.8.7: Parking Area Lighting. Refine lighting standards for parking areas to improve visibility and safety and contribute to an inviting public environment.

Policy M.8.8: Wayfinding. Enhance wayfinding to public parking structures.

Policy M.8.9: Teacher Parking. Allow school teachers to park in surrounding neighborhoods in order to maximize the use of school property

Policy M.8.10 Shared Parking. Encourage shared parking and off-street parking solutions for longer term visits.

Policy M.8.11: Parking Structure Reuse. Develop an understanding of how parking structures can be reused and designed to be reused for future conversion.

Policy M.8.12: Parking Garage Conversion. Promote the conversion of parking garages to residential and commercial uses by encouraging flat plate parking garages with separate access and a minimum floor height of 10 feet.

Policy M.9.1: Alley Activation. Activate the public alley network by encouraging development that fronts onto alleys, landscaping, pedestrian and bicycle amenities, and other elements that enhance general livability, visual quality, and safety while supporting the goal of historic preservation. (CI)

Policy M.9.2: Alley Design. Both commercial and residential district pedestrian alleys should consider paving materials that are conducive for both vehicular and pedestrian activity, be ADA compliant, shield public/private areas from parking structure interior lighting, screen trash bins and service areas, and be designed consistent with the Central City Urban Design Guidelines.

Policy M.9.3: Alley Performance. Encourage alleys in residential districts to perform as minor streets, providing a pedestrian friendly environment affording frontage access to residential units and vehicle access to garages and service areas. Trash enclosures should be located within the buildings and not blocking the alley.

Policy M.9.4: Pedestrian- and Bicycle-friendly Alleys. Encourage activated pedestrian- and bicycle-friendly alleys in commercial areas.

Policy M.10.1 Emerging Transportation Technologies. Support emerging transportation technologies and services to increase transportation system efficiency. Allow for flexibility in the transportation network to take advantage of alternate methods to achieve mobility goals.

Policy M.10.2 Zero-emission and Low-emission Vehicles. Continue to collaborate with State and regional partners to support rapid adoption of zero-emission and low-emission vehicles, which involves the following objectives:

a. Standardizing infrastructure and regulations for public EV charging stations.

b. Developing guidelines and standards for dedicated and preferential parking for zero- and low-emission vehicles (including charging stations for plugin EVs, where necessary).

c. Expanding access to zero emission transportation for multifamily and low income households.

d. Allowing a diversity of business models and approaches to enable zero emission technology (such as free chargers operated by a third party, pay to charge installations, etc.)

Policy M.10.3: Evolving Technologies and Transportation Platforms. Monitor evolving technologies and transportation platforms, such as transportation network companies and autonomous vehicles, and adapt plans and standards to accommodate emerging technologies as appropriate.

Policy M.10.4: Adaptable Transportation Design. Encourage adaptable transportation design, allowing for future reuse of such facilities as parking garages as well as conversion of on-street parking to loading zones for pick-up/drop-off activities.

Policy M.10.5: Intelligent Transportation System (ITS measures). Develop an ITS Master Plan and implement ITS technologies to improve signal timing and efficiency to improve traffic operations and improve the overall mobility system.

I-5 Freeway Subregional Corridor Mitigation Program

The I-5 Freeway Subregional Corridor Mitigation Program (SCMP) is a voluntary development impact fee for new developments within the I-5 corridor between Elk Grove, Downtown Sacramento, and West Sacramento that is intended to be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the threshold could choose to either pay the fee, which would constitute mitigation of their development project's impacts on the freeway mainline, or conduct a Traffic Impact Study, which would evaluate that project's impact on the freeway system and identify mitigation for those impacts.

According to the Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program,[3] the following roadway improvements would be partially funded by the plan (with the remainder coming from other sources):

[3] DKS Associates, 2016. Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program. January 2016.

- extension of light rail from the Township 9/Richards station to Natomas Center,
- new bridge across the American River,
- two new bridges across the Sacramento River,
- reconstruction of I-5/Richards Boulevard Interchange,
- construction of HOV lanes on I-5 from Elk Grove to US 50, and
- construction of a transition lane on I-5 between the Garden Highway off- and on-ramps.

Page 36 of the study specifies that "Caltrans would consider the fees as an adequate mitigation for freeway mainline impacts." Table 18 on Page 32 of the Nexus Study shows the proposed fee per dwelling unit, and per thousand square feet of non-residential space.

4.6.3 Analysis, Impacts, and Mitigation

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the proposed project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

Significance Criteria

The following describes the significance criteria used to identify project-specific and cumulatively considerable impacts to the transportation and circulation system for each of the proposed projects.

Intersections

Impacts to the roadway system are considered significant if:

- The traffic generated by the plan degrades the overall roadway system operation to the extent that the plan would not be consistent with General Plan Policy M 1.2.2 relating to the City's Level of Service Policy.

General Plan Mobility Element Policy M 1.2.2 sets forth definitions for what is considered an acceptable LOS. All study intersections are located in the Core Area and are governed by Policy M 1.2.2 (a). LOS F is acceptable at these locations during peak hours, provided that the project provides improvements to other parts of the citywide transportation system within the project site vicinity (or within the area affected by the project's vehicular traffic impacts) to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the 2035 General Plan goals. Road widening or other improvements to road segments are not required.

The above significance criterion is the City's interpretation of how General Plan Policy M 1.2.2 should be applied in the Core Area and Priority Investment Areas of the City. This policy allows these areas to have intersections that operate at LOS F. However, such conditions should not be detrimental to other general plan circulation policies (including but not limited to policies

M 1.2.1, 1.2.4, 1.3.3, and 1.3.5), which pertain to providing high-quality transit, walkable neighborhoods and business districts, continuous and connected bikeways, TDM, emergency response, and other circulation considerations. Therefore, while LOS F peak hour operating conditions at a single intersection may be considered acceptable, an entire roadway system that experiences severe gridlock, and hampers all modes of travel is generally not considered acceptable. To this end, the evaluation of intersection LOS focuses on the totality of system operations to assess consistency with 2035 General Plan Policy M 1.2.2.

In developing policy M 1.2.2, the City evaluated the benefits of allowing lower levels of service in order to promote infill development within an urbanized high density area of the city that reduces VMT and supports more transportation alternatives, including biking, walking, and transit, as compared to requiring a higher level of service that would accommodate more cars but may also require widening roads and would result in increased VMT and greenhouse gas (GHG) emissions. Based on this evaluation, the City determined that LOS F is acceptable during peak hours within the Core Area, provided that the project provides improvements to other parts of the citywide transportation system within the project site vicinity (or within the area affected by the project's vehicular traffic impacts) to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the general plan goals. The City's LOS policy was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions).

Freeway Facilities

Impacts to the freeway system would be significant if:

- Project traffic causes off-ramp traffic to queue back to beyond the freeway gore point, or worsens an existing/projected queuing problem on a freeway off-ramp.

Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations; or
- Fail to adequately provide access to transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts

The project would have a temporarily significant impact during construction if it would:

- Degrade an intersection or roadway to an unacceptable level;
- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

Methodologies and Assumptions

Project Travel Demand Analysis

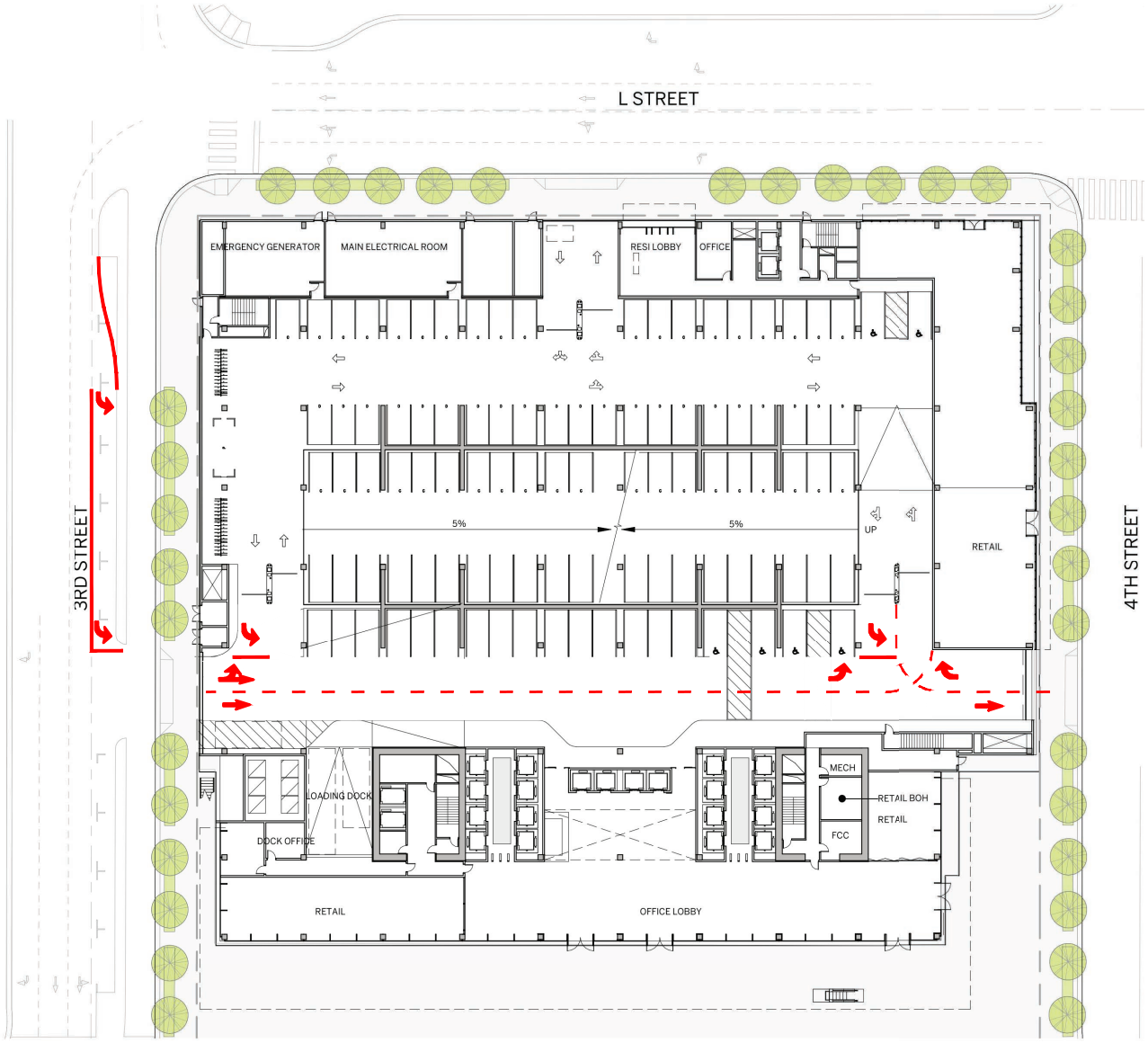
The transportation and circulation analysis methodology uses the anticipated travel characteristics of the project, trip generation, and vehicle trip distribution, as described below.

Project Description

The proposed project site is bounded by 3rd Street, 4th Street, L Street, and Capitol Mall in Downtown Sacramento, and the project would encompass the entire block. The mixed-use building project would include 816,300 square feet of general office space and 100 residential dwelling units. The project would also provide 1,304 vehicle parking spaces and 234 bicycle parking spaces.

Figure 4.6-7 shows the proposed project site plan, as analyzed in this EIR. Vehicle access is provided by project driveways on 3rd Street, 4th Street, and L Street, each located roughly midblock. The 3rd Street driveway is proposed as an inbound only access point, while the 4th Street and L Street driveways are both proposed to allow for inbound and outbound traffic. The project would include two eastbound travel lanes internal through the site. The ramp leading up to the higher levels of the parking structure (where most of the parking would be located) would be near the 4th Street access, with a down ramp to the lower level of parking located near the 3rd Street access.

In addition, the project is located adjacent to the planned Downtown/Riverfront streetcar line that will run along the east side of 3rd Street. The planned streetcar alignment will run bi-directional service on a single track adjacent to the proposed project, with a stop platform at the southeast corner of 3rd Street at L Street. The proposed project would preserve right-of-way for the planned streetcar stop.



Not to scale

SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-7
Project Site Access Plan

Project Trip Generation

Vehicle trip generation estimates were developed based on data published in the Trip Generation Manual, 10th Edition.[4] The General Office Building land use category (Code 710) was used to develop trips associated with the office, retail, and restaurant land uses for the project. Based on the small amount of restaurant and retail space proposed with the relatively large amount of office space, it is appropriate to use this land use category given the description provided in the manual:

> "An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities."

The Multifamily Housing (High-Rise) land use category (Code 222) was used to estimate trips for the residential component of the project.

The manual also provides separate trip rates based on the setting/location. The Center City Core setting is appropriate for this project based on the project location being reflective of the description provided in the manual:

> "Center City Core – the downtown area for a major metropolitan region at the focal point of a regional light- or heavy-rail transit system. This area type is typified by multi-storied buildings, a wide range of land uses, an extensive pedestrian network, and shared and priced parking both on-street and in structured garages or surface lots. The area typically has more jobs than residents and therefore is typically an employment destination. The area also includes the immediate vicinity of the commercial core."

Vehicle trip rates for the Center City Core land use category already consider the higher levels of walking, biking, and transit use typically present in this setting; therefore, no additional shifts to these modes are necessary to develop the vehicle trip generation.

Table 4.6-5 presents the vehicle trip generation rates for the office and residential land uses of the project during the AM peak hour, PM peak hour, and daily on an average weekday.

TABLE 4.6-5
VEHICLE TRIP RATES

Land Use	ITE Land Use Code	Daily	AM Peak Hour			PM Peak Hour		
		Rate	Rate	In %	Out %	Rate	In %	Out %
Office	710	4.61 [1]	0.50	86% [2]	14% [2]	0.58	16% [2]	84% [2]
Residential	222	2.16	0.22	38%	62%	0.23	58%	42%

NOTES:
[1] Office land use in the Center City Core setting does not include a daily trip rate. The daily trip rate is determined using the PM peak hour to Daily k-factor established from the Office land use in the General Urban/Suburban setting, applied to the PM peak hour rate from the Center City Core setting.
[2] Office inbound and outbound directional percentages are not provided for the Office land use in the Center City Core setting during the AM and PM peak hours. The percentages shown are for the Office land use in the Suburban/Urban setting.

SOURCE: Institute of Transportation Engineers, 2017. Trip Generation Manual, 10th Edition.

[4] Institute of Transportation Engineers, 2017. Trip Generation Manual, 10th Edition.

Table 4.6-6 shows the estimated number of vehicle trips for the proposed project.

TABLE 4.6-6
PROJECT VEHICLE TRIP GENERATION

Land Use	ITE Land Use Code	Quantity	Daily	AM Peak Hour			PM Peak Hour		
			Trips	Trips	In	Out	Trips	In	Out
Office	710	816.3 KSF	4,009	408	351	57	473	76	397
Residential	222	100 DU	216	22	8	14	23	13	10
Total Vehicle Trips			4,225	430	359	71	496	89	407

NOTES:
KSF = thousand square feet. DU = dwelling unit.

SOURCE: Fehr & Peers, 2018.

As shown, the project is expected to generate 430 vehicle trips during the AM peak hour, about 500 vehicle trips during the PM peak hour, and approximately 4,250 vehicle daily trips.

Although there is expected to be some internalization of trips between the residential and office land uses, the amount of dwelling units is small compared to the office space proposed; therefore, any internalization would be minimal compared to the overall vehicle trip generation. This analysis conservatively assumes no further reduction for internalization than what is already factored into the trip generation rates.

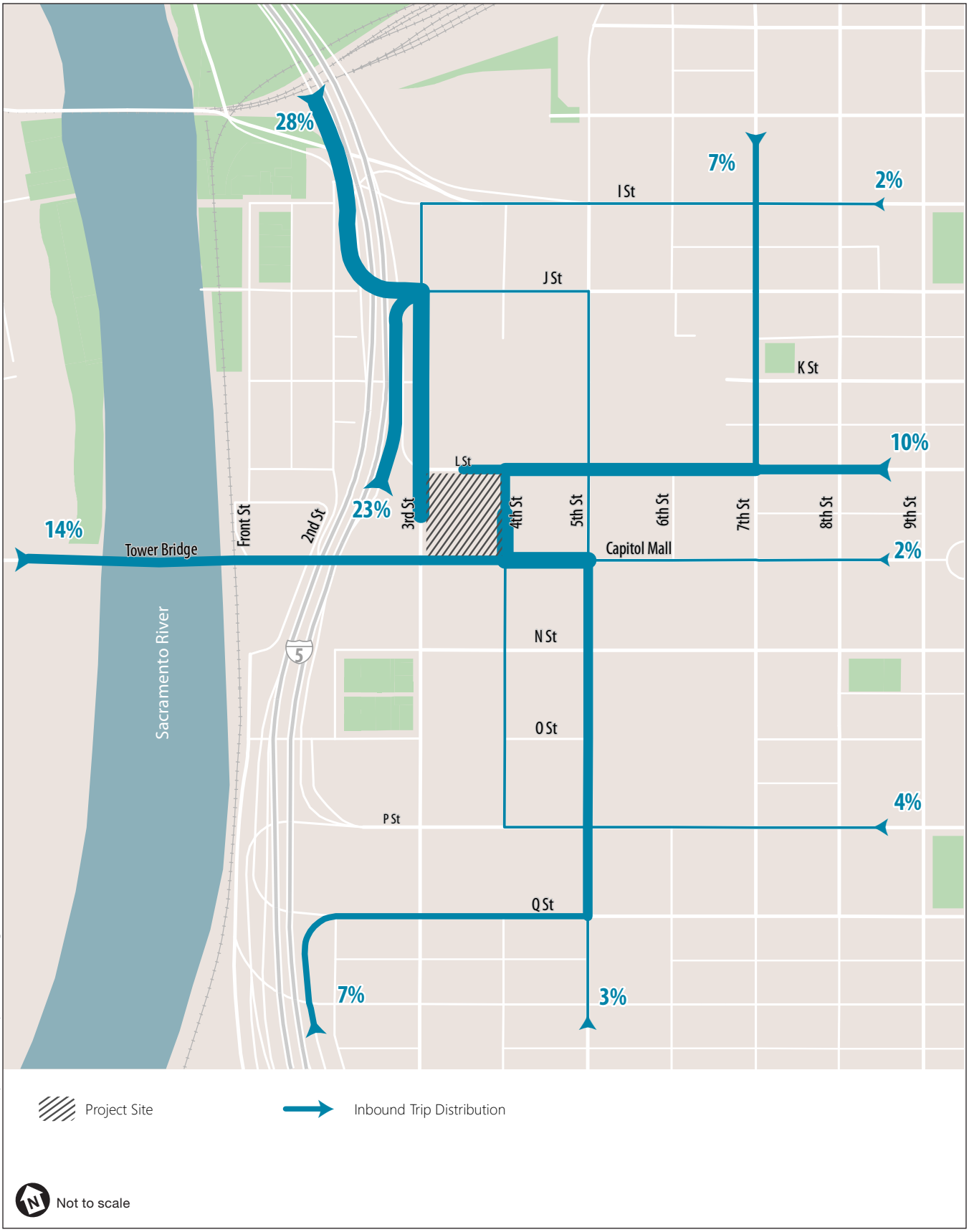
Project Trip Distribution/Assignment

The project's expected vehicle trip distribution and assignment was based on the following sources:

- Proposed ingress/egress for vehicle project access
- Existing travel patterns in the area
- Travel time comparison from Google Maps during peak commute times
- SACMET regional travel demand model select zone analysis

Figures 4.6-8 and **4.6-9** display the expected distribution of inbound and outbound vehicle trips, respectively, to the project. Separate inbound and outbound percentages are necessary due to the presence of one-way roadways within the study area, and different locations and travel patterns to/from freeway on- and off-ramps. The figures reflect the distribution of project trips entering and leaving the study area.

Project trips were added to the existing traffic volumes using this trip distribution and assigned to the study intersections to develop the Existing Plus Project traffic volumes.



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-8
Inbound Trip Distribuiton - Existing Plus Project Conditions

ESA

SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-9
Outbound Trip Distribuiton - Existing Plus Project Conditions

ESA

Vehicle Miles of Travel

This section provides estimates of the daily VMT that would be generated by the proposed project, and evaluation of the project's effect on VMT in the study area and regionally.

Project Generated VMT

Table 4.6-7 displays the daily VMT generated by the project. This includes all vehicle travel to or from the project site. Daily project generated VMT was estimated by tracking project trips using the SACMET regional travel demand model, and adjusted to account for trips leaving the SACOG region boundary using the California Statewide travel demand model.

TABLE 4.6-7
DAILY PROJECT GENERATED VMT

Metric	Quantity (miles)
Daily Project Generated VMT	39,298

SOURCE: Fehr & Peers, 2019

Project Effects on VMT

Table 4.6-8 shows the daily VMT per service population (total of residents and employees) within the Sacramento Central City for all analysis scenarios. The SACMET base and future year travel demand models were run with and without the project, and all travel to/from the traffic analysis zones representing the Central City (bounded by the Sacramento River, American River, Alhambra Boulevard, and Broadway) was tracked throughout the model in both scenarios, and adjusted to account for trips leaving the SACOG boundary using the California Statewide travel demand model. As shown, the model estimates that the project would increase daily VMT generated by the Central City; however, the project would result in a slight decrease in daily VMT per service population in the area from 42.7 under Existing conditions to 41.9 under Existing Plus Project. The mixed-use project would be served by multiple transit, bicycle, and pedestrian facilities in close proximity that would contribute to the lower automobile use and reduction in daily VMT per service population. The addition of residential land use in the Central City by cumulative conditions results in lower daily VMT per service population overall; however, the project would change daily VMT per service population in the Central City by a smaller margin from 34.6 without the project to 34.3 with the project.

Existing Plus Project Analysis

This section discusses the analysis results under Existing Plus Project conditions for the roadway, bicycle, pedestrian, and transit facilities.

Roadway System

Existing Plus Project Traffic Volumes

Figure 4.6-10 displays the AM and PM peak hour intersection traffic volumes, traffic controls, and lane configurations under Existing Plus Project conditions.

TABLE 4.6-8
DAILY SACRAMENTO CENTRAL CITY GENERATED VMT

Scenario	Central City Area			Central City Area Generated	
	Residents	Employees	Service Population	Daily VMT	Daily VMT per Service Population
Existing Conditions	26,647	87,641	114,288	4,876,825	42.7
Existing Plus Project	26,787	90,321	117,107	4,909,702	41.9
Cumulative No Project	61,786	131,961	193,747	6,710,084	34.6
Cumulative Plus Project	61,925	134,641	196,566	6,741,012	34.3

SOURCE: Fehr & Peers, 2019

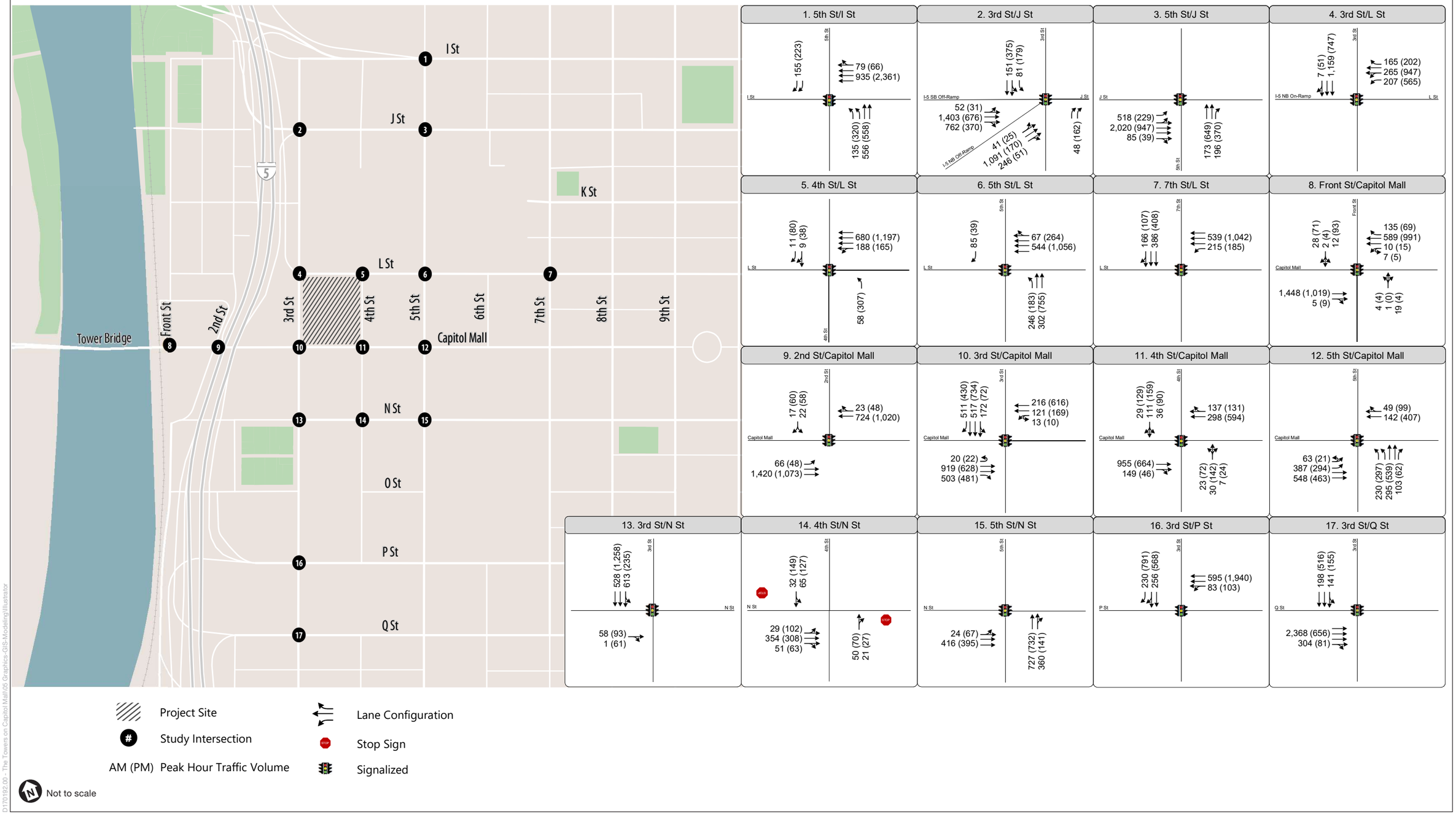
Existing Plus Project Intersection Operations

Table 4.6-9 displays the peak-hour intersection operations at the study intersections under Existing Plus Project conditions.

As shown in Table 4.6-9, delays at study intersections generally remain similar to existing conditions with the addition of the project, except for a few locations immediately adjacent to the project site and/or proximate to freeway ramps (notably along L Street and P Street during the PM peak hour). Outbound project trips during the PM peak hour add traffic and additional delay to Intersection 5 (L Street/4th Street) and Intersection 16 (P Street/3rd Street) which already operate at LOS F conditions without the proposed project; however, the analysis shows that traffic progression along these roadways is maintained and a breakdown in traffic flow that could result in gridlock does not occur.

Existing Plus Project Off-Ramp Queues

Table 4.6-10 displays the off-ramp queuing within the study are during the AM and PM peak hours under Existing Plus Project conditions. As shown, all study freeway off-ramp queues remain within the available storage area during the both peak hours.



D170192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-10
Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Project Conditions

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TABLE 4.6-9
INTERSECTION OPERATIONS – EXISTING PLUS PROJECT

Intersection	Traffic Control	Peak Hour	Existing Conditions		Existing Plus Project	
			Delay (seconds)	LOS[1]	Delay (seconds)	LOS[1]
1. I Street/5th Street	Signal	AM PM	11 33	B C	12 34	B C
2. J Street/3rd Street	Signal	AM PM	32 22	C C	45 26	D C
3. J Street/5th Street	Signal	AM PM	10 38	B D	10 43	B D
4. L Street/3rd Street	Signal	AM PM	7 63	A E	8 60	A E
5. L Street/4th Street	Signal	AM PM	21 81	C F	23 113	C F
6. L Street/5th Street	Signal	AM PM	10 39	B D	11 46	B D
7. L Street/7th Street	Signal	AM PM	8 12	A B	8 11	A B
8. Capitol Mall/Front Street	Signal	AM PM	26 15	C B	22 23	C C
9. Capitol Mall/2nd Street	Signal	AM PM	13 15	B B	11 18	B B
10. Capitol Mall/3rd Street	Signal	AM PM	24 15	C B	21 24	C C
11. Capitol Mall/4th Street	Signal	AM PM	16 15	B B	15 42	B D
12. Capitol Mall/5th Street	Signal	AM PM	13 15	B B	14 19	B B
13. N Street/3rd Street	Signal	AM PM	12 14	B B	12 35	B C
14. N Street/4th Street	SSSC[2]	AM PM	2 (8) 4 (10)	A (A) A (B)	2 (9) 34 (129)	A (A) D (F)
15. N Street/5th Street	Signal	AM PM	16 14	B B	17 18	B B
16. P Street/3rd Street	Signal	AM PM	8 89	A F	8 105	A F
17. Q Street/3rd Street	Signal	AM PM	22 14	C B	22 14	C B

NOTES:
[1] LOS = Level of Service.
[2] SSSC = Side-street stop controlled

For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. All intersections were analyzed in SimTraffic.

SOURCE: Fehr & Peers, 2019

TABLE 4.6-10
OFF-RAMP QUEUING – EXISTING PLUS PROJECT

Location	Available Storage (feet)	Peak Hour	Existing Queue (feet)	Existing Plus Project Queue (feet)
Interstate 5 SB Off-Ramp at J Street (from J Street/3rd Street)	1,525	AM PM	825 300	1,325 350
Interstate 5 NB Off-Ramp at J Street (from J Street/3rd Street)	1,025	AM PM	400 125	425 125
Interstate 5 SB Off-Ramp at Q Street (from Q Street/3rd Street)	1,700	AM PM	275 125	300 100
Interstate 5 NB Off-Ramp at Q Street (from Q Street/3rd Street)	1,550	AM PM	275 125	300 100

NOTES:
The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. The I-5 NB off-ramp at Q Street is measured from the off-ramp terminal intersection to the gore point of the I-5 NB off-ramp and the US 50 WB to I-5 NB ramp.

Maximum queue length is based upon output from SimTraffic microsimulation software.

SOURCE: Fehr & Peers, 2019

Impacts and Mitigation Measures

Impact 4.6-1: The proposed project could worsen conditions at intersections in the City of Sacramento.

Implementation of the proposed project would result in some intersections in the City of Sacramento experiencing degraded operating conditions during peak hours. All study intersections are located in a Priority Investment Area as well as within the Core Area and are governed by General Plan Mobility Element Policy M 1.2.2. This policy states that LOS F is acceptable in Priority Investment Areas as well as in the Core area during peak hours. The project is located in the heart of Downtown Sacramento in close proximity to extensive transit, bicycle, and pedestrian facilities and services, providing residents and employees with numerous non-vehicular transportation options for travel to and from the project site. In addition, the project would enhance sidewalk facilities along all sides of the project site, providing wide sidewalks, landscaping, and other pedestrian amenities. The project would support bicycle access by providing 234 bicycle parking spaces within the ground level of the internal parking garage. Therefore, the LOS results documented above are consistent with expectations outlined in General Plan Policy M 1.2.2.

As discussed previously, General Plan Policy M 1.2.2 was adopted to allow decreased levels of service (e.g., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality, reduced GHG emissions, and traffic progression along study area roadways are maintained such that a breakdown in traffic flow resulting in severe gridlock does not occur). Based on this evaluation, the City determined that LOS F is considered

acceptable during peak hours within the Core Area, therefore, the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.6-2: The proposed project could worsen conditions at freeway off-ramps in the study area.

As shown in Table 4.6-10, the project would increase vehicle queuing at the I-5 freeway off-ramps near the project site; however, the addition of the project would not result in queues that extend back to the freeway mainline. All study freeway off-ramps would continue to remain within the available storage area; therefore, the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.6-3: The proposed project could adversely affect public transit operations.

Many of the local and commuter bus routes that would serve the project are along Capitol Mall, 5th Street, and L Street. Transit operations along these key facilities would be affected by the overall traffic operations along these roadways. The project would add traffic to the roadway facilities that serve transit routes; however, as shown in Table 4.6-9, the additional delay to intersections along these routes would increase at most by 32 seconds at Intersection 5 (L Street/4th Street) during the PM peak hour. Despite the increase in delay, traffic progression for transit would be maintained and a breakdown in traffic flow that would result in gridlock would not occur; therefore, the impact to transit operations would be **less than significant**.

Mitigation Measure

None required.

Impact 4.6-4: The proposed project could fail to adequately provide access to transit.

Many transit services are provided in close proximity to the project site. This includes local and commuter bus, regional light rail, and intercity passenger rail service. Access to these transit services are provided by key bus stops at L Street/4th Street, Capitol Mall/2nd Street, and Capitol Mall/7th Street, a light rail stop at Capitol Mall/7th Street, and the Sacramento Valley Station (passenger rail) north of I Street/4th Street. All of these facilities are located 3.5 blocks away or

less from the project site. Access to these transit stops are also served by sidewalks connecting to the project site. As documented previously, the proposed project would expand and enhance sidewalks adjacent to the project site. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.6-5: The proposed project could adversely affect existing or planned bicycle facilities or fail to provide for access by bicycle.

The project would not modify or change the existing bicycle system in the study area. Bicyclists to/from the project site would be able to access the project using the Class II bike lanes on Capitol Mall, and other nearby bicycle facilities. The project would also provide access by bicycle with the inclusion of 234 bicycle parking spaces on the ground-level of the internal parking garage. As noted in the Central City Specific Plan, no planned bicycle facilities are adjacent to the project on L Street, 3rd Street, or 4th Street; therefore, the project would not preclude the construction of any planned bicycle facilities. This impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.6-6: The proposed project could adversely affect existing or planned pedestrian facilities or fail to provide for access for pedestrians.

The project would enhance the pedestrian facilities along the frontage of all streets the project site is bound by: south side of L Street, north side of Capitol Mall, east side of 3rd Street, and west side of 4th Street. Enhancements include providing wide sidewalks, landscape strip separating the sidewalk from the roadway, and other pedestrian amenities. The project would not affect existing or planned pedestrian facilities. The project's pedestrian improvements would be consistent with the Central City Specific Plan, which identifies the adjacent sidewalks along the project frontage on L Street and 4th Street for "activity center enhancements," which includes providing additional sidewalk capacity in areas with high pedestrian volumes, and on 3rd Street and Capitol Mall for streetscape projects. The project would also be consistent with the Capitol Mall Streetscape Promenade project, which would include a wide plaza with additional pedestrian amenities along the Capitol Mall frontage.

The project would result in an increase in the number of pedestrians along Capitol Mall, notably for pedestrians accessing the site to and from transit. The Capitol Mall/4th Street intersection does not allow eastbound left and westbound left-turn movements for vehicles. This requires motorists entering the project from the west along Capitol Mall to drive eastbound through the Capitol

Mall/4th Street intersection, make an eastbound U-turn at Capitol Mall/5th Street, and a westbound right-turn at Capitol Mall/4th Street.

This circuitous movement would require drivers to cross four marked pedestrian crosswalks (east leg of the Capitol Mall/4th Street intersection while driving eastbound, west leg of the Capitol Mall/5th Street intersection while making an eastbound U-turn, east leg of the Capitol Mall/ 4th Street intersection again while driving westbound, and north leg of the Capitol Mall/4th Street intersection while making the westbound right-turn), increasing potential conflicts with pedestrians at these locations by increasing the number of vehicles traveling across the crosswalks. Notably, drivers would make a right turn from westbound Capitol Mall onto 4th Street, which would result in potential conflicts with pedestrians in the north leg crosswalk during a permitted signal phase (i.e., pedestrians using this crosswalk have a walk signal while westbound vehicles have a green signal). This increase in potential conflicts between pedestrians and project-generated vehicle traffic would adversely affect access for pedestrians; therefore, this impact would be **potentially significant**.

Mitigation Measure 4.6-6

Construct a dedicated eastbound left-turn pocket, with 180 feet of storage, at the Capitol Mall/4th Street intersection, and modify and retime the traffic signal at the Capitol Mall/ 4th Street intersection to include a protected eastbound left-turn phase.

Significance After Mitigation: Construction of an eastbound left-turn pocket and retiming the traffic signal at the Capitol Mall/4th Street intersection to allow for a protected eastbound left-turn movement would reduce vehicle traffic across three marked crosswalks (east leg of the Capitol Mall/4th Street intersection while driving eastbound, west leg of the Capitol Mall/5th Street intersection while making an eastbound U-turn, east leg of the Capitol Mall/4th Street intersection again while driving westbound) by eliminating the circuitous travel for eastbound traffic on Capitol Mall destined to travel north on 4th Street. This protected turn movement would also reduce the amount of westbound right-turning vehicles conflicting with pedestrians in the north leg crosswalk of Capitol Mall/4th Street and would instead allow project-generated traffic to make a protected eastbound left-turn while pedestrians on the north leg of the intersection have a "do not walk" signal. The mitigation measures described above would reduce pedestrian related impacts to a **less-than-significant** level.

Impact 4.6-7: The proposed project could cause construction-related traffic impacts.

Project construction may require restricting or redirecting pedestrian, bicycle, and vehicular movements at locations around the site to accommodate material hauling, construction, staging, and modifications to existing infrastructure. The duration of construction, number of trucks, truck routing, number of employees, employee parking, truck idling, lane closures, and a variety of other construction-related activities are unknown at this time. Therefore, it would be speculative to conduct any type of quantitative analysis. However, because of the extent and duration of construction, and the associated potential for prolonged lane closures, damage to roadbeds, and

traffic hazards to bikes/pedestrians, the project impacts during construction would be **potentially significant**.

Mitigation Measure 4.6-7

i. Before issuance of any demolition or building permits for any phase of the project, the project applicant shall prepare a detailed Construction Traffic Management Plan that will be subject to review and approval by the City Department of Public Works, in consultation with affected transit providers, and local emergency service providers including the City of Sacramento Fire and Police departments. The plan shall ensure that acceptable operating conditions on local roadways are maintained. At a minimum, the plan shall include:

- The number of truck trips, time, and day of street closures
- Time of day of arrival and departure of trucks
- Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting
- Provision of a truck circulation pattern
- Identification of detour routes and signing plan for street closures
- Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas)
- Maintain safe and efficient access routes for emergency vehicles and transit
- Manual traffic control when necessary
- Proper advance warning and posted signage concerning street/lane closures
- Provisions for pedestrian and bicycle safety

A copy of the approved construction traffic management plan shall be submitted to local emergency response agencies and transit providers, and these agencies shall be notified at least 30 days before the commencement of construction that would partially or fully obstruct roadways.

ii. The project applicant, in coordination with the City of Sacramento, Regional Transit, and other transit providers within the project vicinity and subject to their approval, shall identify temporary bus stop locations and cause ADA-compliant replacement bus stop facilities to be constructed in place of any bus stops that need to be temporarily closed during project construction. The relocation of bus stops may have a secondary impact related to the loss/relocation of a small number of on-street parking spaces and/or loading zones. This secondary impact would not be significant.

Significance After Mitigation: The mitigation measures described above would reduce construction-related traffic impacts to a **less-than-significant** level.

Cumulative Conditions Analysis

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable future projects. The geographic area that could be affected by a project varies, depending on the type of environmental issue being considered. This cumulative impact analysis does not rely on a list of specific pending, reasonably foreseeable development proposals in the vicinity of the project; rather, it relies on existing and future development accommodated under the City's General Plan and Central City Specific Plan, which is included in the SACMET regional travel demand model.

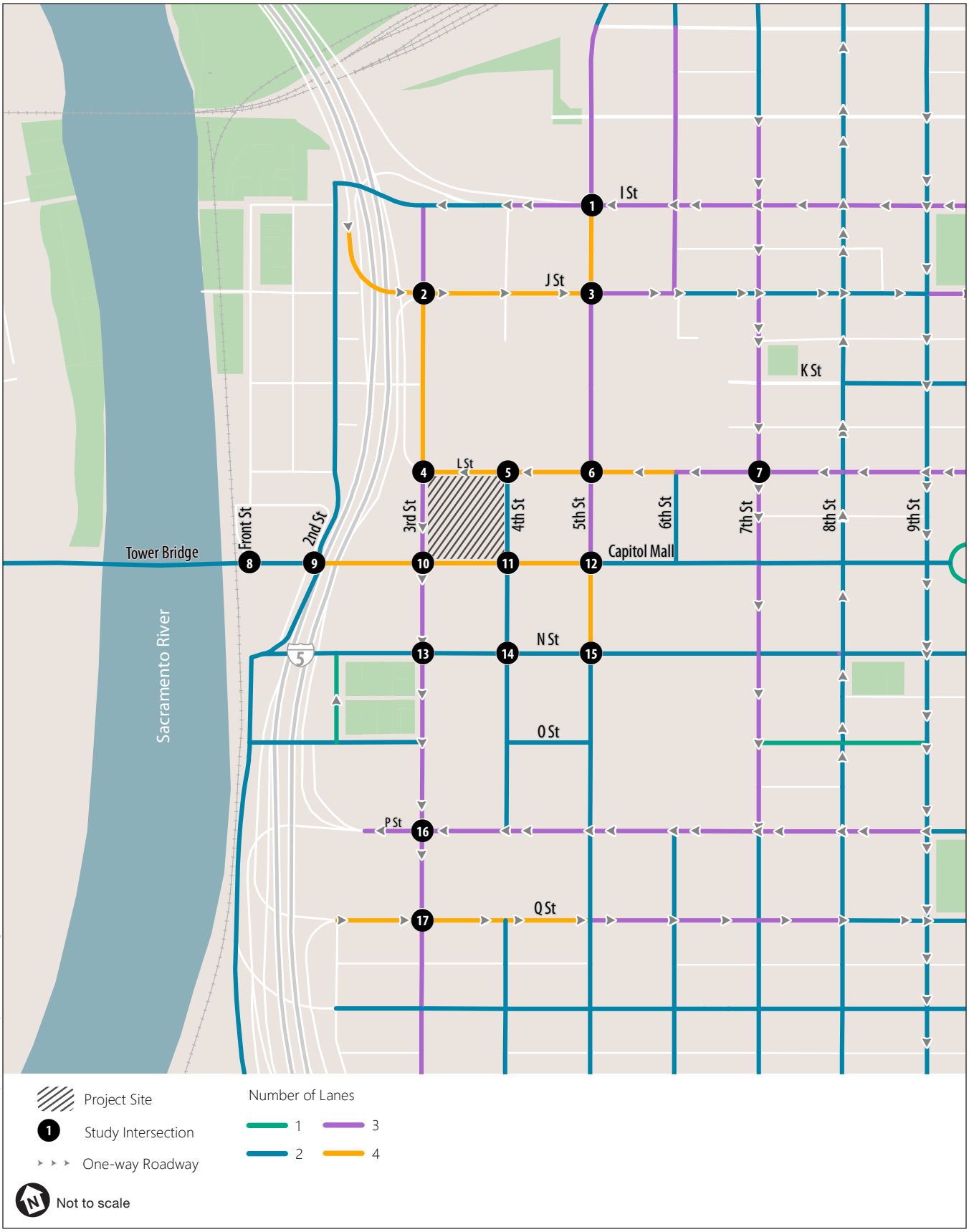
Cumulative Land Use and Transportation System Assumptions

The most recent version of the SACMET regional travel demand model developed and maintained by SACOG was used to forecast cumulative (year 2036) traffic volumes within the study area. The cumulative version of this model accounts for planned land use growth within the City of Sacramento according to the City's 2035 General Plan, as well as within the surrounding region. The SACMET model also accounts for planned improvements to the surrounding transportation system, including improvements identified in the City's "Grid 3.0" plan for the Central City, and incorporates the current MTP/SCS for the Sacramento region. The version of the model used to develop the forecasts was modified to include the most recent planned land uses and transportation projects within the City of Sacramento. Modifications to the model included additional transportation network and land use detail within the study area to improve accuracy.

The cumulative analysis for this study assumes a variety of reasonably foreseeable future roadway improvements in the study area including:

- MTP/SCS Projects
  - Green Line Light Rail extension to the Sacramento International Airport
  - Increase in bus service with 15 minute or better headways from roughly one quarter of all services in base year to about half of all services by 2036. The number of buses entering Downtown Sacramento during peak periods is projected to increase by 75 percent by 2036.
  - I Street Bridge Replacement between Sacramento and West Sacramento
  - New Sacramento River crossing at Broadway connecting Sacramento and West Sacramento
  - New all-modes American River crossing between Downtown and Natomas
- Downtown Specific Plan/Grid 3.0 Projects – multi-modal set of transportation improvements throughout Downtown.
- Downtown Riverfront Streetcar service between Downtown Sacramento and West Sacramento.

Figure 4.6-11 illustrates the study roadway facilities, including the number and direction of travel lanes, under cumulative conditions.



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-11
Cumulative Roadway Network

ESA

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A forecasting procedure known as the 'difference method' was used to develop the Cumulative No Project forecasts. This method accounts for potential differences between the base year model and existing traffic counts that could otherwise transfer to the future year model and traffic forecasts.

This forecasting procedure is calculated as follows:

Cumulative Traffic Forecast = Existing Count Volume + (Cumulative Model Forecast – Base Year Model Forecast)

Cumulative Project Trip Distribution/Assignment

The project trip distribution and assignment are expected to differ slightly under cumulative conditions due to changes in the roadway network and nearby complimentary land uses. **Figures 4.6-12** and **4.6-13** display the expected cumulative project distribution of inbound and outbound vehicle trips, respectively, to the project. The figures reflect the distribution of project trips entering and leaving the study area.

Project trips were added to the Cumulative No Project traffic forecasts using this trip distribution and assignment to develop the Cumulative Plus Project traffic volumes.

Roadway System

Cumulative Traffic Volumes

Figures 4.6-14 and **4.6-15** displays the AM and PM peak hour intersection traffic volumes, traffic controls, and lane configurations under Cumulative No Project and Cumulative Plus Project, respectively.

Cumulative Intersection Operations

Table 4.6-11 displays the peak-hour intersection operations at the study intersections under Cumulative No Project and Cumulative Plus Project conditions.

As shown in Table 4.6-11, delays are expected to be higher throughout the study area under Cumulative No Project conditions, with many intersections operating at LOS F during the AM and/or PM peak hour, including:

- Intersection 2 (J Street/3rd Street)
- Intersection 4 (L Street/3rd Street)
- Intersection 5 (L Street/4th Street)
- Intersection 6 (L Street/5th Street)
- Intersection 8 (Capitol Mall/Front Street)
- Intersection 10 (Capitol Mall/3rd Street)
- Intersection 11 (Capitol Mall/4th Street)
- Intersection 13 (N Street/3rd Street)
- Intersection 14 (N Street/4th Street)
- Intersection 15 (N Street/5th Street)
- Intersection 16 (P Street/3rd Street)

Under Cumulative Plus Project conditions, the project would add traffic and additional delay to these intersections, exacerbating LOS F conditions; however, the analysis shows that traffic progression along the majority of these roadways is maintained and a breakdown in traffic flow

that would result in gridlock does not occur, with the exception at Intersection 14 (N Street/ 4th Street). This intersection has side-street stop traffic control, which under cumulative conditions, has a side-street stop worst movement delay that would result in a breakdown in traffic flow.

Cumulative Off-Ramp Queues

Table 4.6-12 displays the off-ramp queuing within the study area during the AM and PM peak hours under Cumulative No Project and Plus Project conditions. Queues under Cumulative No Project conditions would spill back to the freeway mainline at the I-5 Southbound and Northbound Off-Ramps at J Street during the AM peak hour. The addition of the project would worsen this queuing during the AM peak hour, and increase the queue spillback to the mainline during the PM peak hour.

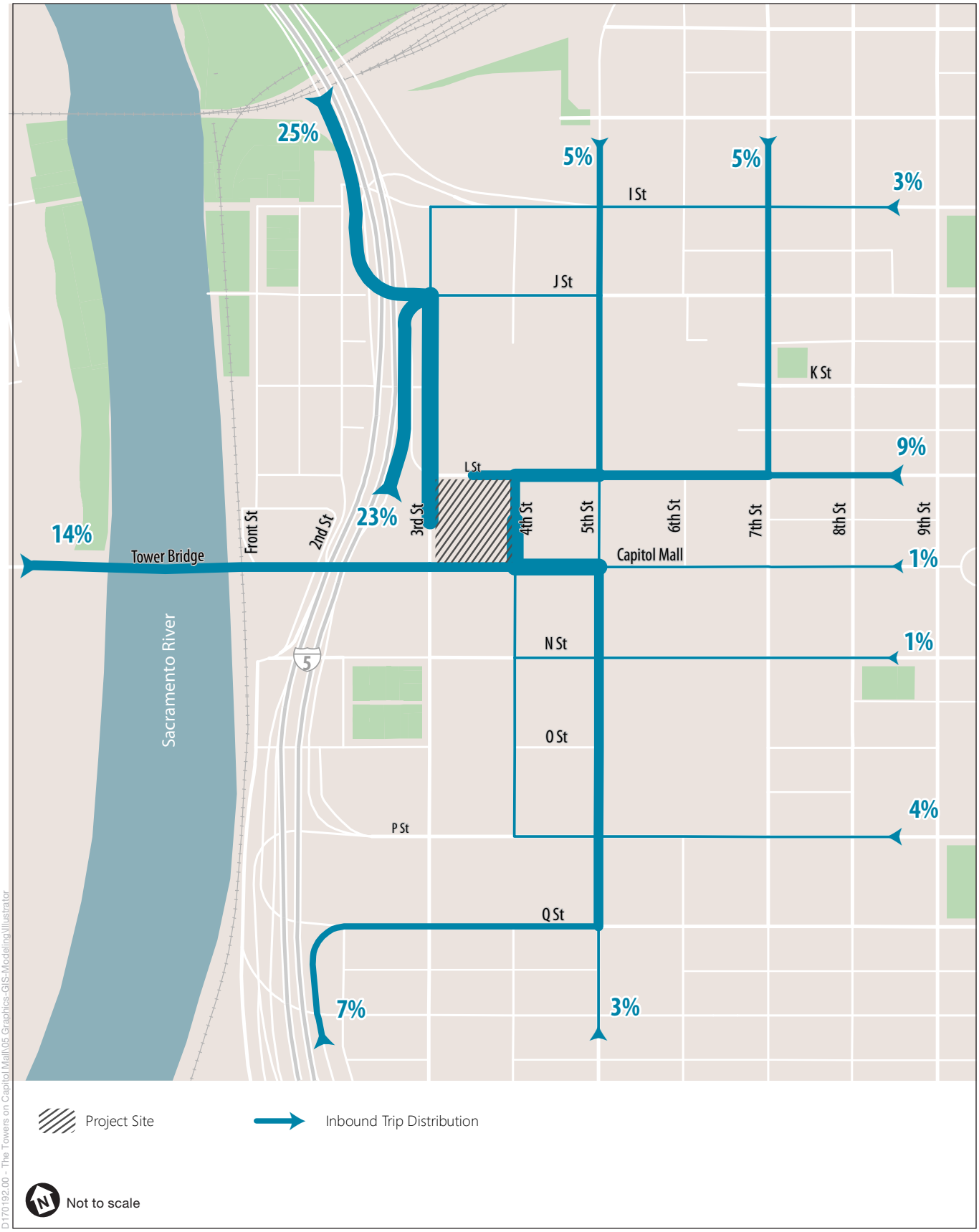
Cumulative Impacts and Mitigation Measures

Impact 4.6-8: The proposed project could worsen cumulative conditions at intersections in the City of Sacramento.

The proposed project would degrade operating conditions at some intersections in the City of Sacramento. All study intersections are located in a Priority Investment Area as well as within the Core Area and are governed by General Plan Mobility Element Policy M 1.2.2. This policy states that LOS F is acceptable in Priority Investment Areas as well as in the Core area during peak hours. The project is located in the heart of Downtown Sacramento in close proximity to extensive transit, bicycle, and pedestrian facilities and services, providing residents and employees with numerous non-vehicular transportation options for travel to and from the project site.

The above significance criterion is the City's interpretation of how General Plan Policy M 1.2.2 should be applied in the Core Area and Priority Investment Areas of the City. This policy allows these areas to have intersections that operate at LOS F. However, such conditions should not be detrimental to other general plan circulation policies (including but not limited to policies M 1.2.1, 1.2.4, 1.3.3, and 1.3.5), which pertain to providing high-quality transit, walkable neighborhoods and business districts, continuous and connected bikeways, TDM, emergency response, and other circulation considerations. Therefore, while LOS F peak hour operating conditions at a single intersection may be considered acceptable, an entire roadway system that experiences severe gridlock, and hampers all modes of travel is generally not considered acceptable. To this end, the evaluation of intersection LOS focuses on the totality of system operations to assess consistency with 2035 General Plan Policy M 1.2.2.

Under Cumulative Plus Project conditions, the project would add traffic and additional delay to Intersection 14 (N Street/4th Street). This intersection has side-street stop traffic control, which under cumulative conditions, has a side-street stop worst movement delay that would result in a breakdown in traffic flow during the PM peak hour (delay for worst case movement of 699 seconds). The severe delay at this location would result in gridlock that would hamper all modes of travel; therefore, the project's contribution to this cumulative impact would be considerable, and thus **significant**.

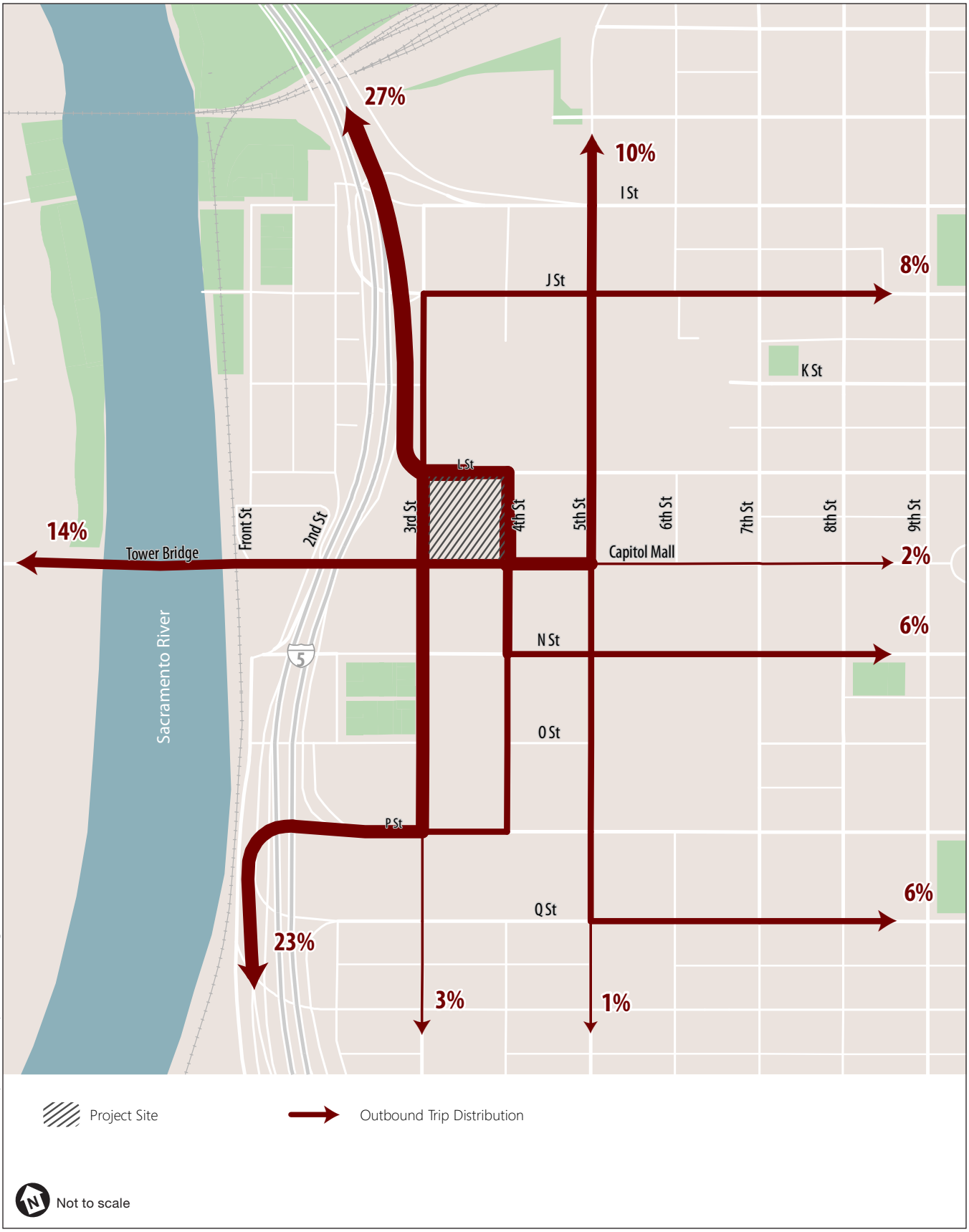


SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-12
Inbound Trip Distribuiton - Cumulative Plus Project Conditions

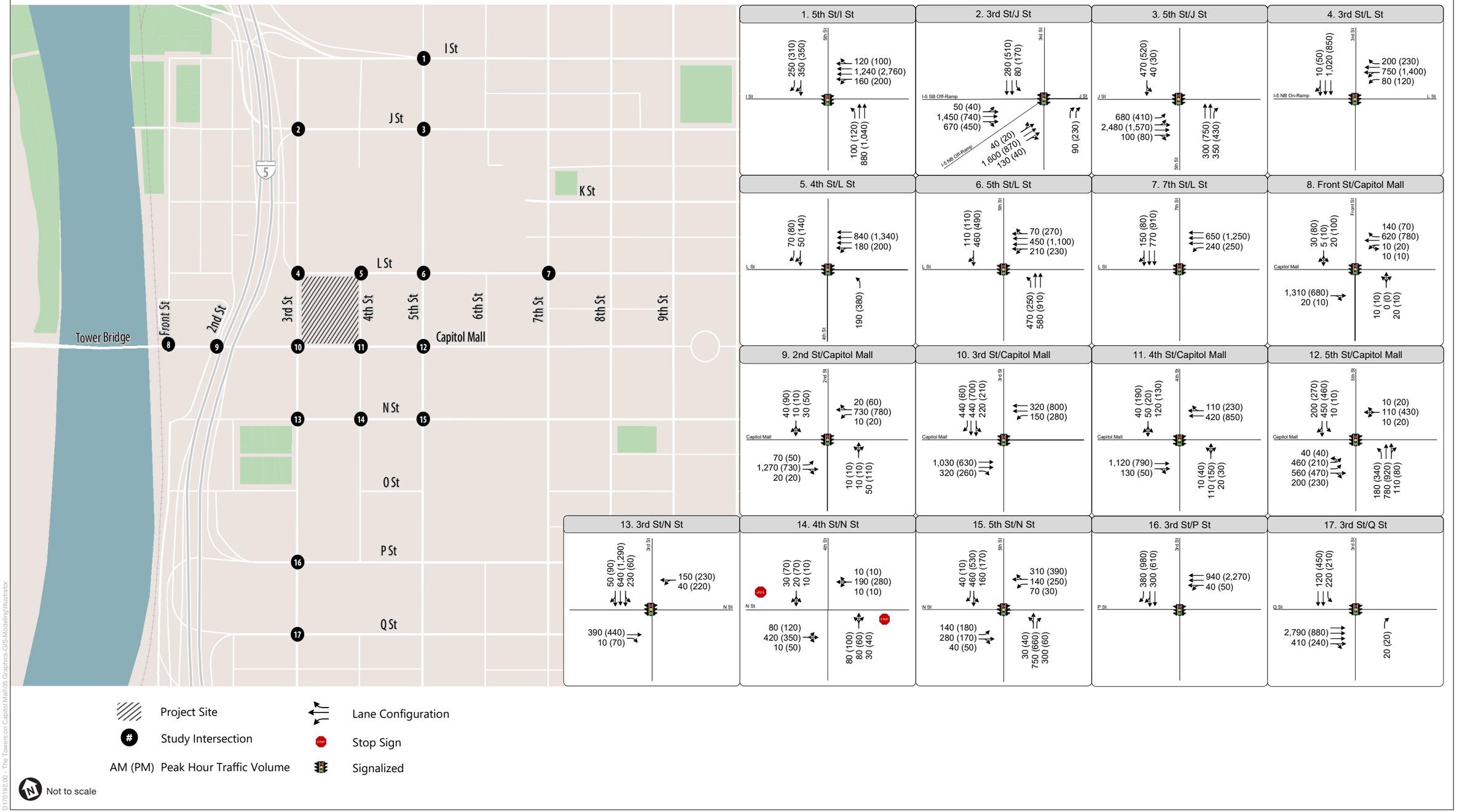
ESA



SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-13
Outbound Trip Distribuiton - Cumulative Plus Project Conditions



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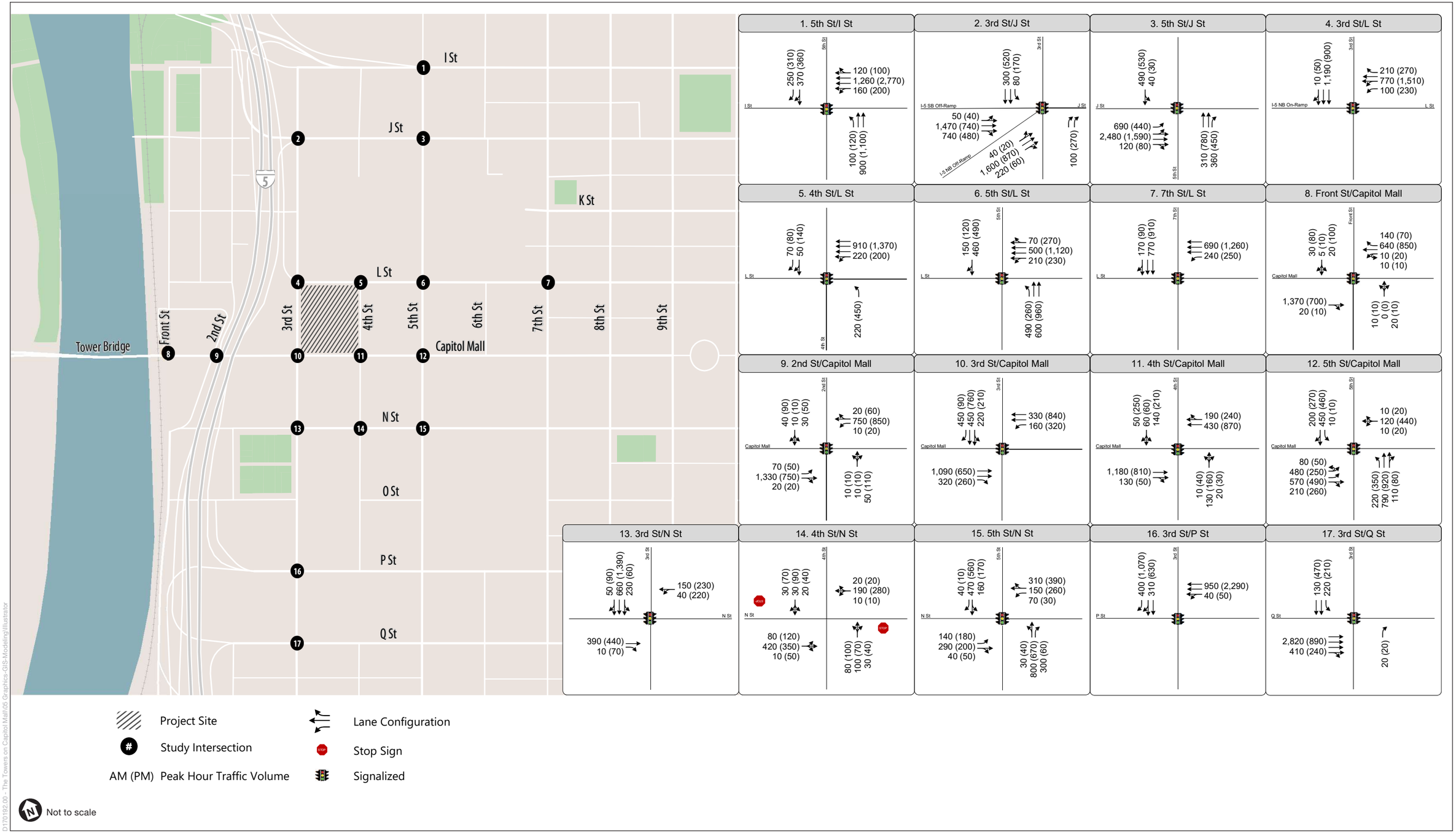
SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-14
Peak Hour Traffic Volumes and Lane Configurations
Cumulative No Project Conditions



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SOURCE: Fehr & Peers, 2019

Tower 301

Figure 4.6-15
Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions

ESA

TABLE 4.6-11
INTERSECTION OPERATIONS – CUMULATIVE NO PROJECT AND CUMULATIVE PLUS PROJECT

Intersection	Traffic Control	Peak Hour	Cumulative No Project		Cumulative Plus Project	
			Delay (seconds)	LOS[1]	Delay (seconds)	LOS[1]
1. I Street/5th Street	Signal	AM PM	23 40	C D	20 36	B D
2. J Street/3rd Street	Signal	AM PM	242 117	F F	242 150	F F
3. J Street/5th Street	Signal	AM PM	33 44	C D	33 43	C D
4. L Street/3rd Street	Signal	AM PM	16 110	B F	19 116	B F
5. L Street/4th Street	Signal	AM PM	14 143	B F	14 158	B F
6. L Street/5th Street	Signal	AM PM	53 93	D F	60 96	E F
7. L Street/7th Street	Signal	AM PM	41 59	D E	34 71	C E
8. Capitol Mall/Front Street	Signal	AM PM	75 114	E F	76 116	E F
9. Capitol Mall/2nd Street	Signal	AM PM	15 65	B E	15 60	B E
10. Capitol Mall/3rd Street	Signal	AM PM	30 99	C F	30 118	C F
11. Capitol Mall/4th Street	Signal	AM PM	18 93	B F	21 131	C F
12. Capitol Mall/5th Street	Signal	AM PM	47 64	D E	50 73	D E
13. N Street/3rd Street	Signal	AM PM	25 178	C F	22 194	C F
14. N Street/4th Street	SSSC[2]	AM PM	12 (25) 143 (500)	B (C) F (F)	7 (16) 126 (699)	A (C) F (F)
15. N Street/5th Street	Signal	AM PM	87 149	F F	77 177	E F
16. P Street/3rd Street	Signal	AM PM	9 98	A F	9 108	A F
17. Q Street/3rd Street	Signal	AM PM	89 26	F C	103 26	F C

NOTES:
[1] LOS = Level of Service.
[2] SSSC = Side-street stop controlled

For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. All intersections were analyzed in SimTraffic.

SOURCE: Fehr & Peers, 2019

TABLE 4.6-12
OFF-RAMP QUEUING – CUMULATIVE NO PROJECT AND CUMULATIVE PLUS PROJECT

Location	Available Storage (feet)	Peak Hour	Cumulative No Project	Cumulative Plus Project
			Queue (feet)	Queue (feet)
Interstate 5 SB Off-Ramp at J Street (from J Street/3rd Street)	1,525 feet	AM PM	**>1,525** 1075	**>1,525** **>1,525**
Interstate 5 NB Off-Ramp at J Street (from J Street/3rd Street)	1,025 feet	AM PM	**>1,025** 900	**>1,025** **>1,025**
Interstate 5 SB Off-Ramp at Q Street (from Q Street/3rd Street)	1,700 feet	AM PM	525 200	500 200
Interstate 5 NB Off-Ramp at Q Street (from Q Street/3rd Street)	1,550 feet	AM PM	925 200	1000 200

NOTES:
Queues that equal or exceed the available storage length are shown in **bold**.

The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point. The I-5 NB off-ramp at Q Street is measured from the off-ramp terminal intersection to the gore point of the I-5 NB off-ramp and the US 50 WB to I-5 NB ramp.

Maximum queue length is based upon output from SimTraffic microsimulation software.

SOURCE: Fehr & Peers, 2019

Mitigation Measure 4.6-8

The project applicant shall make a fair-share contribution to the City of Sacramento for the installation of a traffic signal at the N Street/4th Street intersection when warranted, and to restripe the intersection to include dedicated eastbound and westbound left-turn pockets.

Significance After Mitigation: Installation of a traffic signal and restriping the intersection to include eastbound and westbound dedicated left-turn pockets would reduce delay at the N Street/4th Street intersection to allow for traffic progression to occur along the roadway and improve traffic flow within the vicinity. As shown in **Table 4.6-13**, this would result in average delay of 168 seconds during the PM peak hour at the N Street/4th Street intersection.

In addition, the intersection meets the peak hour signal warrant under Cumulative No Project and Cumulative Plus Project conditions during the PM peak hour (see traffic signal warrant analysis included in **Appendix G**). This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated state guidelines. The future traffic signal shall be constructed when warranted, subject to review and approval of the City Traffic Engineer.

The project's contribution to this cumulative impact would not be considerable with the implementation of the mitigation measure described above**,** and therefore, this impact would be **less than significant**.

TABLE 4.6-13
INTERSECTION OPERATIONS – CUMULATIVE PLUS PROJECT WITH MITIGATION

Intersection	Traffic Control	Peak Hour	Cumulative No Project		Cumulative Plus Project		Cumulative Plus Project with Mitigation	
			Delay (seconds)	LOS[1]	Delay (seconds)	LOS[1]	Delay (seconds)	LOS[1]
14. N Street/4th Street	SSSC[2]/ Signal[3]	AM PM	12 (25) 143 (500)	B (C) F (F)	7 (16) 126 (699)	A (C) F (F)	24 168	C F

NOTES:
[1] LOS = Level of Service.
[2] SSSC = Side-street stop controlled.
[3] Signalized traffic control under the with mitigation conditions.

For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. All intersections were analyzed in SimTraffic.

SOURCE: Fehr & Peers, 2019

Impact 4.6-9: The proposed project could worsen cumulative conditions at freeway off-ramps in the study area.

As shown in Table 4.6-12, the project would increase vehicle queuing at the I-5 freeway off-ramps near the project site. The addition of the project would worsen queues that would spill back to the freeway mainline at the I-5 Southbound and Northbound Off-Ramps at J Street under cumulative conditions, and increase the spillback to the mainline during the PM peak hour. Therefore, the project's contribution to this cumulative impact would be considerable**,** and thus - **significant**.

Mitigation Measure 4.6-9

Pay fair share contribution to the I-5 Freeway Subregional Corridor Mitigation Program (SCMP).

Significance After Mitigation: The impact fee for new developments within the I-5 corridor will be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the threshold could choose to either pay the fee, which would constitute mitigation of their development project's impacts on the freeway mainline.

The project's contribution to this cumulative impact would not be considerable with the implementation of the mitigation measure described above, and therefore, this impact would be **less than significant.**

Impact 4.6-10: The proposed project could adversely affect cumulative public transit operations.

Many of the local and commuter bus routes that would serve the project run along Capitol Mall, 5th Street, and L Street. Transit operations along these key facilities would be affected by the

overall traffic operations along these roadways. The project would add traffic to these roadway facilities that serve transit routes. As shown in **Table 4.6-14**, the project would add 63 seconds of delay to LOS F conditions along the key transit corridor of Capitol Mall (westbound from 5th Street through 4th Street) during the PM peak hour. Some of the added delay along Capitol Mall is related to the eastbound left turn prohibition at the Capitol Mall/4th Street intersection. Motorists desiring to turn left from Capitol Mall toward the proposed project entry on 4th Street must instead continue eastbound on Capitol Mall to the 5th Street intersection, make a U-turn, then a westbound right-turn at Capitol Mall/4th Street, increasing the amount of travel and delay along the transit corridor. This level of delay would create poor traffic progression for transit along the corridor and would deteriorate the travel time reliability of transit service; therefore, the project's contribution to this cumulative impact would be considerable**,** and thus **potentially significant**.

TABLE 4.6-14
TRANSIT CORRIDOR DELAY – CUMULATIVE PLUS PROJECT WITH MITIGATION

Corridor	Peak Hour	Cumulative No Project	Cumulative Plus Project		Cumulative Plus Project with Mitigation	
		Delay (seconds)	Delay (seconds)	Difference from No Project (seconds)	Delay (seconds)	Difference from No Project (seconds)
Capitol Mall – Eastbound Through at 4th Street and Eastbound Left at 5th Street	PM	95	125	+29	103	+8
Capitol Mall – Westbound Through at 5th Street and Westbound Through at 4th Street	PM	170	223	+63	196	+26

NOTES:
[1] LOS = Level of Service.
[2] SSSC = Side-street stop controlled.
[3] Signalized traffic control under the with mitigation conditions.
For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. All intersections were analyzed in SimTraffic.

SOURCE: Fehr & Peers, 2019

Mitigation Measure 4.6-10(a)

Implement Mitigation Measure 4.6-6 - Construct a dedicated eastbound left-turn pocket at the Capitol Mall/4th Street intersection, with 180 feet of storage, and modify and retime the traffic signal at the Capitol Mall/4th Street intersection to include a protected eastbound left-turn phase.

Mitigation Measure 4.6-10(b)

Pay fair share contribution toward construction of the following 4th Street Improvements:

- Restripe the northbound and southbound approaches to the Capitol Mall/4th Street intersection to include dedicated left-turn lanes and one shared through/right lane.

- Restripe the northbound approach to the L Street/4th Street intersection to include dual left-turn lanes.

Significance After Mitigation: As shown in Table 4.6-14, construction of the eastbound left-turn pocket at Capitol Mall/4th Street as identified in Mitigation Measure 4.6-10(a), and the 4th Street Improvements identified in Mitigation Measure 4.6-10(b) would reduce delay along Capitol Mall westbound between 5th Street and through 4th Street by 27 seconds from Cumulative Plus Project conditions. This would reduce circuitous travel due to the existing turn prohibition, as well as provide additional capacity for traffic and transit to progress along Capitol Mall.

The project's contribution to this cumulative impact would not be considerable with the implementation of mitigation measure described above, and therefore, this impact would be **less than significant.**

Impact 4.6-11: The proposed project could fail to adequately provide access to transit under cumulative conditions.

Many transit services are provided in close proximity to the project site. This includes local and commuter bus, regional light rail, and intercity passenger rail service. In addition, the proposed project would be designed consistent with the planned Downtown Riverfront Streetcar, which would travel directly adjacent to the project on 3rd Street. The project would not interfere with the proposed streetcar stop platform on 3rd Street immediately south of L Street and would preserve right-of-way for the platform. In addition, other transit services would continue to be provided at key bus stops at L Street/4th Street, Capitol Mall/2nd Street, and Capitol Mall/7th Street, a light rail stop at Capitol Mall/7th Street, and the Sacramento Valley Station (passenger rail) north of I Street/4th Street. All of these facilities are located 3.5 blocks away or less. Access to these transit stops are also served by sidewalks connecting to the project site. As documented previously, the proposed project would expand and enhance sidewalks adjacent to the project site. For these reasons, the project's contribution to this cumulative impact would not be considerable**,** and therefore, this impact would be **less than significant.**

Mitigation Measure

None required.

Impact 4.6-12: The proposed project could adversely affect existing or planned bicycle facilities or fail to provide for access by bicycle under cumulative conditions.

The project would not modify or change any aspect of planned bicycle facilities in the study area. Bicyclists to/from the project site would be able to access the project using the Class II bike lanes on Capitol Mall, and other nearby bicycle facilities. The project would also provide access by bicycle with the inclusion of 234 bicycle parking spaces on the ground-level of the internal

parking garage. As noted in the Central City Specific Plan, no planned bicycle facilities are adjacent to the project on L Street, 3rd Street, or 4th Street; therefore, the project would not preclude the construction of any planned bicycle facilities. As part of the Central City Specific Plan, additional bicycle facilities in the study area along 5th Street and N Street would further enhance the bicycle accessibility to the project site. As a result, the project's contribution to this cumulative impact would not be considerable**,** and therefore, this impact would be **less than significant.**

Mitigation Measure

None required.

Impact 4.6-13: The proposed project would adversely affect existing or planned pedestrian facilities or fail to provide for access for pedestrians under cumulative conditions.

The project would enhance the pedestrian facilities along the frontage of all streets the project site is bound by: south side of L Street, north side of Capitol Mall, east side of 3rd Street, and west side of 4th Street. Enhancements include providing wide sidewalks of at least 13 feet in width, landscape strip separating the sidewalk from the roadway, and other pedestrian amenities. The project would not affect planned pedestrian facilities. The project's pedestrian improvements would be consistent with the Central City Specific Plan, which identifies the adjacent sidewalks along the project frontage on L Street and 4th Street for "activity center enhancements," which includes providing additional sidewalk capacity in areas with high pedestrian volumes, and on 3rd Street and Capitol Mall for streetscape projects. The project would also be consistent with the Capitol Mall Streetscape Promenade project, which would include a wide plaza with additional pedestrian amenities along the Capitol Mall frontage.

This circuitous movement would require drivers to cross four marked pedestrian crosswalks (east leg of the Capitol Mall/4th Street intersection while driving eastbound, west leg of the Capitol Mall/5th Street intersection while making an eastbound U-turn, east leg of the Capitol Mall/ 4th Street intersection again while driving westbound, and north leg of the Capitol Mall/4th Street intersection while making the westbound right-turn), increasing potential conflicts with pedestrians at these locations by increasing the number of vehicles traveling across the crosswalks. Drivers would make a right turn from westbound Capitol Mall onto 4th Street, which would result in potential conflicts with pedestrians in the north leg crosswalk during a permitted signal phase (i.e., pedestrians using this crosswalk have a walk signal while westbound vehicles have a green signal). This increase in potential conflicts between pedestrians and project-generated vehicle traffic would adversely affect access for pedestrians; therefore, the project's contribution to this cumulative impact would be considerable**,** and thus **potentially significant.**

Mitigation Measure

Mitigation Measure 4.6-13

Implement Mitigation Measure 4.6-6 - Construct a dedicated eastbound left-turn pocket at the Capitol Mall/4th Street intersection, with 180 feet of storage, and modify and retime the traffic signal at the Capitol Mall/4th Street intersection to include a protected eastbound left-turn phase.

Significance After Mitigation: Construction of an eastbound left-turn pocket and retiming the traffic signal at the Capitol Mall/4th Street intersection to allow for a protected eastbound left-turn movement would reduce vehicle traffic across three marked crosswalks (east leg of the Capitol Mall/4th Street intersection while driving eastbound, west leg of the Capitol Mall/5th Street intersection while making an eastbound U-turn, east leg of the Capitol Mall/4th Street intersection again while driving westbound) by eliminating the circuitous travel for eastbound traffic on Capitol Mall destined to travel north on 4th Street. This protected turn movement would also reduce the amount of westbound right-turning vehicles conflicting with pedestrians in the north leg crosswalk of Capitol Mall/4th Street and would instead allow project-generated traffic to make a protected eastbound left-turn while pedestrians on the north leg of the intersection have a "do not walk" signal.

The project's contribution to this cumulative impact would not be considerable with the implementation of mitigation measure described above, and therefore, this impact would be **less than significant.**

Impact 4.6-14: The proposed project could cause construction-related traffic impacts under cumulative conditions.

The construction of the project would be complete by 2036, the analysis year under Cumulative conditions. Therefore, the project would not generate construction activity or construction-related traffic impacts under cumulative conditions. For this reason, the project's contribution to this cumulative impact would not be considerable**,** and therefore, this impact would be **less than significant.**

Mitigation Measure

None required.

4.6.4 Site Access Evaluation and Recommendations

A list of recommendations regarding access to the proposed project based upon a review of the project application materials and site plan by the Department of Public Works can be found in Appendix G of the Draft EIR.

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CHAPTER 5
Other CEQA Required Considerations

5.1 Introduction

Section 15126 of the CEQA Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. Further, CEQA Guidelines section 15126.2(a) requires that the evaluation of significant impacts consider direct and reasonably foreseeable indirect effects of the project over the short-term and long-term. The EIR must identify (1) significant environmental effects of the proposed project, (2) feasible mitigation measures proposed to minimize significant effects, (3) significant environmental effects that cannot be avoided if the proposed project is implemented, (4) significant irreversible environmental changes that would result from implementation of the proposed project, (5) growth-inducing impacts of the proposed project, and (6) alternatives to the proposed project.[1]

Sections 4.1 through 4.6 of the EIR provide a comprehensive presentation of the proposed project's environmental effects, proposed mitigation measures, and conclusions regarding the level of significance of each impact both before and after mitigation.

Chapter 6, Alternatives, presents a comparative analysis of alternatives to the proposed project.

The other CEQA-required analyses described above are presented below.

5.2 Significant and Unavoidable Adverse Impacts

Section 15126.2(c) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. As discussed in Chapter 4, the proposed project would not result in any project-specific or cumulative impacts that would be significant and unavoidable.

5.3 Significant Irreversible Environmental Effects

Under CEQA, an EIR must analyze the extent to which a project's primary and secondary effects would generally commit future generations to the allocation of nonrenewable resources and to

[1] CEQA Guidelines sections 15126.2(a), (c-e), 15126.4, and 15126.6.

irreversible environmental damage (State CEQA Guidelines section 15126.2(c); 15127). 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 assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the proposed project would result in the dedication of the project site to a high-rise building which would have office as the primary use and a mix of residential, commercial, and parking uses, thereby precluding other uses for the lifespan of the project.

The State CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed project. While the proposed project could result in the use, transport, storage, and disposal of hazardous wastes during construction and operation, as described in initial study included as an appendix to the EIR (see **Appendix C**), all activities would comply with applicable state and federal laws related to hazardous materials, which significantly reduce the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are increased generation of pollutants from vehicle travel and stationary operations, and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during construction activities. The environmental consequences of the proposed project are described in the appropriate sections in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

Resources that would be permanently and continually consumed by implementation of the proposed project include water, electricity, natural gas, 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. With respect to operational activities, compliance with applicable

building codes, including the 2019 Title 24 Energy Efficiency Standards (Effective January 1, 2020), as well as mitigation measures, planning policies, and standard conservation features, would ensure that natural resources are conserved to the maximum extent feasible. It is also possible that, over time, new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Over the past decade our understanding of global climate change and the role that communities can play in addressing it has grown significantly. There is scientific consensus that recent increases in global temperatures are associated with corresponding increases of greenhouse gases. This temperature increase is beginning to affect regional climates and is expected to result in impacts to our region and the world. Climate change has profound implications for the availability of the natural resources on which economic prosperity and human development depend. Because climate change is inherently a cumulative effect, the relative contribution from the proposed project to global warming is not currently possible to determine. This issue is discussed in Section 4.4, Global Climate Change.

5.4 Growth-Inducing Effects

As required by section 15126.2(e) of the State CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. The purpose of this section is to evaluate the potential growth-inducing effects resulting from the implementation of the proposed project in the City of Sacramento, and throughout the region. Additional analysis of the growth-inducing effects from the proposed project is provided in Chapter 3, Land Use, Population, Employment, and Housing.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to or infrastructure capacity that serves an area; a change in zoning or general plan designations that increase density for areas outside the boundaries of the project site); or indirectly stimulates economic expansion or growth that occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the potential for a proposed project to remove infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval; and

- **Economic Effects:** This refers to the potential for a proposed project to cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A "multiplier" is an economic term used to describe inter-relationships among various sectors of the economy. The Multiplier Effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect recognizes that the onsite employment and population growth of each project may not be the complete picture of growth caused by the project.

5.4.1 Elimination of Obstacles to Growth

The elimination of physical obstacles to growth is considered a growth-inducing effect. Growth within Downtown Sacramento and the City of Sacramento as a whole is affected by the capacity of utility systems serving the City including the wastewater and drainage, water supply, and electrical systems. Growth within the City is also affected by the roadway circulation system, public transit infrastructure and services and bikeway/pedestrian facilities.

The implementation of the proposed project would not result in the elimination of obstacles to growth. The proposed project is located within Sacramento's heavily urbanized Central City. While the proposed project would include localized circulation improvements, such as the addition of turn lanes, driveways, crosswalks, and sidewalks, such improvements would be designed to facilitate project-related circulation and would not substantially expand the capacity of area roadways, which are constrained by existing development. As described in the initial study, included as Appendix C of the EIR, existing service systems for drainage and wastewater are either adequate to serve the proposed project, or require improvements to accommodate the proposed project. Improvements to utility infrastructure would be intended to serve the proposed project; they would not be sized to provide substantial excess capacity beyond what is needed to serve the proposed project. Therefore, improvements associated with the proposed project would not expand the capacity of local infrastructure to the extent that current constraints to development in surrounding areas would be eliminated. As such, the proposed project would not eliminate obstacles to further growth within Downtown Sacramento and the City of Sacramento.

5.4.2 Economic Effects

As is presented in Chapter 3, under the future conditions it is anticipated that the proposed high-rise office and mixed use development would employ a total of 4,500 employees and house 162 residents. In addition to the employment and residential growth generated by the proposed project, additional employment could be generated in the local and regional economy through what is commonly referred to as the "Multiplier Effect." The Multiplier Effect generally refers to the secondary economic effects caused by spending from project-generated residents and employees and resulting in additional employment in the local and regional economy. The Multiplier Effect tends to be greater in regions with larger diverse economies due to a decrease in

the requirement to import goods and services from outside the region, as compared to the effects of spending in smaller economies where goods and services must be imported from elsewhere. Because the project site is located in the Sacramento metropolitan area, a large diverse, and complex economy, the Multiplier Effect would tend to be greater than if the proposed project were constructed and operated in a smaller region.

Two different types of secondary economic effects (additional employment) are tracked through the Multiplier Effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of residents and direct employment associated with the project. For example, future workers and residents of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence because that is where people typically spend money on groceries and their other day-to-day needs.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees and residents within the proposed project area to include jobs created by the stream of goods and services necessary to construct the proposed project and support businesses within the Sacramento area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs are considered *induced* employment. As an additional example, when an employee or resident from the project goes out to lunch or dinner nearby, the person who serves the project employee lunch or dinner holds a job that was *indirectly* caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

In Chapter 3, Land Use, Population, Employment, and Housing, it is estimated that the future office, retail, and restaurant uses under the proposed project would result in an increase in direct employment of 4,500 jobs while the future residential units onsite would provide housing for 162 residents. Increased activity in the project area would support increased purchases of supplies, equipment, and services from businesses in Sacramento and nearby cities and from businesses located elsewhere in the region and beyond the Sacramento area. The increased spending also would initiate subsequent rounds of additional business spending by those and other businesses. Increased employment and housing in the project area would provide increased wage and salary incomes that would support additional household spending for a wide variety of goods and services.

Increased future employment generated by employee and resident spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that determine the type and magnitude of environmental

impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental consequences of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento region and beyond. Some of the increased employee spending would occur in proximity of the project site and more of it would occur near employee places of residence, many of which would be in Sacramento and nearby cities, and elsewhere in the Sacramento region. The additional employee spending would support business activity and jobs and initiate subsequent rounds of additional spending.

The future cumulative context of citywide and regional growth used for the cumulative analyses in the City of Sacramento's 2035 General Plan Master EIR (Master EIR) and the cumulative analyses in the Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS) EIR includes the multiplier effects of the project. Consequently, the cumulative impact analyses in the Master EIR and the MTP/SCS EIR account for additional growth beyond the project site that would be generated by the project.

It should be noted that, while the proposed project would contribute to direct, indirect, and induced growth in the region, it would develop office, retail, restaurant, and residential land uses in a manner that is located in the center of the Sacramento region, is efficient, and utilizes existing and planned urban resources. As is described in Chapter 3, development of the proposed project is consistent with the goals and policies of the City's General Plan. Contributing to the vitality of the community is also a General Plan goal, which would be achieved as a result of the proposed project.

5.4.3 Environmental Effects of Induced Growth

While economic and employment growth at the project site is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also affect the greater region. Increased future employment generated by employee and resident spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this developed physical space at a specific location that determines the type and magnitude of environmental impacts of this additional economic activity.

Depending on its location and design, potential effects caused by induced growth in the region could include: increased traffic congestion; increased air pollutant emissions; loss of open space; loss of habitat and associated flora and fauna; increased demand on public utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in housing demand in the Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth could further contribute to the loss of open space because it could encourage conversion to urban uses for housing, commercial space, and infrastructure.

Nevertheless, the incremental increase in economic activity created by the indirect and induced employment associated with the proposed project would be a small part of the overall future growth in economic activity in the Sacramento region. Local governments throughout the region are planning for additional residential and employment-generating land uses, some of which could meet the demands created indirectly by the proposed project. Through their planning and entitlement actions, the future actions of those local agencies would be subject to environmental review under CEQA, and would be required to be consistent with regional and state plans and regulations. To the extent that future development that accommodates indirect and induced growth from the proposed project is undertaken in a manner consistent with the Sacramento 2035 General Plan and SACOG MTP/SCS, as well as a multitude of planning and regulatory documents referred to throughout the sections of Chapter 4 of this EIR, many of the potential adverse environmental consequences would be reduced in magnitude or avoided altogether.

Although the economic effect of indirect and induced employment can be predicted, because the adverse physical environmental impacts of these economic effects could occur at locations throughout the Sacramento region, the actual environmental consequences of this type of economic growth are too speculative to predict or evaluate. Pursuant to CEQA Guidelines section 15145, no further analysis of the environmental consequences of indirect or induced growth associated with the proposed project is proper under CEQA.

5.5 Urban Decay

5.5.1 Economic and Social Effects

Under CEQA, economic or social effects are not considered significant effects on the environment. Rather, these effects are considered as potential linkages or indirect connections between the proposed project and physical environmental effects. More specifically, the direction for treatment of economic and social effects is stated in section 15131(a) of the CEQA Guidelines:

> Economic or social effects of a 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 project through anticipated economic or social changes resulting from the 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 physical changes.

A social or economic change also may be considered in determining whether the physical change is significant (CEQA Guidelines section 15331(b)).

5.5.2 Urban Decay

As used in CEQA, the term “urban decay” was introduced by the Court of Appeal in the case entitled *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184 (*Bakersfield Citizens*). In that decision, the court required the City of Bakersfield to revise

and recirculate two EIRs for two proposed Wal-Mart stores because the documents both failed to address the possible indirect physical effects flowing from the direct economic effects of the two projects. Though the court did not expressly define "urban decay," the court seemed to equate the concept with a "chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake."[2]

For the purposes of this assessment and consistent with the above described court decision, "urban decay" is not simply a condition in which buildings become vacant as businesses compete with each other in the normal course of the market-based economy, nor is it a condition where a building may be vacated by one business or use and reused by a different business or for alternative purposes. Rather, under CEQA "urban decay" is defined as physical deterioration of properties or structures that is so prevalent, substantial, and lasting a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community. Physical deterioration includes abnormally high business vacancies, abandoned buildings, boarded doors and windows, and long-term unauthorized use of the properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth.

Prolonged business vacancies which could result in urban decay generally result from a lack of sufficient demand for commercial goods or services within a market area. Under these conditions, there isn't sufficient demand for the provision of goods or services to support the existing inventory of developed commercial space within a market area. Within any market area a small percentage of commercial vacancy is common and is considered a natural part of the market economy. In most market areas, the vacant or partially occupied commercial spaces are regularly maintained, as vacancies are assumed to be temporary. Urban decay conditions can potentially occur in market areas where a persistent deficit in the demand for commercial services exists, relative to the available inventory of commercial space.

As it pertains to restaurant and retail uses, as are proposed in the Tower 301 project, the existing restaurant and retail uses within a market area constitute *supply*, which is the necessary volume of goods and services that must be sold for those businesses to meet operating costs. The demand for goods and services by retail and restaurant consumers within a market area constitute their *spending potential*. Healthy economic conditions within a market area occur when spending potential exceeds the supply of goods and services. If the supply within that market area exceeds the spending potential commercial establishments become strained. Under those conditions, consumers in a market area do not have enough demand for goods and services to meet the supply of the businesses within that market area. It is anticipated that existing businesses can absorb a small percentage excess supply. However, periods of severe and/or prolonged excess supply result in business closures within an effected market area and ensuing commercial space vacancies. Under most conditions, business closures result in temporary vacancies that are

2 *Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184*. p. 1204.

eventually filled by similar new or alternative uses. Under more severe conditions, market forces create persistent vacancies where the demand for commercial space is well below the available inventory of commercial space, creating focused prolonged vacancies, property repossessions and declining maintenance of those properties. These types of conditions are contributing factors to the occurrence of urban decay.

Analysis of a proposed project's contribution to urban decay evaluates the project's impact on the existing market area, to determine if the additional supply introduced by the commercial land uses in a proposed project would increase the total market area supply, to the extent that it would result in the types of conditions under which urban decay could be anticipated to occur or already is occurring. For this reason, analysis of urban decay takes into consideration conditions in the existing market area, the characteristics of the market area, and the impacts of the proposed project.

Existing Market Area

The conditions that were present in the *Bakersfield Citizens* case are distinguishable from the conditions related to the proposed project. In the former, two proposed Wal-Mart stores were proposed, and the question of urban decay related to the potential adverse effect of additional retail supply on existing retail stores in the same market area. In the case of the *Bakersfield Citizens* case, a defining characteristic of the market area is that the Bakersfield market area, while sizeable, is bound by agricultural, rural or undeveloped land uses on all sides. The discrete geographic nature of the market area limited the retail spending potential of the market area.

The conditions under which the proposed project would be constructed are much different. The project site is set within the vast urbanized Sacramento area, which exhibits overlapping market connectivity with eastern portions of the San Francisco Bay Area to the southwest and the Stockton metropolitan area to the south, as well as smaller communities to the north and other directions. Within this environment, market areas for various types of retail vary by product or service type, each of which is subject to the furthest anticipated distance that consumers are willing to travel for those particular goods or services, while such goods or services are commonly available beyond those distances. Under these conditions numerous markets for particular goods or services can exist within the region. Consumers are typically less willing to travel large distances to obtain goods or services from neighborhood-serving retail establishments, such as grocery stores, but typically have a greater willingness to travel for specialty goods or services. For these reasons the distribution of specific types of retailers is commensurate to the size of the market area for the goods or services they provide. Smaller market areas will only allow a certain number of businesses providing particular goods or services before exceeding the retail spending potential for that market area. Specialty goods or services, having larger market areas, have greater flexibility to respond to changes in the market, including the introduction of new retail supply. The larger market area provides flexibility and a decreased likelihood that individual retail projects would have a substantial impact on the overall market area.

Project Impact

The proposed project would add approximately 24,653 square feet of commercial uses, including a mix of retail and restaurant uses to the downtown area of Sacramento's Central City. The downtown Sacramento area contains hundreds of thousands of square feet of retail and restaurant space, with a large amount of retail and restaurant space projected for development, across a number of large projects. The proposed retail uses would not be anticipated to be community-serving retail that could be anticipated to create competitive pressure for nearby community-serving retail uses. While the specific retail and restaurant users that would populate the project's proposed commercial space are unknown at this time, the nature of the proposed project suggests that those users would be specialty retail or retail types likely to occupy premium retail space.

Under the market area conditions described above, addition of the proposed retail and restaurant space included in the proposed project would not be anticipated to have a substantial impact on sales demand in the project area. The amount of retail and restaurant space in the proposed project would be very small in comparison to existing commercial development in the downtown area. For example, the Downtown Commons to the northeast and proposed development in the Sacramento Railyards to the north include existing or proposed retail and restaurant space many times the size of that included in the proposed project. The 24,653 sf of retail and restaurant uses located in the proposed project would have minimal, if any, material effect on the overall supply of commercial space in the vicinity or the larger Sacramento market area.

In addition, employees from the proposed office space included in the proposed project and future project residents would provide additional spending potential to the local commercial market area. To the extent that employees that will work at the proposed Tower 301 development already work in the area, and would be relocated to the proposed project, at least some of the spending of these employees will be shifted to the project area, supporting the retail and restaurant uses in the proposed project as well as other downtown area businesses.

As described above, it is not anticipated that addition of commercial space included in the proposed project would have a substantial impact to project area and market area retailers to the extent that addition of the proposed uses would result in the prolonged closure of market-area businesses. Any closures and ensuing commercial vacancies that may result from competitive market pressures would be anticipated to be temporary and would eventually be filled by other retail or restaurant uses, or by other commercial uses that would be compatible with available space. Therefore, the City does not anticipate that the proposed project would result in conditions that would contribute to or cause urban decay. This impact would be **less than significant**.

CHAPTER 6
Project Alternatives

6.1 Overview

Under CEQA, an environmental impact report (EIR) must describe a range of reasonable alternatives to the proposed project that might feasibly accomplish most of the project's basic objectives and could avoid or substantially lessen one or more of the significant effects of the project. The feasibility of an alternative is determined by the lead agency based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines section 15126.6(f)(1)).

The chapter discloses the comparative effects of each of the alternatives relative to the proposed project, and evaluates the relationship of the alternatives to the objectives of the proposed project. As required under section 15126.6(e)(2) of the CEQA Guidelines, the discussion describes the relative environmental merits of the alternatives and identifies which of them may be considered the "environmentally superior" alternative.

6.2 Factors in the Selection of Alternatives

6.2.1 Project Objectives

The objectives of the proposed project are used to evaluate the reasonableness and potential feasibility of each alternative. As presented in Chapter 2, Project Description, the objectives for the proposed project are as follows:

1. Create a high-quality visual landmark that enhances and defines the Downtown skyline.
2. Provide a complimentary mix of office, retail, residential and entertainment uses to enhance the emergence of Downtown as a 24-hour urban center.
3. Engage the public realm by providing active uses and pedestrian friendly features along all street frontages.
4. Provide amenities that benefit residents of and visitors to the Central Business District (CBD).
5. Provide office space with a variety of floorplate sizes to target a broad range of office tenants, including government uses, private businesses, and other creative professionals.
6. Provide an urban housing option within the CBD.

7. Create a high-rise development that incorporates sustainable features into building design and operation.

6.2.2 Significant Effects of the Proposed Project

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. The analysis of project-specific and cumulative impacts in Chapter 4 of this EIR did not identify impacts that cannot be avoided if the project is approved as proposed. Therefore, there would be no significant and unavoidable impacts resulting from the proposed project.

6.3 Alternatives Considered but Dismissed from Further Evaluation

As required under section 15126.6(c) of the State CEQA Guidelines, the City is required to disclose alternatives that were considered but rejected from further analysis in this Draft EIR and provide the rationale for dismissal of those alternatives.

Of the alternatives considered for the Tower 301 project, the use of an alternative site was considered but rejected as no other development sites exist within the CBD that are controlled by the project applicant or the City and would be of sufficient size to accommodate the proposed project. The ability of the applicant to purchase and develop the project at another site is considered speculative.

A comment letter received by the City in response to the NOP requested consideration of a hospital use on the project site, including multiple medical service providers (see Appendix B). This alternative was not considered because all of the large commercial medical services providers in the Sacramento region have large facilities within or in close proximity to the Central City and the alternative lacks consistency with project objectives. The proposed office, residential, and commercial land uses included in the proposed project would be consistent with existing uses along the Capitol Mall. For these reasons, a hospital alternative was not considered further.

No other types of alternatives were found to be facially infeasible or worthy of dismissal prior to further consideration. Therefore, all other alternatives considered for the proposed project have been selected for further consideration and are discussed in the following section.

6.4 Alternatives Selected for Further Consideration

This section describes the range of alternatives to the proposed project that are analyzed in this Draft EIR and examines how specific environmental impacts would differ in severity compared to those associated with the proposed project. For the most part, significant impacts of the

alternatives can be mitigated to less than significant levels through adoption of mitigation measures identified in Chapter 4, which contains the environmental analysis of the proposed project. Like the proposed project, the following alternatives also would not result in any significant and unavoidable impacts. The alternatives considered in this section include:

Alternative 1: No Project/No Development Alternative

Alternative 2: No Project/Existing Zoning Alternative

Alternative 3: Reduced Intensity Alternative

Table 6-1 provides a side-by-side comparison of each alternative. Each of the alternatives is described in more detail and analyzed in the following subsections.

TABLE 6-1
COMPARISON OF ALTERNATIVES

	Proposed Project	Alternative 1 No Project / No Development	Alternative 2 No Project / Existing Zoning	Alternative 3 Reduced Intensity
Development Program				
Office	791,647 SF	None	445,000 SF	475,670 SF
Residential	100 Units 96,755 SF	None	None	100 Units 96,755 SF
Retail/Amenity	24,653 SF	None	24,653 SF	24,653 SF
Vehicle Parking Spaces	1,304 Vehicles	None	1,112 Vehicles	848 Vehicles
Bicycle Parking Spaces	234 Spaces	None	234 Spaces	234 Spaces
Total Program Gross Area	**913,055 SF**	**None**	**469,653 SF**	**597,078 SF**

SOURCE: ESA, 2019.

The evaluation of alternatives is organized to facilitate a clear comparison between the effects of the alternative and the effects of the proposed project. There is a discussion of those impacts of the alternative that would be the same or similar to those of the proposed project. This is followed by a discussion of those effects of the alternative that would be less substantial than those of the proposed project, followed by those effects of the alternative that would be more substantial than those of the proposed project. Each discussion concludes with a discussion of the relationship between the alternative and the basic objectives of the proposed project.

6.4.1 Alternative 1: No Project/No Development Alternative

Description

Under the No Project/No Development Alternative (Alternative 1), the Tower 301 project would not be developed, and the project site would remain unutilized. Under the No Project/No Development Alternative, the City would not approve any project, and none of the mitigation measures identified in this EIR would be implemented.

Comparative Analysis of Environmental Effects

The No Project/No Development Alternative would be a continuation of the existing conditions described in the Environmental Settings presented in the resource sections of Chapter 4, because no new development would occur at the project site.

Impacts Identified as Being the Same or Similar to the Proposed Project

Under the No Project/No Development Alternative, there would be no construction at the project site, and the project site would remain undeveloped and fenced off to prevent public hazard. Therefore, none of the impacts identified for the proposed project would occur under this alternative.

Impacts Identified as Being Less Substantial than the Proposed Project

There would be no impacts that would be more less substantial under the No Project/No Development Alternative for the proposed project, as no construction, demolition, or change in existing operations, would take place.

Impacts Identified as Being More Substantial than the Proposed Project

There would be no impacts that would be more substantial under the No Project/No Development Alternative for the proposed project, as no construction, demolition, or change in existing operations, would take place.

Relationship to Significant and Unavoidable Impacts

As described in Chapter 4, the proposed project would not result in significant and unavoidable impacts. Under the No Project/No Development Alternative, the proposed project would not be constructed. Therefore, any adverse impacts from the proposed project would be avoided under the No Project/No Development Alternative.

Relationship to Tower 301 Project Objectives

Under the No Project/No Development Alternative, none of the Tower 301 objectives would be achieved.

6.4.2 Alternative 2: No Project/Existing Zoning Alternative

Description

Under the No Project/Existing Zoning Alternative (Alternative 2), the Tower 301 project would not be developed on the project site and the project site would be developed in a manner consistent with the existing zoning designation for the project site. As described in Chapter 3, Land Use, Population, Employment, and Housing, the project site is located within the Central City Specific Plan (CCSP) area, within the Central City Special Planning District (SPD). The project site is within the C-3-SPD zone, which provides for by-right mixed-use high-rise development and single-use or mixed-use development within easy access to transit. Those uses could include office, retail, restaurant, service, cinema, fitness, hotel, multifamily dwellings,

gathering places, and compatible public, quasi-public, and special uses. Under the C-3-SPD zoning designation, allowable development would be limited to a 450-dwelling-units-per-net-acre maximum density for a residential-only project or minimum and maximum floor area ratios found in the general plan for a mixed-use or non-residential project. In addition, projects would be subject to a maximum parking standard of 1 parking space per 400 square feet of building; no minimum parking standard exists within the CBD. The project site is located within the Central City SPD, which provides incentives to further encourage development consistent with the goals of the CCSP and Central City SPD. One such incentive, that would be applicable to the project site would be reduced open space requirements for residential uses.

The 2035 General Plan land use designation for the project site is CBD, which allows for development density range between 61 and 450 dwelling units per net acre and a floor area ratio (FAR) between 3.00 and 15.00.

Based on the applicable zoning policy described above, development on the project site, under the No Project/Existing Zoning Alternative would occur in a manner consistent with the land use pattern along the Capitol Mall, which includes high rise development. The zoning designation for the project site allows for and encourages high rise development in this part of the city, so a high-rise development that included a mix of uses, with office and ground-floor retail could be anticipated to occur at the project site. Based on the development standards, provided by relevant land use plans to the project site, the 104,108-square-foot (2.39-acre) project site could be developed with between 312,324 and 1,561,620 square feet of mixed uses, based on allowable FARs, or up to 1,075 residential units, based on the maximum allowable development density. However, under prior market conditions, more recent high-rise development along the Capitol Mall has been smaller in size than development proposed under the Tower 301 project. For these reasons, development under the No Project/Existing Zoning Alternative would be similar in size and scale to the most recently completed development project along Capitol Mall, which is the Bank of the West Building, also known as Five Hundred Capitol Mall. This structure, completed in 2009, is 25 stories in height and includes approximately 445,000 square feet of building space. The development under the No Project/Existing Zoning Alternative would also be 25 stories in height and include 445,000 square feet of office space. In addition, the same amount of ground floor retail and amenities would be provided as the proposed project. Based on the square-footage, the alternative would include 1,112 parking spaces. The design of the structure would also retain the tower-over-podium composition similar to the proposed project, with a 10-story podium and a 15-story tower.

Comparative Analysis of Environmental Effects

Impacts Identified as Being the Same or Similar to the Proposed Project

Under both the No Project/Existing Zoning Alternative and the proposed project, the building exterior would include the same design and features. However, under the No Project/Existing Zoning Alternative, the project would have fewer tower levels, with 443,402 fewer square feet of building space. As with the proposed project, the visual character of the project site would

undergo visual change, as the existing site conditions would be replaced with a high-rise structure. However, the substantially reduced height of the building under the No Project/Existing Zoning Alternative would result in a less dramatic change to the existing visual character of the site and its surroundings than would result from development of the Tower 301 project. As a result, the project site would be more similar in appearance to nearby development along Capitol Mall. In addition, as the CBD is intended to have the greatest concentration of development in the City, and the Capital Mall features numerous existing high rise developments, the No Project/Existing Zoning Alternative would be considered to have a similar impact on visual character, as would occur under the proposed project (Impacts 4.1-1 and 4.1-4).

The project that would be developed under the No Project/Existing Zoning Alternative would have the same footprint as under the proposed project, so impacts related to ground disturbance and project footprint would be essentially the same. Specifically, impacts would be the same for biological resources, including raptors and other protected species (Impacts 4.3-1, 4.3-2, and 4.3-5), trees (Impact 4.3-4), and waters of the U.S. and of the state (Impact 4.3-3). Development under the No Project/Existing Zoning Alternative would have a similar aboveground and subgrade footprint to the proposed project, would result in similar impacts to water resources, including generation of new polluted runoff and ground water levels and recharge.

Under the No Project/Existing Zoning Alternative, the structure would be smaller than the Tower 301 project, however the footprint of the lower levels would be anticipated to be similar. As such, the development under the No Project/Existing Zoning Alternative would have similar impacts related to the introduction of new sources of light and glare, where they are experienced near ground level (Impact 4.1-2, 4.1-3, 4.1-5 and 4.1-6).

The lower levels of the No Project/Existing Zoning Alternative development and the proposed project, including subgrade levels, would be the same. Thus, the level of subgrade site work and excavation would be the same. This would result in similar impacts relating to geology, soils, seismicity, and paleontological resources. The same would apply to cultural resources, including archaeological resources, tribal cultural resources, and historic sites and structures, and hazards, including exposure of people to contaminated soil and groundwater.

The No Project/Existing Zoning Alternative would develop a high-rise structure requiring similar fire and police protection service levels and specialized services to those required for the Tower 301 project. Thus, impacts from the potential construction and operation of new police or fire facilities based on project-specific or cumulative demands would be anticipated to be similar for both the No Project/Existing Zoning Alternative and the proposed project.

Impacts Identified as Being Potentially Less Substantial than the Proposed Project

Demands on schools and other resident-serving public services, under the No Project/Existing Zoning Alternative, would be anticipated to be lessened. There would be no residential units

included in the No Project/Existing Zoning Alternative, therefore, there would be no impact to schools and other resident-serving services.

As described above, duration of construction, under the No Project/Existing Zoning Alternative, would be anticipated to be shorter than under the proposed project, however, the intensity of construction activity on a daily basis would be anticipated to be the same. Due to the shorter duration of construction, impacts with respect to exterior and interior noise levels at nearby sensitive receptors are anticipated to be less substantial (Impacts 4.5-1, 4.5-2, 4.5-6, and 4.5-7) as would construction-related traffic impacts (Impacts 4.6-7 and 4.6-14). The No Project/Existing Zoning Alternative would also result in less substantial impacts related construction-related air emissions (Impacts 4.2-2 and 4.2-3) and degradation of water quality, all of which would be lessened in severity as a result of a shorter construction duration.

Under the No Project/Existing Zoning Alternative, the building space would be approximately 50 percent smaller than under the proposed project, so air and GHG emissions from building operation and employee transportation would be expected to be lower by a similar proportion (Impacts 4.2-2, 4.2-3, 4.2-4, 4.2-5, 4.4-1, and 4.4-2). The substantially lower number of employees, that would be added under No Project/Existing Zoning Alternative would have lower demand on the utility infrastructure, including water supply and wastewater conveyance and treatment. With approximately 50 percent less building space, there would be lower energy demands for the project under the No Project/Existing Zoning Alternative. The development under the No Project/Existing Zoning Alternative would generate no residential trips and have fewer vehicle trips to and from the project site from office employees. As a result, impacts to nearby intersections, including delays, would be lessened, and the need for offsite improvements to the transportation infrastructure also may be lessened (Impacts 4.6-1, 4.6-2, 4.6-8, and 4.6-9). Reduced delays would lessen the severity of impacts to public transit, in the project vicinity (Impacts 4.6-3, 4.6-4, 4.6-10, and 4.6-11). Fewer vehicle trips to and from the project site would reduce potential conflicts between bicyclists and vehicles on nearby streets (Impacts 4.6-1, 4.6-5, 4.6-8, 4.6-12). Fewer vehicle trips would also reduce the potential for conflicts between vehicles and pedestrians (Impacts 4.6-1, 4.6-6, 4.6-8, 4.6-13). As described in Section 4.5, Noise and Vibration, most of the long-term noise that would result due to the implementation of the proposed project would primarily be traffic-generated. Thus, fewer vehicle trips to and from the project site under the No Project/Existing Zoning Alternative, relative to those that would occur under the proposed project, would also reduce operational noise impacts from traffic (Impacts 4.5-3, 4.5-5, and 4.5-8). In addition, the elimination of residential space and the reduction in office space would result in the need to heat and cool fewer floors, and thus fewer HVAC systems would be required. For this reason, operational noise impacts from stationary sources would be reduced (Impact 4.5-4).

Impacts Identified as Being More Substantial than the Proposed Project

The No Project/Existing Zoning Alternative would increase daily VMT per service population in the Central City compared to the proposed project. Therefore, VMT would be anticipated to be more substantial under the No Project/Existing Zoning Alternative. However, VMT under this

alternative would still be slightly lower than VMT under existing conditions. No other impacts from the No Project/Existing Zoning Alternative would be anticipated to be more substantial than the same type of impacts that would occur under the Tower 301 project.

Relationship to Significant and Unavoidable Impacts

As described in Chapter 4, the proposed project would not result in significant and unavoidable impacts. Under the No Project/Existing Zoning Alternative, a similar development would be constructed on the project site, that would be substantially smaller, would include fewer employees, and would not include residential units. Therefore, any adverse impacts from the proposed project, related to development density, or the inclusion of residential units, would be lessened under the No Project/No Development Alternative.

Summary of Preliminary Evaluation of Relationship to Tower 301 Project Objectives

The No Project/Existing Zoning Alternative would construct a modern high-rise structure along the western side of the Downtown skyline (Objective 1). The structure would be similar in height to nearby development. While development of the No Project/Existing Zoning Alternative would add to and be a noticeable part of the Downtown skyline, the similar size of the structure to other development along Capitol Mall would limit its prominence within the skyline. The alternative would provide a mix of uses, including office, retail, restaurant, and entertainment uses, but would not include residential uses (partially meeting Objectives 2 and 4). The ground floor level of the development under the No Project/Existing Zoning Alternative would include retail/ restaurant uses, and office lobby, activating all sides of the project site (Objective 3). The alternative would include the podium and tower configuration allowing for a variety of office space configurations, including the atrium, tower, tower transfer, and podium-level office floorplates (Objective 5). The alternative would not include residential units as required to meet Objective 6. Under the No Project/Existing Zoning Alternative, the project would be anticipated to include all of the sustainability features included in the proposed project (Objective 7). However, the alternative would not include residential units, the addition of which to the CBD is recognized as helping to reduce VMT.

6.4.3 Alternative 3: Reduced Intensity Alternative

Description

Under the Reduced Intensity Alternative (Alternative 3), the proposed project would be developed with same types and square footage of uses proposed in the Tower 301 project, with the exception that there would be 475,670 square feet of office space or approximately 60 percent of the proposed office in the proposed project. Overall, the structure would have 35 percent less building space than the proposed project. The structure that would be constructed under the Reduced Intensity Alternative would retain the tower-over-podium composition with a 10-story podium and 16-story tower. The amount of retail, restaurant, and residential space and the number of amenities would remain the same as in the proposed project. The Reduced Intensity

Alternative would include 35% less vehicle parking spaces than would be included in the propose project, with a total of 848 vehicle spaces.

Construction activities, under the Reduced Intensity Alternative, would have the same amount of site preparation and lower level construction, however the smaller office tower, under the Reduced Intensity Alternative would require a shorter construction window, shortening the overall construction timeline, relative to the Tower 301 project.

Under the Reduced Intensity Alternative, there would be fewer office employees utilizing the office space on the project site, relative to the Tower 301 project. However, the number of residential units would be the same. As a result, there would be fewer vehicle trips to and from the project site, especially during peak weekday traffic periods. The Reduced Intensity Alternative would have less demand on public utilities including lessened demand for energy, water supply, wastewater conveyance and treatment.

Comparative Analysis of Environmental Effects

Impacts Identified as Being the Same or Similar to the Proposed Project

Under both the Reduced Intensity Alternative and the proposed project, the building exterior would include the same design and features. However, under the Reduced Intensity Alternative, the project would have fewer tower levels, with 315,977 fewer square feet of building space. As with the proposed project, the visual character of the project site would undergo visual change, as the existing undeveloped site conditions would be replaced with a high-rise structure. However, the substantially reduced height of the building under the Reduced Intensity Alternative would result in a less dramatic change to the existing visual character of the site and its surroundings than would result from development of the Tower 301 project. As a result, the project site would be more similar in appearance to nearby development along Capitol Mall. In addition, as the CBD is intended to have the greatest concentration of development in the City, and the Capital Mall features numerous existing high rise developments, the Reduced Intensity Alternative would be considered to have a similar impact on visual character, as would occur under the proposed project (Impacts 4.1-1 and 4.1-4).

The project that would be developed under the Reduced Intensity Alternative would have the same footprint as under the proposed project, so impacts related to ground disturbance and project footprint would be essentially the same. Specifically, impacts would be the same for biological resources, including raptors and other protected species (Impacts 4.3-1, 4.3-2, and 4.3-5), trees (Impact 4.3-4), and waters of the U.S. and of the state (Impact 4.3-3). Development under the Reduced Intensity Alternative would have a similar aboveground and subgrade footprint to the proposed project, would result in similar impacts to water resources, including generation of new polluted runoff and ground water levels and recharge.

Under the Reduced Intensity Alternative, the structure would be smaller than the Tower 301 project, however the footprint of the lower levels would be anticipated to be similar. As such, development under the Reduced Intensity Alternative would have similar impacts related to the

introduction of new sources of light and glare, where they are experienced near ground level (Impact 4.1-2, 4.1-3, 4.1-5 and 4.1-6).

The lower levels of the Reduced Intensity Alternative development and the proposed project, including a subgrade level, would be the same. Thus, the level of subgrade site work and excavation would be the same. This would result in similar impacts relating to geology, soils, seismicity, and paleontological resources. The same would apply to cultural resources, including archaeological resources, tribal cultural resources, and historic sites and structures, and hazards, including exposure of people to contaminated soil and groundwater.

Demands on public services, under the Reduced Intensity Alternative, would be anticipated to be similar. The number of residents would be the same, having similar impacts on schools and other resident-serving services. The Reduced Intensity Alternative would also develop a high-rise structure requiring similar service levels and specialized services to those required for the Tower 301 project. Thus, impacts from the potential construction and operation of new public services facilities based on the project-specific or cumulative demands would be anticipated to be similar for both the Reduced Intensity Alternative and the proposed project.

Impacts Identified as Being Less Substantial than the Proposed Project

As described above, duration of construction, under the Reduced Intensity Alternative, would be anticipated to be shorter than under the proposed project, however, the intensity of construction activity on a daily basis would be anticipated to be the same. Due to the shorter duration of construction, impacts with respect to exterior and interior noise levels at nearby sensitive receptors are anticipated to be less substantial (Impacts 4.5-1, 4.5-2, 4.5-6, and 4.5-7) as would construction-related traffic impacts (Impacts 4.6-7 and 4.6-14). The Reduced Intensity Alternative would also result in lessened impacts related construction-related air emissions (Impacts 4.2-2 and 4.2-3) and degradation of water quality, all of which would be lessened in severity as a result of a shorter construction duration.

Under the Reduced Intensity Alternative, the building space would be approximately 35 percent smaller than under the proposed project, so air and GHG emissions from building operation and employee transportation would be expected to be lower by a similar proportion (Impacts 4.2-2, 4.2-3, 4.2-4, 4.2-5, 4.4-1, and 4.4-2). The substantially lower number of employees, that would be added under Reduced Intensity Alternative, would have lower demand on the utility infrastructure, including water supply and wastewater conveyance and treatment. With 35 percent less building space, there would be lower energy demands for the project under the Reduced Intensity Alternative. The development under the Reduced Intensity Alternative would also have fewer vehicle trips to and from the project site from office employees. As a result, impacts to nearby intersections, including delays, would be lessened, and the need for offsite improvements to the transportation infrastructure may be lessened (Impacts 4.6-1, 4.6-2, 4.6-8, and 4.6-9). Reduced delays would lessen the severity of impacts to public transit, in the project vicinity (Impacts 4.6-3, 4.6-4, 4.6-10, and 4.6-11). Fewer vehicle trips to and from the project site would reduce potential conflicts between bicyclists and vehicles on nearby streets (Impacts 4.6-1, 4.6-5,

4.6-8, 4.6-12). Fewer vehicle trips would also reduce the potential for conflicts between vehicles and pedestrians (Impacts 4.6-1, 4.6-6, 4.6-8, 4.6-13). As described in Section 4.5, Noise and Vibration, most of the long-term noise that would result due to the implementation of the proposed project would primarily be traffic-generated. Thus, fewer vehicle trips to and from the project site under the Reduced Intensity Alternative, relative to those that would occur under the proposed project, would also reduce operational noise impacts from traffic (Impacts 4.5-3, 4.5-5, and 4.5-8). In addition, the reduction in office space would result in the need to heat and cool fewer floors, and thus fewer HVAC systems would be required. For this reason, operational noise impacts from stationary sources would be reduced (Impact 4.5-4).

Impacts Identified as Being More Substantial than the Proposed Project

The Reduced Intensity Alternative would increase daily VMT per service population in the Central City compared to the proposed project. Therefore, VMT would be anticipated to be more substantial under the No Project/Existing Zoning Alternative. However, VMT under this alternative would still be slightly lower than VMT under existing conditions. No other impacts from the Reduced Intensity Alternative would be anticipated to be more substantial than the same type of impacts that would occur under the Tower 301 project.

Relationship to Significant and Unavoidable Impacts

As described in Chapter 4, the proposed project would not result in significant and unavoidable impacts. Under the Reduced Intensity Alternative, a similar development would be constructed on the project site that would be substantially smaller and would include fewer employees. Therefore, any adverse impacts from the proposed project, related to the addition of employees to the project site and the project area, would be lessened under the No Project/Reduced Intensity Alternative.

Summary of Preliminary Evaluation of Alternatives in Relation to Tower 301 Project Objectives

The Reduced Intensity Alternative would construct a modern high-rise structure along the western side of the Downtown skyline (Objective 1). The structure would be similar in height to nearby development. While development of the Reduced Intensity Alternative would add to and be a noticeable part of the Downtown skyline, the similar size of the structure to other development along Capitol Mall would limit its prominence within the skyline. The alternative would provide a mix of uses, including office, residential, retail, restaurant, and entertainment uses (Objectives 2, 4, and 6). The ground floor level of the development under the No Project/Reduced Intensity Alternative would include retail/restaurant uses, an office lobby and residential lobby, activating all sides of the project site (Objective 3). The alternative would include the podium and tower configuration allowing for a variety of office space configurations, including the atrium, tower, tower transfer, and podium-level office floorplates (Objective 5). Under the No Project/Reduced Intensity Alternative, the project would be anticipated to include all of the sustainability features included in the proposed project (Objective 7).

6.5 Environmentally Superior Alternative

From the alternatives evaluated for the Tower 301 project in this EIR, the environmentally superior alternative would be Alternative 1, the No Project/No Development Alternative. This alternative would avoid all potentially significant impacts and required mitigation associated with the Tower 301 project.

Among the action alternatives, Alternative 2, the No Project/Existing Zoning Alternative, could be expected to have the fewest adverse impacts because it would require a shorter construction duration, could consume fewer resources and raw materials, and have less substantial operational impacts.

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CHAPTER 8
Acronyms and Abbreviations

AB	Assembly Bill
ADA	Americans with Disabilities Act
APS	alternative planning strategy
BMPs	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBD	Central Business District
CCAA	California Clean Air Act
CCCP	Central City Community Plan
CCR	California Code of Regulations
CCSP	Central City Specific Plan
CCSPD	Central City Special Planning District
CCUDG	Central City Urban Design Guidelines
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal regulations
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
CRPR	California Rare Plant Rank
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act

dB	decibels
dBA	A-weighted decibels
DPM	diesel particulate matter
EIR	Environmental Impact Report
ESA	Environmental Science Associates
FAR	floor area ratio
FESA	federal Endangered Species Act
FGC	Fish and Game Code
FR	Federal Register
FTA	Federal Transit Administration
GHG	greenhouse gas
GSF	Gross Square Feet
GVW	gross vehicle weight
GWP	global warming potential
HAPs	Hazardous Air Pollutants"
HFCs	hydrofluorocarbons
HRA	health risk assessment
HVAC	heating, ventilation and air-conditioning systems
I-5	Interstate 5
I-80	Interstate 80
IPCC	International Panel on Climate Change
LOS	level of service
LVW	loaded vehicle weight
MBTA	Migratory Bird Treaty Act
MEI	maximum exposed individual
MICR	Million Increase in Cancer Risk
MMP	mitigation monitoring plan
MMTCO2e	million metric tons of CO2e
MPO	metropolitan planning organizations
MTIP	Metropolitan Transportation Improvement Program
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	nitrogen oxides
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Governor's Office of Planning and Research

PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	particulate matter of 10 microns or less in diameter
$PM_{2.5}$	particulate matter of 2.5 microns or less in diameter
ppd	pounds per day
PPV	peak particle velocity
RMS	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RTP	regional transportation plan
SACOG	Sacramento Area Council of Government's
SacRT	Sacramento Regional Transit District
SB	Senate Bill
SCMP	Subregional Corridor Mitigation Program
sf	square feet
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SLM	sound level meter
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SPD	Special Planning District
SPDR	Site Plan and Design Review
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SVAB	Sacramento Valley Air Basin
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TCCR	Transportation Corridor Concept Report
TDM	transportation demand measures
tpy	tons per year
US EPA	United Stated Environmental Protection Agency
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
V/C	volume to capacity
VMT	vehicle miles traveled
VOC	Volatile organic compound
Yolobus	Yolo County Transportation District

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CHAPTER 9
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