City of
SACRAMENTO
Community Development

ADDENDUM TO AN ADOPTED ENVIRONMENTAL IMPACT REPORT

The City of Sacramento, California, a municipal corporation, does hereby prepare, make declare, and publish the Addendum to a certified Environmental Impact Report (EIR) for the following described project:

Project Name and Number: Kaiser South Emergency Department Expansion (Z18-214)

Original Project: Kaiser South Sacramento Medical Expansion (P04-185)

The City of Sacramento, Community Development Department, has reviewed the proposed project and on the basis of the whole record before it, has determined that there is no substantial evidence that the project, as identified in the attached Addendum, would have a significant effect on the environmental beyond that which was evaluated in the attached EIR. A Subsequent EIR is not required pursuant to the California Environmental Quality Act of 1970 (Sections 21000, et. Seq., Public Resources Code of the State of California) (CEQA).

This Addendum to a certified EIR has been prepared pursuant to Title 14, Section 15164 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, Planning Division, 300 Richards Boulevard, Sacramento, California 95811.

Environmental Services Manager, City of Sacramento, California, a municipal corporation

By: Scott Johnson

Date: 7-30-19

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Kaiser Permanente South Sacramento Medical Center Emergency Department Expansion Project (Z18-214) Addendum to the Kaiser South Sacramento Medical Expansion Environmental Impact Report (SCH 2005102127)

File Number/Project Name: Kaiser Permanente South Sacramento Medical Center Emergency Department Expansion Project (proposed project - Z18-214)

Project Location: The proposed project is located at 6600 Bruceville Road (see Attachment A, Vicinity Map) within the existing Kaiser Permanente South Sacramento Medical Center campus, in the South Sacramento Community Plan area of the City of Sacramento (City), CA. The project site is situated just south of the Mack Road and Alta Valley Drive intersection, west of State Route 99. The Medical Center campus is bounded by Valley Hi Drive on the west, Bruceville Road on the north and east, and Wyndham Drive on the south. The Emergency Department is located in the southern portion of the campus.

Existing Plan Designations and Zoning: The City of Sacramento 2035 General Plan land use designation for the project site is Employment Center mid-rise. The zoning for the project site is Hospital (H-R).

Project Discussion: A planning application was received by the City for the Kaiser Permanente South Sacramento Medical Center Emergency Department Expansion Project, proposing construction and operation of a new Emergency Department (ED) building, renovations to the existing ED building, and reconfiguration of the entrance to this portion of the campus. The project would be located on a 3.5-acre parcel (Assessor Parcel number 117-0170-050). The proposed project would require the following entitlements from the City:

- Conditional Use Permit – Major Modification;
- Site Plan and Design Review; and
- Tree Permit

As described above, the proposed project is located within the larger Kaiser Permanente South Sacramento Medical Center campus. The Kaiser South Sacramento Medical Center Expansion project (P04-185) (KPSSMC Expansion project) was approved and the EIR (SCH 2005102127) certified by City Planning Commission on July 13, 2006. Further details regarding the original South Sacramento Medical Center Expansion project and EIR, as well as the proposed modifications to the affected parcel are provided below.

<u>Kaiser South Sacramento Medical Center Expansion Project Background</u>

As stated above, the KPSSMC Expansion project was approved and the associated EIR was certified by City Planning Commission on July 13, 2006. the staff report includes the

adopted Findings of Fact, Mitigation Monitoring Plan (MMP), and Statement of Overriding Considerations. The project approval established a plan to expand the existing Kaiser South Sacramento Medical Center located at 6600 Bruceville Road. The EIR and Planning Commission Resolution are available online at: http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

The KPSSMC Expansion EIR was prepared in compliance with CEQA, and evaluated the relevant technical issues in terms of whether the KPSSMC Expansion project, as proposed, would cause significant effects on the environment. The MMP included in the Final EIR (Attachment C) identified the mitigation measures set forth within the EIR that are required to reduce significant effects. Significant and unavoidable impacts identified in the EIR included impacts related to the following: increase in traffic under existing (baseline) plus project conditions to State Route (SR) 99 which is operating at an unacceptable LOS F during the AM and PM peak hours; increase in traffic during Year 2025 plus project conditions to SR 99, which is operating at an unacceptable LOS F during the AM peak hour; and increase in traffic during Year 2025 plus project conditions to southbound SR 99, which is operating at an unacceptable LOS F during the PM peak hour.

The original KPSSMC Expansion project was approved for an overall addition of seven structures totaling approximately 244,000 square feet (sf) to the Medical Center campus, thereby increasing the entire Medical Center to approximately 793,500 sf. A breakdown of the specific components is as follows:

- An approximately 158,000 sf Hospital Tower (basement plus five levels above grade) south of the existing hospital building, containing 96 new medical surgery beds, 20 new intensive care beds, and 20 intensive care beds relocated from the existing hospital. Additionally, one existing medical surgery bed would be eliminated from the existing hospital, resulting in a total of 115 new hospital beds.
- A two-story, approximately 57,000 sf Outpatient Surgery Center with a six-room surgery suite constructed west of the new Hospital Tower.
- A five-story, approximately 882-space parking structure on the north side of the campus along Bruceville Road. In addition, surface parking lots on the west side of the campus would be constructed to maintain City and project sponsor parking requirements.
- An addition to the Central Utility Plant consisting of a new single-story, approximately 6,000 sf chiller addition to support the hospital expansion.
- A single-story, approximately 10,000 sf Emergency Department addition east of the existing ED for a Trauma Center.
- A two-story, approximately 15,000 sf addition to outpatient services on the west side of the existing Medical Office Building 1.
- An emergency helicopter landing pad as part of the new trauma center.

The original KPSSMC Expansion project also included several additional site upgrades: the realignment of segments of the campus ring road, the addition of dedicated pick-up

and drop-off zones, the addition of ingress and egress drives, and the improvement of on-site way-finding. The ring road would be constructed from an entrance off Wyndham Drive to a new drop-off circle in front of the ED. It would then follow Parking Lots 9 and 10 adjacent to Wyndham Drive; continue past Parking Lot 11, the D.B. Moore Building, and the Central Utility Plant to Parking Lots 16 and 17; and exit onto Bruceville Road at Alta Vista Way. The KPSSMC Expansion project also included construction of an additional access road that would parallel Bruceville Road and encircle the Lot 3 parking structure that was proposed on the northeast portion of the site.

Kaiser Permanente South Sacramento Medical Center Emergency Department Expansion Project

The Kaiser Permanente South Sacramento Medical Center Emergency Department Expansion Project (hereafter referred to as the proposed project) proposes development of a new one-story, 28-foot-tall, free-standing 42,000 sf ED building located immediately adjacent to the existing ED building (Attachment B, Site Plan). The new building is designed to achieve Leadership in Energy and Environmental Design (LEED) silver certification and to accommodate an increase in patients. The new ED building would provide 45 treatment rooms and 44 to 52 new employees.

The proposed project also includes partially renovating the existing ED and reconfiguring vehicle access and circulation to the ED. Renovations to the existing ED would include relocating the main entrance from the west to the east side of the building and remodeling the lobby and waiting areas. The new building would include a new Emergency drop off on the east side and would connect to the existing ED at two locations; the north/south connection to the ambulance and Trauma bays, and the north/south connection to the existing treatment area. To accommodate the new ED building, the existing ring road, center roundabout, and Wyndham Driveway would be reconfigured. Specifically, the Wyndham Driveway would be relocated approximately 250 feet to the west of the existing driveway and will be constructed with exclusive left and right southbound turn lanes. A portion of Lot 8 (currently designated as staff parking) would be converted to ED visitor and Kaiser Permanente member parking, and the City may require restriping the Bruceville Road two-way left turn median south of the Kaiser Driveway to extend the northbound left turn pocket.

To accommodate the project, demolition of existing sidewalks, driveway, asphalt roads/parking, and landscaping would be required. The project site contains 84 existing trees, 80 trees would be removed by the project and replaced by 99 new trees. As a condition of approval if tree removal occurs between February 15 and September 1 a preconstruction nesting bird survey would be conducted no more than 15 days prior to receipt of a tree permit. If active nests are found, a no-disturbance buffer shall be established around the tree, and monitored by a biologist to confirm no interference with nesting, or tree removal delayed until after the nesting season is over.

The removal of any protected private trees would be subject to the City's Tree Preservation Ordinance (Ord. 2016-0026; City Code Chapter 12.56). Removal and rerouting of existing utilities would also be required. Specifically, two parking lots (Lot 7 and Lot 9A) that contain a total of 85 spaces, a portion of an internal loop access road, and a center roundabout and landscaped median, including approximately 84 trees would be removed to accommodate the new ED building and reconfiguration of access to the ED. The total area to be graded/disturbed is approximately 152,000 sf or 3.5 acres and approximately 8,600 cubic yards of soil would be required to be imported to the site. Construction is anticipated to occur over two and half years.

CEQA Analysis Approach

In the case of a project proposal requiring discretionary approval by the City on a project for which the City has certified an EIR for the overall project, as here, the City must determine whether a supplemental or subsequent EIR is required. The CEQA Guidelines provide guidance in this process by requiring an examination of whether, since the certification of the EIR and approval of the project, changes in the project or conditions have been made to such an extent that the proposal may result in substantial changes in physical conditions that are considered significant under CEQA. If so, the City would be required to prepare a subsequent EIR or supplement to the prior certified EIR. The examination of impacts is the first step taken by the City in reviewing the CEQA treatment of the proposed project.

The following review proceeds with an overview of the requirements of CEQA Guidelines Section 15162, Subsequent EIRs and Negative Declarations, and Section 15163, Supplement to an EIR, discussed in detail below. The following discussion concludes that the conditions set forth in Sections 15162 and 15163 were not present, and that an addendum would be the required CEQA document prepared for the project pursuant to CEQA Guidelines Section 15164.

The discussion in this Addendum confirms that the proposed project has been evaluated for significant impacts pursuant to CEQA. The discussion is meaningfully different than a determination that the project is "exempt" from CEQA review, which is not the case. Rather, the determination here is that the project's impacts have been considered in an EIR (the Kaiser South Sacramento Medical Center Expansion project EIR) that was reviewed and certified by the City Council, and that the EIR provides a sufficient and adequate analysis of the environmental impacts of the proposed project. Therefore, the City has determined an addendum is the appropriate environmental document. For purposes of this addendum, the KPSSMC Expansion project EIR is hereinafter referred to as the previous EIR.

Discussion

An Addendum to a certified EIR may be prepared if only minor technical changes or additions are required, and none of the conditions identified in CEQA Guidelines Sections 15162 and 15163 are present. The following identifies the standards set forth in Section

15162(a) as they relate to the project:

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

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

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

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

    b) **Significant effects previously examined will be substantially more severe than shown in the previous EIR [or negative declaration];**

    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.**

Section 15162 provides that the lead agency's role in project approval is completed upon certification of the EIR and approval of the project, unless further discretionary action is required. The approvals requested as part of the proposed project are considered discretionary actions, and CEQA review, is therefore required.

Section 15163(a) specifies that the Lead or Responsible Agency may choose to prepare a supplement to an EIR rather than a subsequent EIR if:

1. **Any of the conditions described in Section 15162 would require the preparation of a subsequent EIR, and**

2. **Only minor additions or changes would be necessary to make the previous**

EIR adequately apply to the project in the changed situation.

The proposed project would not meet any of the conditions identified in CEQA Guidelines Sections 15162 and 15163 which would require preparation of a Subsequent or Supplemental EIR, as detailed below.

"Substantial Changes in the Project" Standard

The proposed project would change the current uses at the project site, and would increase the overall building square footage on the campus. The original KPSSMC Expansion project did not propose any change to the existing use of the project site for surface parking, internal circulation, and landscaping. The proposed project would be consistent with the City's Employment Center mid-rise land use designation and H-R zoning for the site. The parcel that comprises the project site currently contains a paved parking lot (Parking Lot 7) and a portion of Parking Lot 9A, campus pathways, landscaping, and a segment of the campus ring road. The areas affected by the proposed project are located in a developed portion of the campus and have been disturbed and do not contain any sensitive or protected biological resources or habitat. The proposed project would also reconfigure access to the existing ED and campus circulation. The realignment of segments of the campus ring road, the addition of dedicated pick-up and drop-off zones, the addition of a new ingress and egress driveway, and the improvement of on-site way-finding was evaluated in the original KPSSMC Expansion project and analyzed in the previous EIR. The proposed project involves the development of uses that are consistent with the campus and would not be considered a substantial change to what was evaluated in the original KPSSMC Expansion project. Overall, development of the proposed project would not result in any substantial changes from what has been previously analyzed and would not result in new significant impacts not identified in the previous EIR or result in a substantial increase in the severity of previously identified significant impacts. The project, therefore, does not constitute a substantial change in the previous project that require major revisions to the previous EIR.

"Substantial Changes in the Circumstances" Standard

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this section presents a discussion of whether changes to the project site or the vicinity (environmental setting) have occurred subsequent to the certification of the previous EIR that would result in new significant impacts or a substantial increase in the severity of a previously identified significant impact that were not evaluated and mitigated by the previous EIR.

Physical changes that have occurred throughout the Kaiser South Sacramento Medical Center campus and in the vicinity of the proposed project site include construction of new buildings and uses consistent with the original KPSSMC Expansion project. In 2002, an addition to the ED building was constructed east of the existing ED. This addition consisted of a single-story, 52,800 sf building that includes an emergency room and radiology facility for emergency and trauma care. An addition to the existing hospital building, an outpatient surgery center, a central utility plant, and a multi-level parking

structure was added to the campus in 2008. The project site itself is in a developed portion of the campus on land currently occupied by paved surface parking lots, landscaping, and an internal loop roadway. There is a large median with shrubs, grasses and trees bordering the south side of the parking lot adjacent to the north side of the internal loop access road and a large, landscaped roundabout to the west of the project site, across from the main entrance to the existing ED building. The only trees and shrubs on the site are those associated with the median and street-side landscaping. The existing parking lots on the project site (Lots 7 and 9A), median, pathways/sidewalks, and internal roadway were in their present configuration and condition at the time that the original KPSSMC Expansion project was proposed and were not altered as part of the prior KPSSMC Expansion project. Based on the environmental baseline identified in the previous EIR and the aforementioned physical changes to the project site and immediately surrounding area since the previous EIR was prepared, the project site has changed little and is in relatively similar condition as when the KPSSMC Expansion project was analyzed in the previous EIR. Thus, the proposed project would not result in any substantial physical changes to the project site from what was included in the original project approval that would adversely affect any issue of environmental significance.

One of the requirements of CEQA is the examination of whether a proposed project would conflict with existing plans and regulations, including the General Plan, zoning regulations, and other planning documents. Inconsistencies may suggest that a project would have environmental effects that have not been identified in advance, and for which planning or analysis has not occurred. The proposed project would not require any amendments related to the City's 2035 General Plan and South Area Community Plan land use designations or zoning for the site and would be within the limits of what was previously analyzed within the previous EIR. Accordingly, City staff has determined that the proposed project would be consistent with the General Plan and South Area Community Plan land use and zoning designations for the site.

Based on the above, the proposed project would not result in any new circumstances that would result in new significant impacts or substantially more severe impacts from what has been anticipated for the site in the previous environmental document.

"New Information of Substantial Importance" Standard

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this section includes a discussion of whether the proposed project would result in 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. New information of substantial importance includes: (1) one or more significant effects not discussed in the previous EIR; (2) significant effects previously examined that are substantially more severe than shown in the previous EIR; (3) 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 (4) mitigation measures or alternatives that 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.

The City of Sacramento determined additional analysis would be required with regards to transportation impacts in order to determine whether the proposed project would result in new information of substantial importance. The results of the additional analysis are presented in the discussion below. Additionally, since the previous EIR was prepared, Appendix G of the CEQA Guidelines have been amended to include questions related to impacts to energy, greenhouse gas emissions, tribal cultural resources, and wildfire hazard impacts. Although impacts related to greenhouse gas emissions, tribal cultural resources and wildfire hazards were not analyzed in the previous EIR, a discussion is included below of proposed project impacts on these resource areas. As discussed in more detail below, the proposed project would not result in any new impacts to these issue areas; therefore, this would not be considered new information of substantial importance.

The remaining environmental resource areas that were deemed not to require additional analysis are also discussed briefly below. Where new information of substantial importance was not identified, new or additional mitigation would not be necessary. If the additional analyses indicate new information of substantial importance, additional environmental documentation is not necessary if a new or modified mitigation would eliminate the new significant impact or reduce the increase in severity to less than substantial.

The requirements of site plan and design review, prior to construction and operation, are requirements that apply to activities generally on the project site, and do not reflect inconsistency with the City's regulations that were previously required (or approved) as part of the KPSSMC Expansion project. The analysis in the previous EIR, to the extent the analysis relied on review and approval of a project that would follow the standards and requirements as set forth in planning documents, is unchanged and valid. The changes do not necessarily raise issues of environmental significance under CEQA.

Transportation

The previous EIR concluded that the original KPSSMC Expansion project would result in significant and unavoidable traffic impacts, as well as other traffic impacts that would be reduced to a less-than-significant level with implementation of mitigation measures. Motorized vehicle level of service (LOS) is a qualitative measure of traffic flow from the perspective of motorists and is an indication of the comfort and convenience associated with driving. The previous EIR determined that two intersections would operate at an unacceptable LOS with the KPSSMC Expansion project: Bruceville Road/Kaiser Access intersection and Mack Road/Valley Hi Drive – La Mancha Way intersection. Additionally, the previous EIR found that two intersections would operate at an unacceptable LOS under Year 2025 conditions (cumulative): Cosumnes River Road/Bruceville Road intersection and Cosumnes River Road/SR 99 southbound ramps intersection. Mitigation Measures 3.3-1, 3.3-2, 3.3-4, and 3.3-5 recommend installing a traffic signal at Bruceville

Road/Kaiser Access, reconfiguring the eastbound Kaiser access approach, adjusting the traffic signal phase timing at both the Mack Road/Valley Hi Drive – La Mancha Way and Cosumnes River Road/Bruceville Road intersections, and restriping the existing SR 99 southbound ramp, respectively. These mitigation measures were found to reduce traffic impacts to these intersections to less than significant. The previous EIR determined that impacts to existing or proposed bicycle facilities, pedestrian circulation, and transit facilities would be less than significant.

Additionally, the original KPSSMC Expansion project was determined to add traffic to SR 99, which was operating at an unacceptable LOS and was also expected to operate at an unacceptable LOS in Year 2025. Since no feasible mitigation measures were identified that would reduce impacts to SR 99, it was found that these impacts would be significant and unavoidable.

A Parking and Circulation Study (Attachment D) was prepared for the proposed project to assess project-related traffic, parking supply, and internal circulation impacts. The study found that the proposed ED building would accommodate a 50% increase in patient visitation and staffing needs over current conditions within ten years. The report determined that this would result in a net increase of 200 daily patient visits and 60 added employees. This would result in 37 new AM peak hour trips and 39 new PM peak hour trips, which corresponds to an approximate 3% increase in overall campus trip generation. The study determined that all study intersections would continue to operate acceptably during the AM and PM peak hours during project operation. Queuing in the project area was determined to remain within available storage except for the Bruceville Road/Kaiser Driveway intersection. As a condition of project approval, the City is requiring restriping Bruceville Road for a two-way left turn median south of the Kaiser Driveway to extend the northbound left turn pocket in order to accommodate the maximum queue length of 300 feet. The overall campus parking utilization would increase by 6% with the proposed project to result in an overall campus parking utilization of 96%. The report determined that this increase in parking occupancy would most affect the eastern portion of the campus. The report determined that although the eastern portion of the campus has capacity to absorb the displaced parking and increased demand, parking occupancy would be high (close to 100%) and lots within the eastern portion of campus would effectively be full during peak parking demand. The proposed project would not result in a change to the number of licensed patient beds or the amount of outpatient, outpatient surgery, or administrative building square footage. Therefore, the project would meet the City's and Kaiser's parking requirements. The existing plus project parking supply on the campus would result in a surplus of approximately 2,000 spaces over City parking requirements and would continue to do so with the near-term 58 additional patient beds. However, while the existing plus project parking supply on the campus would exceed Kaiser's internal guidelines by 70 spaces, with the addition of 58 additional patient beds, existing parking supply on the campus would fall short of Kaiser's internal guidelines by 104 spaces.

The proposed project would construct a new pedestrian pathway along the perimeter of the proposed ED building. New or repainted crosswalks would be provided at the ring

road intersections with the Lot 8 driveway and the reconstructed South Tower roundabout. Additionally, the pedestrian pathway through Lot 8 would be preserved. Therefore, adequate pedestrian and bicycle circulation would remain. There is an existing bus stop that serves Sacramento Regional Transit routes 55 and 56 directly south of Parking Lot 8 that would not be affected by the proposed project. No impacts to pedestrian, bicycle, and transit facilities would occur as a result of the proposed project.

Project impacts related to traffic, parking, and circulation would be less than significant and any applicable mitigation measures set forth within the previous EIR would still be required for the proposed project. No mitigation measures set forth in the previous EIR would be applicable to the proposed project.

Remaining CEQA Sections

The previous EIR evaluated all of the environmental issue areas in an Initial Study (included as Appendix A to the previous EIR) with the exception of air quality and transportation. The Initial Study included analysis of aesthetics, light and glare; biological resources; cultural resources; energy; soils and geology; hazards; land use and planning; noise; population and housing; public services; recreation; seismicity; utilities; and water. Appendix G of the CEQA Guidelines was updated in March 2010 to include analysis of project greenhouse gas emissions. Additionally, on September 27, 2016, Appendix G of the CEQA Guidelines was updated to include questions related to impacts to tribal cultural resources in compliance with the passage of Assembly Bill 52. Furthermore, on December 28, 2018, amendments were added to Appendix G to include analysis of wildfire hazard impacts. Impacts related to greenhouse gas emissions, tribal cultural resources and wildfire hazards were not analyzed in the previous EIR, but are included in the following discussion of proposed project impacts. Further details regarding the proposed project's effects on the previous analysis with regards to the aforementioned resource areas are discussed in further detail below.

As presented in the discussion below, the proposed project would not result in any new significant information of substantial importance, new impacts or an increase in the severity of previously identified impacts associated with aesthetics, light and glare; air quality; biological resources; cultural resources; energy; soils and geology; hazards; land use and planning; noise; population and housing; public services; recreation; seismicity; utilities; and water that would require major revisions to the previous EIR. The proposed project would be required to implement all applicable mitigation measures set forth in the previous EIR.

Aesthetics, Light, and Glare

The previous EIR determined that the original KPSSMC Expansion project would have a less- than-significant impact on aesthetics and light and glare because the campus and surrounding area is not located within a scenic vista or adopted view corridor, proposed project elements would be consistent with the existing visual character of the site, and lighting would include cut-off luminaires and would comply with the requirements of the Sacramento City Code. No mitigation measures were identified.

The proposed project would involve development that would be consistent with the type, scale, design, color scheme, and intensity of surrounding land uses on the campus. The proposed ED building would be a single-story building with a long and wide rectangular footprint. The building would be subdivided into a modular framework to reduce the perceived size and scale of its exterior. Earth-toned terracotta panels and tall windows would line the exterior of the building. The building would be surrounded by an approximately 15-foot tall white trellis. All new exterior building light fixtures would be LED light fixtures and would be consistent with the City's 2035 General Plan Policy ER 7.1.3, which requires lights be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. The project would not create a new source of light that would be directed towards oncoming traffic or any residential uses. Building signage would be designed to meet the City's Ordinance that regulates signage. The proposed building would be surrounded by green spaces with turf, trees, and shrubs that would provide a visual respite from surrounding hardscape. The project would be located on the Kaiser South Sacramento Medical Center campus and would not be located within a scenic vista or adopted view corridor, as discussed in the previous EIR. The proposed project would be compatible with the height of the adjacent existing ED building, and would be visually compatible with the design of surrounding medical center buildings. The proposed project would ensure that new building light sources would be directed downward to minimize light spill-over and to comply with the City's 2035 General Plan Policy ER 7.1.3. The project would not result in any new significant light or glare impacts. Thus, impact conclusions related to aesthetics, light, and glare identified within the previous EIR would remain adequate for the proposed project.

Air Quality and Greenhouse Gas Emissions

Construction of the original KPSSMC Expansion project was found to result in significant air quality impacts that could be mitigated to a less-than-significant level. These impacts were associated with project emissions of particulate matter less than 10 microns in diameter (PM_{10}) and ozone precursors during project construction. These impacts would be reduced to less than significant through implementation of Mitigation Measures 3.2-1a and 3.2-1b, which describe fugitive dust control measures and equipment standards, use, and maintenance. No significant impacts were identified related to project operation. The proposed project would comply with applicable mitigation measures specified in the previous EIR, identified below, which would reduce construction impacts related to the proposed project.

The proposed project includes construction and operation of a new ED building, renovations to the existing ED building, and reconfiguration to the entrance to this portion of the campus. Construction would occur over a period of two and half years. The project site falls within the Sacramento Valley Air Basin, which is designated as nonattainment for 8-hour ozone, PM_{10} and $PM_{2.5}$, and attainment for all other criteria pollutants under the California Clean Air Act. Under federal standards, the Basin is classified as nonattainment for ozone (8-hour standards) and PM_{10}, and attainment for all other criteria pollutants. The proposed project has the potential to generate ozone, PM_{10} and $PM_{2.5}$ during project construction through use of construction vehicles and equipment, and through soil disturbance activities that could generate dust. Compliance with Mitigation Measures 3.2-

1a and 3.2-1b, identified in the previous EIR and included below, would reduce these impacts to less than significant.

As described previously, the traffic study prepared for the project indicates the project would generate 37 new AM peak hour trips and 39 new PM peak hour trips, which corresponds to an approximate 3% increase in overall campus trip generation. This would result in a minimal increase in air pollutants during project operation. Additionally, area source emissions would be generated by the increased consumption of electrical energy and natural gas associated with the proposed project.

The proposed ED building would implement several energy conservation features that would reduce pollutant and greenhouse gas (GHG) emissions that result from water and energy use. These include the following:

- The project includes solar panels that can provide up to 120kW of energy, and up to 50% of the building's electricity would be offset through participation in the Sacramento Municipal Utility District "Solar Shares" community photovoltaic array program.
- Bicycle racks, showers, and changing rooms would be provided for employees.
- Preferred parking for low-emitting and fuel-efficient vehicles and installation of alternative-fuel fueling stations (e.g., electric charging stations).
- Roofing materials with a solar reflectance index (SRI) equal to or greater than SRI=78 for low-sloped roofs, for a minimum of 75% of the roof surface.
- Recycling facilities for cardboard, glass, plastics and metals.
- Development and implementation of a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials would be sorted on-site or comingled.
- Strategies that result in a 20+% reduction in water usage (not including irrigation).

GHG emissions were not directly addressed in the previous EIR. However, potential impacts related to GHG emissions do not constitute "new information" as defined by CEQA, as GHG emissions were known as potential environmental issues before 1994. Since the time the previous EIR was certified, the City has taken numerous actions towards promoting sustainability within the City, including efforts aimed at reducing GHG emissions. On February 14, 2012, the City adopted the City of Sacramento Climate Action Plan (CAP), which identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions.

The City's 2035 General Plan Update incorporates measures and actions from the City's Climate Action Plan (CAP) into Appendix B, General Plan CAP Policies and Programs. Appendix B includes all City-wide policies and programs that are supportive of reducing GHG emissions. The General Plan CAP Policies and Programs per the General Plan Update supersede the City's CAP. Rather than compliance and consistency with the CAP, all proposed projects must now be compliant and consistent with the General Plan CAP Policies and Programs, outlined in Appendix B. As such, the proposed project would be

required to comply with the General Plan CAP Policies and Programs set forth in the 2035 General Plan Update.

In addition to the City's 2035 General Plan CAP Policies and Programs, a number of regulations have been enacted since the previous EIR was certified for the purpose of, or with an underlying goal of, reducing GHG emissions, such as the California Green Building Standards Code (CALGreen Code) and the California Building Energy Efficiency Standards Code. Such regulations have become increasingly stringent since the previous EIR was certified. The proposed project would be required to comply with all current applicable regulations associated with GHG emissions, including the CALGreen Code and California Building Energy Efficiency Standards Code.

Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to air quality and greenhouse gas emissions any applicable mitigation measures set forth within the previous EIR would still be required for the proposed project. Mitigation measures included in the previous EIR that would be applicable to the proposed project include the following:

Mitigation Measure 3.2-1a: To reduce fugitive dust emissions, in compliance with Rule 403 of the Sacramento Metropolitan Air Quality Management District (SMAQMD), the following mitigation measures would be implemented during construction:

- All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover;
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant;
- When materials are transported off-site, they shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container;
- All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring;
- Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer or suppressant;
- On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph);

- Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site;
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent;
- Excavation and grading activities shall be suspended when winds exceed 20 mph; and
- The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.

Mitigation Measure 3.2-1b: To reduce nitrogen oxides (NO_x) and visible emissions from heavy-duty diesel equipment, the following measures would be implemented prior to and during construction:

- The project shall provide a plan for approval by the City of Sacramento and the SMAQMD demonstrating that the heavy-duty (≥ 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, would achieve project-wide fleet averages of 20-percent NOx reduction and 45-percent particulate reduction compared to the most recent California Air Resources Board (CARB) fleet average at the time of construction; and the project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, expect that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project sponsor shall provide the City and SMAQMD with the anticipated construction timeline (including start date), and name and telephone number of the project manager and on-site foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emissions diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or other options as they become available.

- The project shall ensure that emissions from off-road diesel-powered equipment used on the project site do not exceed 40-percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40-percent opacity (or Ringlemann 2.0) shall be repaired immediately, and the City and SMAQMD shall be notified within 48 hours of identification of noncompliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of

the project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The City and SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supersede other SMAQMD or state rules and regulations.

- The primary contractor shall be responsible for ensuring that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.

Biological Resources

The previous EIR determined that impacts to biological species, including sensitive species and their habitat, wetlands, and trees, would be less than significant. This is because the Kaiser South Sacramento Medical Center campus is completely developed with minimal landscaping and located in an urbanized area. There are no special-status species or habitat present on the campus. The proposed project would construct a new one-story, 42,000 sf ED building on a site that is currently developed with existing paved parking lots, a landscaped median containing non-native groundcover, shrubs, and trees, existing pathways, and a segment of an internal roadway. The project site contains 84 existing trees, 80 trees would be removed by the proposed project and replaced with approximately 99 new trees. As a condition of approval if tree removal occurs between February 15 and September 1 a preconstruction nesting bird survey would be conducted no more than 15 days prior to receipt of a tree permit. If active nests are found, a no-disturbance buffer shall be established around the tree, and monitored by a biologist to confirm no interference with nesting, or tree removal delayed until after the nesting season is over. The removal of any protected private trees would be subject to the City's Tree Preservation Ordinance (Ord. 2016-0026; City Code Chapter 12.56). The project site currently experiences heavy use by people driving, parking, and walking. Therefore, it is unlikely that any nesting birds or special-status species would use the site for foraging or habitation. The proposed project would not cause any new impacts, or previously identified impacts to become more severe than previously analyzed, related to biological resources.

Cultural and Tribal Cultural Resources

No significant cultural resources, including prehistoric or historic archaeological resources, were identified on or adjacent to the project site in the previous EIR. However, the previous EIR determined that the possibility to impact unknown cultural resources during construction activities still exists. The previous EIR concluded that with the implementation of mitigation measures, impacts to cultural resources would be less than significant. The proposed project would construct an ED building, improvements to the existing ED building, and transportation improvements on the project site. As the proposed project would be located in a disturbed area within the existing Kaiser South Sacramento Medical

Center campus, the potential of encountering previously unknown cultural resources during site development would not increase in severity as a result of the proposed project. Thus, impact conclusions related to cultural resources identified within the previous EIR would remain adequate for the proposed project and any applicable mitigation measures set forth within the previous EIR related to cultural resources would still be required for the proposed project. Mitigation measures included in the previous EIR that would be applicable to the proposed project include the following:

> **Mitigation Measure 14-1**: If subsurface archeological or historical remains are discovered during construction, work in the area shall stop immediately and a qualified archaeologist and a representative of the Native American Heritage Commission shall be consulted to develop, if necessary, further mitigation measures to reduce any archeological impact to a less than significant level before construction continues.
>
> **Mitigation Measure 14-2**: If human burials are encountered, all work in the area shall stop immediately and the Sacramento County Coroner's office shall be notified. If the remains are determined to be Native American in origin, both the Native American Heritage Commission and any identified descendants shall be notified and recommendations for treatment solicited.

Assembly Bill (AB) 52, passed in 2014, requires environmental review documents to disclose and analyze potential significant impacts to tribal cultural resources including sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. Lead agencies are also required to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requests to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

AB 52 applies to projects that have a Notice of Preparation (NOP), a notice of negative declaration filed, or mitigated negative declaration filed on or after July 1, 2015. The NOP for the previous EIR was filed on October 28, 2005, prior to implementation of AB 52. Therefore, AB 52 is not applicable to the proposed project. In addition, no cultural resources associated with California Native American tribes were identified in the previous EIR, and no comment letters were received from tribal representatives regarding the NOP or the previous EIR.

Energy

The previous EIR found that although energy resources would be permanently and continually consumed by the KPSSMC Expansion project, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of energy. The previous EIR determined that energy use would be reduced through the use of energy-efficient lighting and other energy conservation measures. Furthermore, the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric Company indicated that they have sufficient capacity to supply energy to the

Kaiser South Sacramento Medical Center Expansion project. Impacts related to energy use were determined to be less than significant.

The proposed project would construct a new ED building and implement renovations to the existing ED building. This would require additional energy use during construction and operation. The project site is presently developed, and utility lines serve the existing ED building and hospital. The new ED building would be served by the existing campus Central Utility Plant that provides air conditioning and heat. The project would require electricity for lighting and other hospital/medical-related activities. The project applicant has joined SMUD's Greenergy Program that supports developing renewable sources of energy. In the event of a power outage, emergency power would be provided by the hospital's existing emergency power generators. The project applicant has estimated the project would consume 57,464 kilowatt-hours per day of energy.

The proposed project is designed to minimize its carbon footprint and conserve water and energy usage. The proposed ED building would be designed to achieve LEED silver certification. Additionally, several energy conservation measures, including provision of solar panels and use of solar energy, inclusion of bicycle facilities for employees, preferred parking for low-emitting and fuel-efficient vehicles and installation of alternative-fuel fueling stations, energy-efficient roofing, recycling facilities, construction waste management, and water conservation measures (see full list above under the Air Quality and Greenhouse Gas Emissions discussion), would be implemented by the proposed project. Therefore, energy usage of the proposed project would not be unnecessary, inefficient, or wasteful, and the proposed project would not cause any new impacts, or previously identified impacts to become more severe than previously analyzed, related to energy use.

Seismicity, Soils and Geology

The previous EIR determined that although the KPSSMC Expansion project would result in the exposure of people to geologic or seismic hazards, all structures would be constructed to current Uniform Building Code (UBC) standards, which would minimize the potential for damage due to ground shaking. The previous EIR found that minimal grading and compaction of the site would be required because the campus has already been developed. Furthermore, compliance with Chapter 15.88 (Grading, Erosion and Sediment Control) of the City's municipal code, would ensure impacts related to soil erosion would be minimized. The previous EIR concluded that impacts to seismicity, soils, and geology would be less than significant. The proposed project would be required to follow UBC and California Building Code standards, which would reduce impacts from ground shaking and seismicity, along with impacts associated with other geologic hazards such as ground failure, landslides, unstable geologic units, and expansive soils. Additionally, the proposed project would be required to comply with Chapter 15.88 of the City's municipal code, which would reduce soil erosion impacts. As the project site is already developed with parking lots, roadways, pathways, and landscaping, it is anticipated that minimal grading and compaction of soils on the project site would be required. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to seismicity, soils and geology.

Hazards

Impacts related to hazards were determined to be less than significant by the previous EIR. As a medical facility, the proposed ED building would generate biohazards and minor amounts of toxic substances. The proposed ED facility, like all other medical facilities on the Kaiser South Sacramento Medical center campus, would comply with federal, state and local regulatory agency requirements for the use, handling and storage of hazardous materials, such as the requirements of the California Department of Toxic Substances Control, California Occupational Safety and Health Administration, National Institute of Health, and City of Sacramento Fire and Police Departments. Hazardous materials, including biohazards, would be transported, handled, stored, used, and disposed of in accordance with all applicable federal, state, and local statutes. The proposed project is confined to the existing medical campus and would not interfere with existing emergency evacuation plans or routes. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to hazards and hazardous materials.

Hydrology/Water Quality

The previous EIR determined that impacts to hydrology and water quality within the Kaiser South Sacramento Medical Center campus would be less than significant. The previous EIR found that because the area of impervious surface on the campus would not change significantly, and the KPSSMC Expansion project would not change the existing water absorption rate, drainage pattern, or rate and amount of surface runoff. Additionally, the KPSSMC Expansion project included installation of an on-site detention system for stormwater capture and treatment prior to conveyance into the City′s storm drain system. The campus was determined to be located within Federal Emergency Management Agency Flood Insurance Rate Map Zone X, which is an area of minimal flood hazard. The previous EIR determined that the KPSSMC Expansion project would not have impacts to stormwater and would not impact groundwater because it would be required to comply with the City′s Grading, Erosion, and Sediment Control Ordinance and the State′s National Pollution Discharge Elimination System (NPDES) General Permit and is not located in a groundwater recharge area.

The proposed project would remove existing paved parking lots, a large landscaped median, and a segment of a paved roadway and pathways. The removal of impervious area would be replaced with a one-story, 42,000 sf ED building. The amount of impervious area would essentially not change relative to existing conditions. The proposed project would not increase the impervious area on the project site and therefore would not change the existing drainage pattern or rate of runoff on the site. Stormwater from the project site would continue to drain into the campus' detention basin system before it enters the City's storm drain system. The campus is designated as Zone X and would not experience flood hazards. As the proposed project would be required to comply with the City's Grading, Erosion, and Sediment Control Ordinance and the State's NPDES Permit, it would not result in water quality impacts. The proposed project would obtain its water supply from the City and would not deplete groundwater supplies. Therefore, the proposed project would not result in any in new significant impacts or substantially more severe impacts related to hydrology and water quality.

Land Use and Planning

The previous EIR determined that the KPSSMC Expansion project would result in less than significant impacts on the present or planned land use of the project area and agricultural resources or operations. This finding was reached because the Kaiser South Sacramento Medical Center campus has been developed for over 20 years with a medical center and development proposed as part of the KPSSMC Expansion project would be consistent with the City's 2035 General Plan land use designation and zoning. The proposed project would involve the construction and operation of a new ED building, renovations to the existing ED building, and reconfiguration of the campus circulation system. The proposed project would be consistent with surrounding medical center uses, and the existing land use designation and zoning for the project site. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to land use and planning.

Noise

The previous EIR determined that potential short-term construction related, and long-term operational noise impacts would occur from development of the KPSSMC Expansion project. Noise impacts from short-term construction activities were determined to be less than significant with compliance with the City's Noise Ordinance, which exempts noise from construction activities between 7:00 a.m. and 6:00 p.m. Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday, and with implementation of Mitigation Measures 10-1, 10-2, and 10-3, identified below. Additionally, under Sacramento Municipal Code Section 8.68.080, any mechanical device, apparatus, or equipment (e.g., generators or ambulance sirens) related to or connected with emergency activities or emergency work are exempt from the City's Noise Ordinance. Therefore, operational noise associated with the ED was determined to be exempt. Long-term noise impacts were determined to be less than significant due to project design features, such as double-paned glass, that reduce noise impacts to on-site sensitive receptors, and Mitigation Measures 10-4, 10-5, and 10-6, which reduce noise associated with electrical and mechanical equipment, loading docks, and helicopters. Mitigation Measure 10-4 would be applicable to the proposed project and is included below. Operational noise associated with the project would include emergency vehicles accessing the proposed ED building, HVAC systems, and traffic noise on interior roads. On-site traffic noise would be similar to the existing noise environment in the project area and therefore would not create new impacts. As stated previously, noise generated from any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work is exempt from the City's Noise Ordinance. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to noise and any applicable mitigation measures set forth within the previous EIR would still be required for the proposed project. Mitigation measures included in the previous EIR that would be applicable to the proposed project include the following:

> **Mitigation Measure 10-1**: All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the Building Division.

Mitigation Measure 10-2: Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers, to the satisfaction of the Building Division.

Mitigation Measure 10-3: Stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the Building Division.

Mitigation Measure 10-4: Electrical and mechanical equipment (i.e., ventilation and air conditioning units) shall be located as far away as is feasible from sensitive receptor areas. Additionally, the following shall be considered prior to installation: proper selection and sizing of equipment, installation of equipment with proper acoustical shielding, and incorporating parapets into the building design.

Population and Housing

The original KPSSMC Expansion project planned for the expansion of the existing campus by 244,000 sf, thereby increasing the entire building space at the Medical Center to approximately 793,500 sf. The previous EIR determined that impacts to population and housing would be less than significant, because development proposed on the campus was consistent with the underlying land use designation and zoning and would not induce population growth. The proposed project would involve construction and operation of a new ED building, renovations to the existing ED building, and reconfiguration to the entrance to this portion of the campus. The proposed project would serve a growing local population but would not directly or indirectly induce substantial growth on its own. The proposed project would accommodate a 50% increase in patient visitation and staffing needs over current conditions within ten years. This would result in an increase of 60 employees. These new employees would likely come from the local population. Furthermore, the project does not propose housing and would not displace existing housing or people. Therefore, the proposed project would not result in any changes to the previous EIR associated with population and housing.

Public Services and Recreation

The previous EIR found impacts to public services to be less than significant. The proposed project would comply with the UBC, the California Building Code, OHSA, and the City's building requirements to ensure occupant safety in the event of a fire, such as fire department equipment storage rooms, fire suppression systems, automatic sprinklers, smoke detection systems, and fire separation doors. Even though the proposed project would support an increase in employees that may increase demand for fire and police protection services, it would not require the addition of new police and fire personnel requiring the construction of new or altered police or fire facilities. The proposed project would not cause an increase in population or housing. Therefore, it would not affect existing or proposed schools or recreation facilities. The proposed project's demands related to police and fire protection, schools, and recreation facilities would not be expected to increase substantially as a result of the proposed project and the proposed project would not result in new significant impacts or substantially more severe impacts related to public services.

Utilities

The City's Department of Utilities determined that the KPSSMC Expansion project would not result in significant impacts to existing local or regional water supply facilities, or the need for any new major local or regional water treatment facilities. Additionally, the previous EIR found that there would be a less-than-significant impact on the Sacramento Regional Sanitation District's sewer facilities. The KPSSMC Expansion project was determined to have a less-than-significant impact on storm drainage facilities because it incorporated an on-site stormwater detention system and could be adequately supported by the City's existing facilities. Additionally, the previous EIR determined that solid waste impacts would be less than significant.

The Kaiser South Sacramento Medical Center campus is currently served by several existing water lines, including dedicated domestic water, fire, boosted fire, and irrigation lines. It is anticipated that the existing 8-inch domestic water lines, within Wyndham Drive, would be maintained and re-routed. In accordance with City standards, water and irrigation lines would be metered with City approved backflow devices. The project's fire service water system would include new 6- to 8-inch lines installed outside of the new building footprint, and would require thrust restraints. On-site private fire hydrants and individual building fire sprinkler services would be served by the on-site system. The proposed project would construct a new ED building located immediately adjacent to the existing ED building. The proposed project also includes partially renovating the existing ED and reconfiguring vehicle access and circulation to the ED. The addition of the proposed new ED building would not significantly increase the total square footage planned for the Kaiser South Sacramento Medical Center campus in the previous EIR. It is anticipated that the City would have adequate water supply and treatment capacity to accommodate the new ED building and associated landscaping, and impacts to water supply and treatment facilities would be less than significant.

Existing 8-inch and 10-inch sanitary sewer lines serve the portion of the campus where the project site is located. These lines connect to an existing 10-inch line within Wyndham Drive which would be retained. A new 10-inch sewer line would be constructed around the footprint of the proposed ED building that would tie into the existing 10-inch line that connects to the 10-inch sewer line in Wyndham Drive. The existing 8-inch sewer line would potentially be removed. As the proposed project is consistent with the assumptions of the previous EIR and would not substantially increase the total square footage of building space on the campus, it can be assumed that the project would not constrain sewer conveyance and treatment capacity at Regional Sans wastewater treatment plant such that new or expanded facilities would be required. Therefore, impacts to sewer systems would be less than significant.

The project site is currently served by existing 12-inch and 15-inch storm drain lines, which connect to an existing 21-inch line within Wyndham Drive. A majority of the existing storm drain system would be removed and replaced and a new storm drain connection installed to serve this portion of the campus. Consistent with City requirements, all runoff from the project site would be pre-treated prior to being released into the City's storm drain infrastructure. Water runoff from paved areas would be directed to bio-treatment areas or curb inlets. Water runoff from the building roof would be directed to bio-treatment, to the

maximum extent practical. The bio-treatment areas would serve as pretreatment for storm water runoff. Permanent treatment measures would be sized to treat the two-year storm event to meet the City's NPDES post-construction requirements. The treatment areas and on-site piping system would be designed to convey a 10-year storm event. Overland release would be provided to convey runoff in the event the on-site drainage system does not function properly. Anticipated pipes sizes, on-site, would be 12-inch and 15-inch. The proposed project would follow all requirements for on-site storm drainage and would not produce storm water runoff that would exceed the City's storm drainage capacity. Therefore, impacts to storm drainage would be less than significant.

The proposed project would follow all requirements for the disposal and diversion of solid waste during construction and operation. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts related to utilities.

Wildfire

The CEQA Appendix G Checklist was updated on December 28, 2018, to include questions related to fire hazard impacts for projects located in or near state responsibility areas or lands classified as very high fire hazard severity zones by the California Department of Forestry and Fire Protection (CAL FIRE). Although the previous EIR did not analyze wildfire hazard impacts, an analysis of these impacts is included here in accordance with the 2018 CEQA Guidelines Update. The project site is located within an urbanized area on the Kaiser South Sacramento Medical Center campus within the City. The project site is completely surrounded by development and does not contain any sources of fuel (e.g., large stands of trees or areas of dry vegetation).There are no very high fire hazard severity zones, as classified by CAL FIRE, within or near the project site, or within the City. Therefore, the proposed project would not exacerbate wildfire risks or expose project occupants to wildfire risks. The proposed project would comply with the California Fire Code, California Building Code, and City Code, which require adequate fire access and fire suppression features such as fire department equipment storage rooms, fire suppression systems, automatic sprinklers, smoke detection systems, and fire separation doors. Therefore, the proposed project would have a less-than-significant impact related to wildfire hazards.

Environmental Findings

Based on the above evaluation, the proposed project would not cause any new impacts, or previously identified impacts to become more severe than previously analyzed. The feasibility of mitigation measures or alternatives previously identified would not be modified with implementation of the proposed project, and different mitigation measures or alternatives from those previously identified are not proposed or necessary as a result of the proposed project. As a result, new information of substantial importance, which was not known and could not have been known at the time the previous CEQA documents were prepared, has not come to light from what has been previously analyzed.

Conclusion

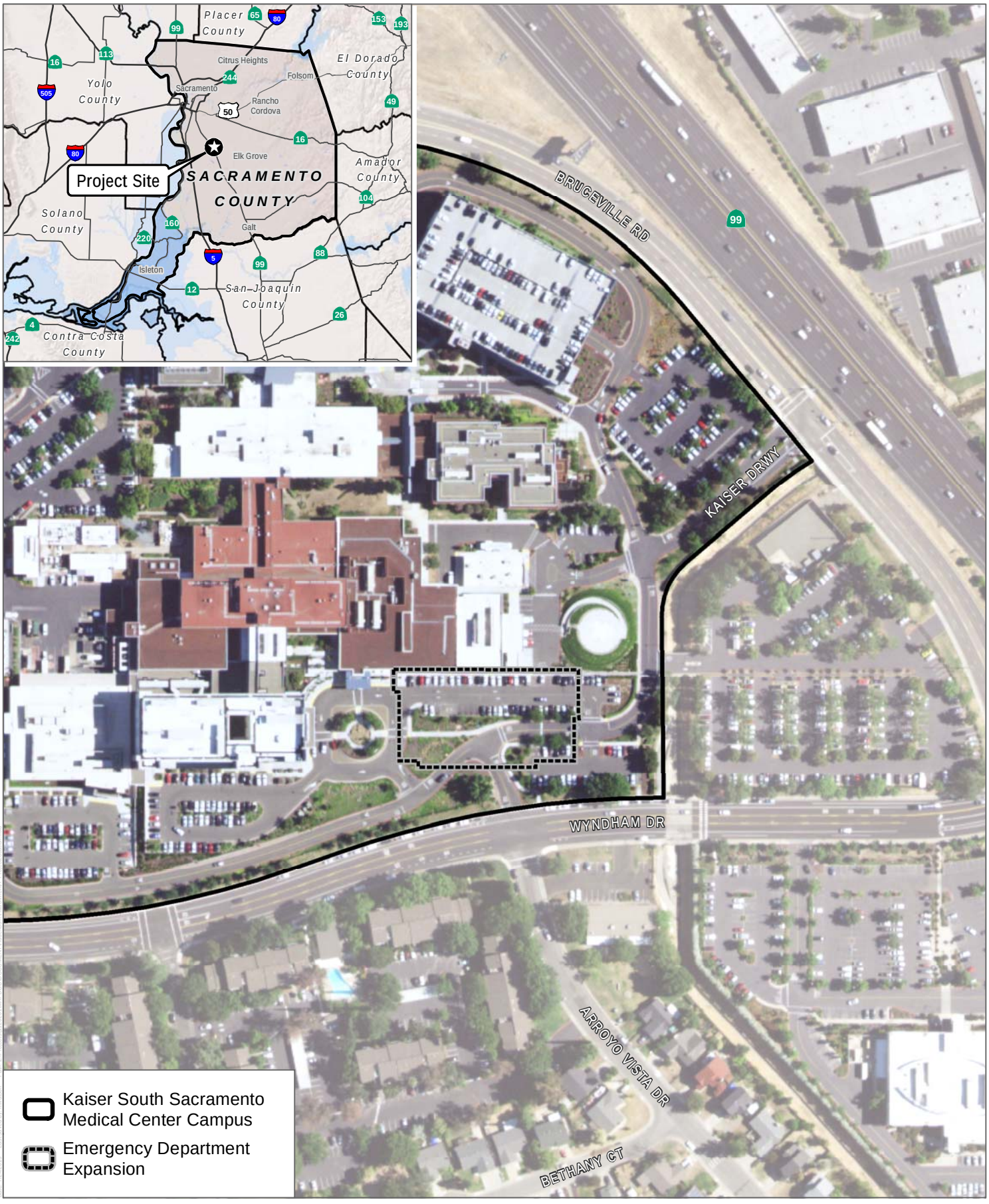
As established in the evaluation above regarding the potential effects of the proposed project, substantial changes are not proposed nor have any substantial changes occurred that would require major revisions to the certified Kaiser South Sacramento Medical

Center Expansion EIR. Impacts beyond those identified and analyzed in the previous EIR would not be expected to occur as a result of the proposed project. Overall, the proposed project would not result in any new information of substantial importance that could result in new, more severe impacts, new mitigation measures, or new or revised alternatives from what was identified in the previous EIR.

Therefore, the Community Development Department concludes that the analyses conducted and the conclusions reached in the EIR certified on July 13, 2006, remain valid. As such, the proposed project would not result in any conditions identified in CEQA Guidelines Sections 15162 or 15163, and supplemental environmental review or a subsequent EIR is not required for the proposed project. Again, it should be noted that the proposed project would be subject to all applicable previously required mitigation measures from the previous EIR. Based on the above analysis, this Addendum to the previously-adopted EIR for the project has been prepared.

Attachments:

A) Vicinity Map
B) Site Plan
C) Kaiser South Sacramento Medical Center Expansion project MMP
D) Parking and Circulation Study for the Kaiser South Sacramento Medical Center Emergency Department Expansion



SOURCE: Sacramento County 2017, Hellmuth, Obata + Kassabaum, Inc. 2019, NAIP 2016

DUDEK

0 100 200 Feet

ATTACHMENT A

Project Location

Kaiser South Sacramento Medical Center Campus Emergency Department Expansion Project

SOURCE: Hellmuth, Obata + Kassabaum, Inc. 2019

ATTACHMENT B

Site Plan

Kaiser South Sacramento Medical Center Campus Emergency Department Expansion Project

DUDEK

Attachment C

CHAPTER 10 – MITIGATION MONITORING PLAN

10.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires public agencies to establish monitoring and reporting programs to ensure compliance with mitigation measures that are adopted or made conditions of project approval to mitigate or avoid significant environmental effects identified in the EIR. This Mitigation Monitoring Plan (MMP) will assist the City in its implementation and monitoring of mitigation measures adopted for the Kaiser South Sacramento Medical Center Expansion (project).

10.2 MITIGATION MEASURES

The mitigation measures in the MMP are those identified in the Draft EIR and Initial Study prepared for the project (Appendix A of the Draft EIR), and are numbered accordingly. The MMP describes the actions that must be taken to implement each mitigation measure, the timing of those actions, and the entities responsible for implementing and monitoring the actions.

10.3 MMP COMPONENTS

Table 10-1, Mitigation Monitoring Plan, consists of the following:

- Impact: This column summarizes the impact identified in the Draft EIR or Initial Study.
- Mitigation Measure: All mitigation measures identified in the Draft EIR are presented and numbered accordingly. In addition, mitigation measures from the Initial Study are identified by topic and number.
- Action: For every mitigation measure, one or more actions are described. The listed actions identify how the mitigation measures will be implemented. Where mitigation measures are particularly detailed, the action may refer back to the measure.
- Implementing Party: The entity responsible for carrying out the required action is identified in this column.
- Timing: The timing for each measure is identified. Each action must take place prior to the time at which a threshold of significance could be exceeded. Implementation of the action must occur prior to or during project approval, design or construction, or on an on-going basis.
- Monitoring Party: The City is responsible for ensuring that most mitigation measures are successfully implemented. Within the City, different departments and divisions will have responsibility for monitoring various aspects of the overall project. Occasionally, monitoring parties outside the City are identified; these parties are referred to as "Responsible Agencies" by CEQA.

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Table 10-1: Mitigation Monitoring Plan

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
Initial Study Section 10 Noise					
Impact Noise-1: Construction of the proposed project would increase short-term noise levels in the project vicinity.	**Mitigation Measure 10-1:** All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the Building Division.	Contractor maintains construction equipment; City conducts periodic field inspections during construction.	Project sponsor	On-going during construction	City of Sacramento, Building Division; City of Sacramento Building Inspector
	Mitigation Measure 10-2: Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers, to the satisfaction of the Building Division.	Contractor places equipment away from sensitive receivers; City conducts periodic field inspections during construction.	Project sponsor	On-going during construction	City of Sacramento, Building Division; City of Sacramento Building Inspector
	Mitigation Measure 10-3: Stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the Building Division.	Contractor locates staging areas away from sensitive receptors; City conducts periodic field inspections during construction.	Project sponsor	On-going during construction	City of Sacramento, Building Division; City of Sacramento Building Inspector
Impact Noise-2: Operation of the proposed project would result in long-term noise impacts on sensitive receptors.	**Mitigation Measure 10-4:** Electrical and mechanical equipment (i.e., ventilation and air conditioning units) shall be located as far away as is feasible from sensitive receptor areas. Additionally, the following shall be considered prior to installation: proper selection and sizing of equipment, installation of equipment with proper acoustical shielding, and incorporating parapets into the building design.	Project sponsor submits plans detailing location of electrical and mechanical equipment for review and approval; project sponsor considers selection, size, acoustical shielding and parapets in project design; City reviews plans and approves.	Project sponsor	Prior to issuance of building permits	City of Sacramento, Building Division
	Mitigation Measure 10-5: Loading docks within the project area shall be designed to have either a depressed (i.e., below- grade) loading dock area, an internal bay, or a wall to break the line of sight between noise-sensitive uses and loading operations. During the final site design process, an acoustical consultant shall determine whether operation of the loading docks would result in noise levels that exceed City	Project sponsor submits plans detailing location of loading docks for acoustical consultant determination; noise attenuation mitigation measures incorporated and submitted for review and approval as necessary.	Project sponsor	Prior to issuance of building permits	City of Sacramento, Building Division

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	standards at exterior on- or off-site sensitive uses. If it is determined that the design is not sufficient, proper noise attenuation mitigation measures shall be incorporated into the plans to be submitted by the project sponsor to the City for review and approval, prior to the issuance of building permits.				
	Mitigation Measure 10-6: Helicopter flight paths shall follow busy roadways so that the road traffic masks the helicopter noise. Low-altitude flyovers shall be avoided, especially above residential property. The hospital shall ensure that patients who require sleep or are more sensitive to noise are located away from the side of the building facing the Helipad.	Project sponsor submits plans detailing helicopter flight paths and the location of departments within the Hospital Tower for review and approval.	Project sponsor	Prior to issuance of building permits	City of Sacramento, Development Services Department
Initial Study Section 14 Cultural Resources					
Impact Cultural Resources-1: Construction of the proposed project may result in impacts to unknown or undiscovered cultural resources.	**Mitigation Measure 14-1:** If subsurface archaeological or historical remains are discovered during construction, work in the area shall stop immediately and a qualified archaeologist and a representative of the Native American Heritage Commission shall be consulted to develop, if necessary, further mitigation measures to reduce any archaeological impact to a less than significant level before construction continues.	Contractor stops work; qualified archaeologist and Native American Heritage Commission representative develop mitigation measures as necessary.	Project sponsor	During construction	City of Sacramento, Development Services Department; Native American Heritage Commission
	Mitigation Measure 14-2: If human burials are encountered, all work in the area shall stop immediately and the Sacramento County Coroner's office shall be notified. If the remains are determined to be Native American in origin, both the Native American Heritage Commission and any identified descendants shall be notified and recommendations for treatment solicited (CEQA Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and 5097.98).	Contractor stops work and notifies County Coroner's office; Native American Heritage Commission and identified descendants notified and recommendations made as necessary.	Project sponsor	During construction	City of Sacramento, Development Services Department; County Coroner; Native American Heritage Commission

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
Draft EIR Section 3.2 Air Quality					
Impact 3.2-1: Construction of the proposed project would generate emissions of particulate matter less than or equal to 10 microns in diameter (PM_{10}) and ozone precursors.	**Mitigation Measure 3.2-1a:** To reduce fugitive dust emissions, in compliance with Rule 403 of the Sacramento Metropolitan Air Quality Management District (SMAQMD), the following mitigation measures would be implemented during construction: • All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover; • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant; • When materials are transported off-site, they shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container; • All operations shall limit or expeditiously remove the accumulation of project- generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring; • Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical	Contractor implements fugitive dust control measures as listed during construction. City conducts periodic field inspections during construction.	Project sponsor	During construction	City of Sacramento, Building Division; City of Sacramento Building Inspector; SMAQMD

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	stabilizer or suppressant; • On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph); • Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site; • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent; • Excavation and grading activities shall be suspended when winds exceed 20 mph; and • The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.				
	Mitigation Measure 3.2-1b: To reduce nitrogen oxides (NO_X) and visible emissions from heavy-duty diesel equipment, the following measures would be implemented prior to and during construction: • The project shall provide a plan for approval by the City of Sacramento and the SMAQMD demonstrating that the heavy-duty (≥50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, would achieve project-wide fleet averages of 20-percent NO_X reduction and 45-percent particulate	Project sponsor submits plan for review and approval; contractor maintains equipment; City conducts periodic field inspections during construction.	Project sponsor	Plans submitted prior to issuance of building permits; on-going during construction	City of Sacramento, Building Division; City of Sacramento Building Inspector; SMAQMD

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	reduction compared to the most recent California Air Resources Board (CARB) fleet average at the time of construction; and the project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project sponsor shall provide the City and SMAQMD with the anticipated construction time line (including start date), and name and telephone number of the project manager and on-site foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or other options as they become available.	Project sponsor submits inventory for review. Project sponsor submits construction time line and project manager and foreman information.	Project sponsor Project sponsor	Monthly during construction At least 48 hours prior to use of subject heavy-duty off-road equipment	City of Sacramento, Building Division City of Sacramento, Building Division; SMAQMD
	• The project shall ensure that emissions from off-road diesel-powered equipment used on the project site do not exceed 40-percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40-percent opacity (or Ringlemann 2.0) shall be repaired immediately, and the City and SMAQMD shall be notified within 48	Project sponsor makes repairs and notifies City and SMAQMD as necessary.	Project sponsor	Within 48 hours of identification of noncompliant equipment	City of Sacramento, Building Division; SMAQMD

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
	hours of identification of noncompliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The City and SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supersede other SMAQMD or state rules and regulations.	Project sponsor visually surveys in-operation equipment and submits summary for review.	Project sponsor	Surveys at least once a week; reports monthly	City of Sacramento, Building Division; SMAQMD
	• The primary contractor shall be responsible for ensuring that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.	City conducts periodic field inspections during construction.	City of Sacramento, Building Division	During construction	City of Sacramento, Building Division; City of Sacramento Building Inspector
Draft EIR Section 3.3 Transportation and Circulation					
Impact 3.3-1: Bruceville Road/Kaiser Access – Baseline Plus-Project Conditions – The addition of traffic associated with the proposed project would degrade the LOS at this intersection from LOS A to LOS F during the AM peak hour.	**Mitigation Measure 3.3-1:** Prior to the completion of Phase 3B, the project sponsor shall install a traffic signal at the Bruceville Road/Kaiser Access intersection and the eastbound (Kaiser Access) approach shall be reconfigured to include a right-turn lane and a left-turn lane.	Project sponsor installs traffic signal; project sponsor submits plan for reconfiguration for review and approval.	Project sponsor	Prior to the completion of Phase 3B	City of Sacramento, Department of Development Services, Development Engineering and Department of Transportation
Impact 3.3-2: Mack Road/Valley Hi Drive - La Mancha Way – Baseline Plus-Project Conditions – The addition of traffic associated with the proposed project would degrade the LOS at this	**Mitigation Measure 3.3-2:** Prior to the completion of Phase 3B, the project sponsor shall pay the City of Sacramento to adjust the PM peak-hour traffic signal phase timing (maximum green-light time) on the northbound, southbound, and eastbound	Project sponsor provides funding for adjustment to traffic signal phase timing.	Project sponsor	Prior to the completion of Phase 3B	City of Sacramento, Department of Development Services, Development Engineering and Department of

Impact	Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
intersection from LOS C to LOS D during the PM peak hour.	approach left-turn and through movements to match projected traffic demands.				Transportation
Impact 3.3-3: Bruceville Road/ Kaiser Access – Year 2025 Plus-Project Conditions – The addition of traffic associated with the proposed project would degrade the LOS at this intersection from LOS A to LOS F during the AM peak hour and from LOS C to LOS D during the PM peak-hour.	Prior to the completion of Phase 3B, the project sponsor shall implement Mitigation Measure 3.3-1.	Project sponsor installs traffic signal per Mitigation Measure 3.3-1.	Project sponsor	Prior to the completion of Phase 3B	City of Sacramento, Department of Development Services, Development Engineering and Department of Transportation
Impact 3.3-4: Cosumnes River Boulevard/Bruceville Road – Year 2025 Plus-Project Conditions – The addition of traffic associated with the proposed project would add more than 5 seconds of delay to the PM peak-hour operations (LOS F).	**Mitigation Measure 3.3-4:** Prior to the completion of Phase 3B, the project sponsor shall pay the City of Sacramento to adjust the PM peak-hour traffic signal timing by increasing the phase time (maximum green-light time) on the eastbound, westbound, and southbound approach through and left-turn movements, and decreasing the phase time on the northbound approach movements (maximum green-light time) to match projected traffic demands.	Project sponsor provides funding for adjustment to traffic signal phase timing.	Project sponsor	Prior to the completion of Phase 3B	City of Sacramento, Department of Development Services, Development Engineering and Department of Transportation
Impact 3.3-5: Cosumnes River Boulevard/SR 99 Southbound Off-Ramp – Year 2025 Plus-Project Conditions – The addition of traffic associated with the proposed project would add more than 5 seconds of delay to the AM peak-hour traffic intersection operations (LOS F).	**Mitigation Measure 3.3-5:** Prior to the completion of Phase 3B, the existing SR 99 southbound off-ramp to Cosumnes River Boulevard approach shall be restriped to allow for a left-turn lane, shared left-turn/right-turn lane, and a right-turn lane, and the cycle length at the intersection shall be increased by ten seconds during the PM peak hour.	Project sponsor restripes off-ramp and provides funding to adjust traffic signal timing.	Project sponsor	Prior to the completion of Phase 3B	City of Sacramento, Department of Development Services, Development Engineering and Department of Transportation

Attachment D

FEHR PEERS

MEMORANDUM

Date: March 26, 2019

To: Belinda Young, HOK

From: Neil Smolen & John Gard, Fehr & Peers

Subject: Parking and Circulation Study for the Kaiser South Sacramento Medical Center Emergency Department Expansion

RS18-3654

This memorandum documents our transportation analysis of the proposed Emergency Department (ED) expansion at the Kaiser South Sacramento Medical Center (KSSMC) campus in Sacramento, CA. The KSSMC campus is located directly west of State Route (SR 99) and bounded by Bruceville Road, Valley Hi Drive, and Wyndham Drive. This study analyzes expected transportation conditions with the proposed expansion in place under existing conditions. Parking supply and internal circulation are also evaluated.

This memorandum is organized into the following seven sections:

I. Project Description
II. Analysis Methodology
III. Significance Criteria for ED Expansion Traffic Impacts
IV. Existing Conditions
V. Project Travel Characteristics
VI. Existing Plus Project Conditions
VII. Recommendations

All figures and technical calculations are contained in the attached appendices.

I. Project Description

The ED expansion is proposed for construction in the southeast portion of the KSSMC campus (refer to Figure 1 in Appendix A for the project location within the KSSMC campus). The proposed

expansion consists of 41,525 square feet of hospital space that would be occupied by an expanded emergency department, additional intensive care space, and other supportive uses. A new porte-cochere (i.e., vehicle drop-off/pick-up) would be constructed on the east side of the building and west of the existing ring road. The project would utilize real estate currently occupied by Lot 7, Lot 9A, and the ring road, and would require the existing ring road, roundabout, and Wyndham Driveway (located adjacent to the current ED and South Tower entrances) to be reconfigured. This reconfiguration would require the existing Kaiser Driveway on to Wyndham Drive to be relocated approximately 250 feet to the west. Additionally, a portion of Lot 8 (currently designated as staff parking) would be converted to ED parking. Refer to Appendix B for the project site plan and Figure 3 for a map showing parking lot numbering, ring road alignment, and driveways.

II. Analysis Methodology

This study analyzes traffic operations using level of service (LOS) as the primary measure of performance. Motorized vehicle LOS is a qualitative measure of traffic flow from the perspective of motorists and is an indication of the comfort and convenience associated with driving. Typical factors that affect motorized vehicle LOS include speed, travel time, traffic interruptions, and freedom to maneuver. Empirical LOS criteria and methods of calculation are documented in the *Highway Capacity Manual (HCM)* published by the Transportation Research Board of the National Academies of Science (Transportation Research Board, 2017). The HCM defines six levels of service ranging from LOS A (representing free-flow vehicular traffic conditions with little to no congestion) to LOS F (oversaturated conditions where traffic demand exceeds capacity resulting in long queues and delays). The LOS definitions and calculations contained in the HCM are the prevailing measurement standard used throughout the United States and are used in this study. Table 1 summarizes intersection LOS criteria for both signalized and unsignalized intersections.

TABLE 1 INTERSECTION LOS CRITERIA			
LOS	**Description**	**Average Control Delay (seconds per vehicle)[1]**	
		Unsignalized Intersections	**Signalized Intersections**
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10	≤ 10
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	> 10 to 15	> 10 to 20
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	> 15 to 25	> 20 to 35
D	Represents high-density, but stable flow.	> 25 to 35	> 35 to 55
E	Represents operating conditions at or near the capacity level.	> 35 to 50	> 55 to 80
F	Represents forced or breakdown flow.	> 50	> 80

Source:
1. *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Science, 2017.

Data Collection

Intersection Traffic Counts

We collected AM (6:30-9:00) and PM (3:00-6:00) peak period vehicle, bicycle, and pedestrian counts at the six intersections listed below on Thursday, April 5, 2018. During the time that the counts were collected, local schools were in session and we observed no unusual traffic events. Kaiser representatives indicated that overall campus activity was typical based on patient census counts and scheduled activities.

1. SR 99 Off Ramp-Alta Valley Drive / Mack Road
2. Valley Hi Drive / Bamford Drive / Bruceville Road
3. SR 99 Off Ramp/ Bruceville Road
4. Bruceville Road / Wyndham Drive
5. Valley Hi Drive / Wyndham Drive

6. Bruceville Drive / Cosumnes River Blvd

We also collected AM (6:00-9:00) and PM (2:00-6:00) peak period traffic counts at the following intersections for purposes of measuring the campus' existing trip generation. Note that these counts include a greater time duration to ensure that the count period captures the campus' peak trip generation period.

7. Kaiser Driveway / Alta Valley Drive / Bruceville Road
8. Kaiser Driveway / Bruceville Road
9. Kaiser Driveway / Valley Hi Drive
10. Kaiser Driveway / Wyndham Drive
11. Wyndham MOB Driveway / Wyndham Drive

Figure 2 displays the existing AM (7:30-8:30) and PM (4:15-5:15) peak hour traffic volumes (as measured by adjacent street traffic), lane configurations, and traffic control at the eleven study intersections. Also displayed in Figure 2 are the AM and PM peak hour traffic volumes for the four additional KSSMC campus intersections below.

101. Ring Road/Wyndham Drive
102. Ring Road/Lot 7/Lot 9A
103. Ring Road/Lot 8
104. Ring Road/Bruceville Driveway

ED Roundabout Vehicle and Person Group Counts

We collected vehicle and person group counts at the existing ED/South Tower roundabout as shown in Table 2. This data was collected for purposes of estimating the ED expansion parking and travel characteristics, which are described later.

TABLE 2
PEAK HOUR VEHICLE AND PERSON GROUP COUNTS[1]
ED/SOUTH TOWER ROUNDABOUT

Facility	Pick-up/Drop-off Vehicles (3:30 – 4:00 PM)[2]	Person Groups (3:30 – 4:00 PM)[3]		
		In	Out	Total
South Tower	28	32	47	79
Emergency Department	10	14	14	28
Total	38	46	61	107

Notes:

1. Counts are based on field observations from 3:30-4:00pm on Wednesday, May 23, 2018.
2. Includes vehicles that picked up or dropped off a patient within the roundabout. Vehicle counts exclude vehicles travelling through the pick-up/drop-off area to access adjacent parking lots (i.e., Lot 9).
3. Person groups include those who arrived via pick-up/drop-off vehicle (either from the roundabout or via walking from a nearby lot)

Source: Fehr & Peers, 2018.

Based on Table 2, the existing ED generates approximately 30 inbound person-group trips and 30 outbound person-group trips during the afternoon peak hour, which is considered the busiest hour of travel to/from the ED.

Parking Inventory

We conducted an inventory of existing on-site parking spaces by space type (e.g., handicapped, general purpose, carpool, valet, and reserved). As part of this inventory, we conducted parking utilization surveys on Thursday, April 5, 2018 on an hourly basis from 8:00 AM to 6:00 PM inclusive. The results of the parking inventory are provided in the Existing Conditions section.

Field Observations

We conducted four field visits during the course of the study. The purpose of the field visits was to observe general traffic conditions, pedestrian flows, and parking utilization, as well as to collect supplemental traffic counts at intersections on the KSSMC campus to estimate roundabout and ring road traffic and pedestrian flows.

We also verified traffic control devices, lane configurations, and turn pocket lengths at the study intersections, as well as recording observed maximum queue lengths for the following intersections:

- SR 99 SB Off-Ramp / Bruceville Road intersection – southbound maximum queue of approximately 300 feet during the AM peak hour

- SR 99 SB Off-Ramp / Mack Road intersection – northbound maximum queue of approximately 600 feet during the PM peak hour
- Bruceville Road / Cosumnes River Boulevard intersection – westbound maximum queue of approximately 1,100 feet during the PM peak hour

The above locations were selected for maximum queue length observations based on significant (i.e., 300 feet or greater) existing queue lengths and input from Kaiser administrators.

III. Significance Criteria for ED Expansion Traffic Impacts

Based on Policy M.1.2.2 in the City of Sacramento's *2035 General Plan*, a significant traffic impact at an intersection would occur when:

- The traffic generated by a project degrades peak period LOS from A, B, C or D (without project) to E or F (with project); or
- The LOS (without project) is E or F, and project-generated traffic increases the peak period average vehicle delay by five seconds or more.

Policy M1.2.2 also includes an exemption to the above LOS standards for intersections that are within ½ mile walking distance of light rail stations.

For SR 99 ramp terminal intersections, the SR 99 *Transportation Concept Report (TCR)* (Caltrans, 2017) designates a concept LOS F for the segment of SR 99 within the study area.

Based on the above policies, the following LOS thresholds were identified for the study intersections:

- The SR 99 Off Ramp / Mack Road / Alta Valley Drive intersection has a minimum operating standard of LOS F based on the SR 99 TCR.
- The Bruceville Road / Cosumnes River Boulevard intersection is exempt from an LOS standard because it is within ½ mile walking distance of the Cosumnes River College light rail station based on City of Sacramento General Plan Policy M.1.2.2.
- All other study intersections have minimum operating standard of LOS D.

The first two bullets describe policies that allow these intersections to operate at LOS F. However, such conditions should not be detrimental toward 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, transportation demand management, emergency response, and other circulation considerations. Therefore, while a single intersection operating at LOS F during the peak hour 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 this significance criterion focuses on the totality of system operations to assess consistency with applicable policies.

Parking Requirements Under City Code

This section compares parking supply with and without the ED Expansion to parking requirements under Sacramento City Code. Sacramento City Code 17.608.030B identifies vehicle parking requirements by parking districts and land use. The Sacramento City Code designates the KSSMC campus as an "urban" parking district with hospital and medical office uses. The bulleted list below summarizes relevant parking requirements under City Code.

City Code 17.608.030B

- Hospital: one space per patient bed
- Medical office: one space per 2,000 gross square feet of building space

IV. Existing Conditions

This section describes the existing transportation system including the roadway, bicycle, pedestrian, and transit systems within the study area.

Intersection Operations

Intersection operations were analyzed using SimTraffic, the simulation add-on to Trafficware's Synchro 9 software package. SimTraffic considers the effects of signal coordination, vehicle queue spillbacks between intersections, and variation in driver and vehicle types. To ensure that the SimTraffic model accurately reflects operating conditions at the study intersections, the SimTraffic model was calibrated to the observed peak hour turn movement volumes and queue lengths using model inputs related to driver behavior. Table 3 displays the existing AM and PM peak hour delay and LOS at the eleven study intersections (refer to Technical Appendix C for detailed calculations).

TABLE 3
INTERSECTION LOS – EXISTING CONDITIONS

Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS	Delay[2]	LOS
1. SR 99 SB Off Ramp / Mack Road / Alta Valley Dr	Signal	9	A	43	D
2. Valley Hi Drive / Bruceville Road	Signal	19	B	24	C
3. SR 99 SB Ramps / Bruceville Road	Signal	20	C	19	B
4. Bruceville Road / Wyndham Drive	Signal	13	B	16	B
5. Valley Hi Drive / Wyndham Drive	SSSC	2 (8)	A (A)	3 (11)	A (B)
6. Bruceville Road / Cosumnes River Blvd	Signal	39	D	57	E
7. Kaiser Driveway / Alta Valley Drive / Bruceville Road	Signal	23	C	29	C
8. Kaiser Driveway / Bruceville Road	Signal	12	B	8	A
9. Kaiser Driveway / Valley Hi Drive	SSSC	1 (1)	A (A)	1 (2)	A (A)
10. Kaiser Driveway / Wyndham Drive	SSSC	3 (6)	A (A)	4 (8)	A (A)
11. Wyndham MOB Driveway / Wyndham Drive	SSSC	2 (5)	A (A)	2 (6)	A (A)

Notes:
1. SSSC = side-street stop controlled.
2. For signalized intersections, delay (sec/veh) and LOS is reported for the overall intersection. For SSSC intersections, delay and LOS is reported for the overall intersection and worst-case movement in parentheses.

Source: Fehr & Peers, 2018.

Per City of Sacramento impact study guidelines, a peak hour factor (PHF) of 1.0 was applied to the study network, meaning reported conditions represent the average delay over the course of the entire peak hour. In contrast, when the observed PHF is applied, conditions are representative of the busiest 15 minutes of the peak hour. Thus, conditions at certain intersections and driveways may appear worse during the busiest 15 minutes of the day than are shown in Table 3.

As seen in Table 3, all intersections operate acceptably during the AM and PM peak hours. However, the existing peak hour operations analysis results show moderate levels of vehicle queuing, which is consistent with the maximum queue length observations described above. These queues primarily occur in the inbound direction during the AM peak hour (relative to the KSSMC campus) and the outbound direction during the PM peak hour. These queues include:

- SR 99 Off-Ramp / Bruceville Road intersection – maximum southbound queue of 300 feet during the AM peak hour

- SR 99 Off-Ramp / Mack Road intersection - maximum northbound queue of 675 feet during the PM peak hour
- Bruceville Road / Cosumnes River Boulevard intersection – maximum northbound queue of 450 feet during the AM peak hour
- Bruceville Road / Cosumnes River Boulevard intersection – maximum westbound queue of 1,150 feet during the PM peak hour

Internal Circulation Adjacent to Existing ED

We observed vehicles entering/exiting the roundabout near the main ED entrance, as well as circulation within the roundabout itself. Patient pick up/drop off is designated on both sides of the roundabout near the main entrance, and most vehicles were observed to be able to access these areas with minimal delay. Although the roundabout operated in a relatively unconstrained manner, it was also observed to be used as both a short-term waiting area as well as long-term parking (i.e., vehicles parked at curb with no driver present). During the AM peak hour, nine unattended vehicles were simultaneously parked on the interior curb of the roundabout.

Vehicle queuing/idling within Lot 9A and Lot 7 was common during both the AM and PM peak hours due to stopped vehicles waiting for an available parking space. Queuing within the parking areas was not significant to the extent that it prevented vehicles from accessing the ring road or the roundabout.

Parking Supply and Occupancy

This section describes our analysis of existing parking supply and occupancy on the KSSMC campus.

Existing Parking Supply

Table 4 and Figure 3 display the existing parking supply by lot and space type on the KSSMC campus. Space types are categorized as patient/visitor, staff, physician, or reserved (i.e., a category that includes parking spaces reserved for expectant mothers, ADA, electric vehicles, urgent care, discharge, special delivery, and patient pick up).

TABLE 4
PARKING SUPPLY BY SPACE TYPE
EXISTING CONDITIONS

Parking Location	Parking by Space Type[1]				Total Parking Supply
	Patient & Visitor	Staff	Physician	Reserved[2]	
Lot 1	71	0	0	26	97
Lot 2	73	0	0	22	95
Garage (Floors 1-3)	442	0	0	41	483
Garage (Floors 4-5)	0	380	0	2	382
Lot 5	87	0	0	13	100
Lot 7	37	0	0	17	54
Lot 8	0	305	18	10	333
Lot 9	30	0	0	16	46
Lot 9A	31	0	0	0	31
Lot 10	42	0	0	16	58
Lot 11	0	0	0	12	12
Lot 12 & 14	184	80	0	20	284
Lot 15	0	260	0	16	276
Lot 16	0	0	95	3	98
Lot 17	0	0	105	7	112
Total without Wyndham MOB	***997***	***1,025***	***218***	***217***	***2,461***
Wyndham MOB	145	163	8	36	352
Total with Wyndham MOB	**1,142**	**1,188**	**226**	**253**	**2,813**

Notes:

1. Parking inventory collected on Thursday, April 5, 2018.
2. Reserved parking includes parking reserved for expectant mothers, ADA, electric vehicles, urgent care, discharge, special delivery, and patient pick up.

Source: Fehr & Peers, 2018.

As displayed in Table 4 and Figure 3, the KSSMC campus has a parking supply of 2,461 spaces excluding the Wyndham MOB, and 2,813 spaces including the Wyndham MOB.

Parking Occupancy by Lot

Table 5 and Figure 4 display the weekday peak parking occupancy (11:00 AM) on the Kaiser South Sacramento campus by lot and space type.

TABLE 5
PEAK PARKING OCCUPANCY BY LOT
EXISTING CONDITIONS

Parking Location	Peak Parking Occupancy at 11AM[1]					Total Parking Supply	Occupancy
	Patient & Visitor	Staff	Physician	Reserved[4]	Total		
Lot 1	71	0	0	14	85	97	88%
Lot 2	48	0	0	21	69	95	73%
Garage (Floors 1-3)	328	0	0	31	359	483	74%
Garage (Floors 4-5)	0	379	0	0	379	382	99%
Lot 5	71	0	0	5	76	100	76%
Lot 7	37	0	0	17	54	54	100%
Lot 8	0	305	14	2	321	333	96%
Lot 9	30	0	0	16	46	46	100%
Lot 9A	31	0	0	0	31	31	100%
Lot 10	42	0	0	16	58	58	100%
Lot 11	0	0	0	10	10	12	83%
Lot 12 & 14	150	80	0	6	236	284	83%
Lot 15[2]	0	275	0	8	283	276	103%
Lot 16	0	0	95	0	95	98	97%
Lot 17[3]	0	0	109	5	114	112	102%
Total without Wyndham MOB	***808***	***1,039***	***218***	***151***	***2,216***	***2,461***	***90%***
Wyndham MOB	119	156	8	25	308	352	88%
Total with Wyndham MOB	**927**	**1,195**	**226**	**176**	**2,524**	**2,813**	**90%**

Notes:

1. Counts were collected on Thursday, April 5, 2018.
2. Lot 15 occupancy exceeded 100 percent due to stacked employee parking (i.e., stacked parking is included in the numerator but not the denominator).
3. Lot 17 occupancy exceeded 100 percent due to illegal parking (i.e., illegal parking is included in the numerator but not the denominator).
4. Reserved parking includes parking reserved for expectant mothers, ADA, electric vehicles, urgent care, etc.

Source: Fehr & Peers, 2018.

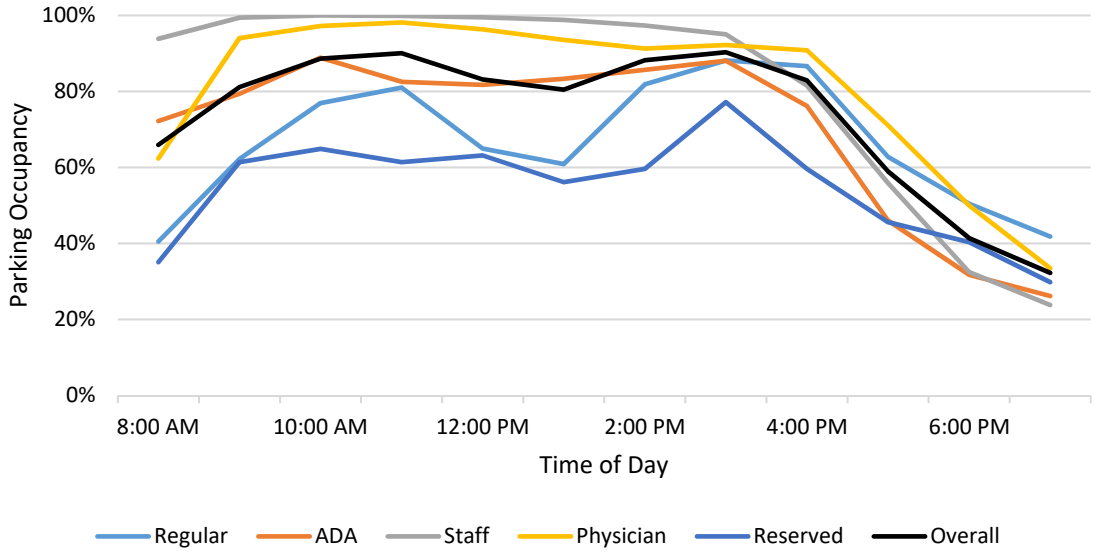
As displayed in Table 5 and Figure 4, overall campus parking utilization is 90 percent. Lots within the southern portion of the KSSMC campus (i.e., near the project site) are effectively full, with Lots 7, 8, 9, 9A, and 10 all at or close to 100 percent occupancy.

The majority of currently unoccupied peak period parking is located in the northeastern portion of campus (i.e., Lot 2, Lot 5, and Floors 1-3 of the parking garage). Floors 1-3 of the parking garage are primarily designated for visitor/member parking, while Floors 4-5 are reserved for staff parking.

Parking Occupancy by Space Type and Time of Day

In addition to analyzing campuswide parking occupancy by lot, we also analyzed campuswide parking occupancy by space type. Chart 1 displays campuswide parking occupancy for the KSSMC campus by space type and time of day based on the categories described above. For purposes of this chart, "regular" parking spaces refer to patient/visitor spaces.

Chart 1
KSSMC Campus Parking Occupancy by Space Type



As displayed in Chart 1, staff and physician spaces on the KSSMC campus are near 100 percent occupancy for most of the day. Regular, ADA, and reserved spaces are around 60-80 percent occupancy for most of the day, with distinct morning (around 11 AM) and afternoon (around 3 PM) peaks. Overall (aggregated) parking displays similar morning (11 AM) and afternoon (3 PM) peaks.

Existing Parking Requirements Under City Code

Under City Code, parking requirements for hospital/inpatient uses are calculated based on the number of patient beds. The existing KSSMC campus has 217 patient beds, with an additional 58 patient beds expected to be licensed by 2020. Parking requirements for hospital/inpatient uses are calculated both based on the existing number of patient beds (217) and the near-term (i.e., 2020) number of patient beds (275). See Table 6 for results.

TABLE 6
KSSMC CAMPUS PARKING REQUIREMENTS UNDER CITY CODE – EXISTING CONDITIONS

Use	Code Requirement[1]	Existing Quantity	Near-Term Quantity	Existing Required Parking[3]	Near-Term Required Parking[3]
Hospital	1 space per patient bed	217 patient beds	275 patient beds	217 spaces	275 spaces
Medical Offices[2]	1 space per 2,000 gross square feet of building	338,463 square feet	338,463 square feet	170 spaces	170 spaces
Total Required Parking Spaces				387 spaces	445 spaces
Existing Parking Supply				2,461 spaces	2,461 spaces
Parking Surplus over City Code Requirement				2,074 spaces	2,016 spaces

Notes:

1. Code requirement is for Urban District as defined in Sacramento City Code 17.608.030B (Vehicle Parking Requirements by Parking Districts).
2. Medical Offices square footage excludes 7300 Wyndham Drive.
3. Excludes parking associated with 7300 Wyndham Drive.

Source: Fehr & Peers, 2018.

As seen in Table 6, existing parking supply on the KSSMC campus currently exceeds City Code requirements by approximately 2,000 spaces and would continue to do so with the 58 additional patient beds.

V. Project Travel Characteristics

This section describes the expected travel characteristics of the proposed project. Refer to Figure 1 for project study area and Appendix B for project site plan.

Proposed Emergency Department Expansion

The proposed ED expansion of the KSSMC campus would consist of an expanded emergency department, additional intensive care space, and other supporting uses. The expanded ED would utilize real estate currently occupied by Lot 7, Lot 9A, and the ring road, and would require the existing ring road, roundabout, and Wyndham Driveway to be reconfigured. Additionally, a portion of the existing staff parking in Lot 8 would be reserved for ED patients/visitors.

Kaiser administrators expect the ED expansion to accommodate a 50 percent increase in patient visitation and staffing needs over current conditions within ten years. Based on documentation of existing patient visitation and staffing (estimated to be 400 daily patient visits[1] and 120 employees[2]) provided Kaiser administrators, the ED expansion would be associated with a net increase of 200 daily patient visits and 60 added employees.

The existing KSSMC campus consists of the following uses:

- A hospital consisting of acute care space in bed towers, and intensive care unit, and emergency department
- Multiple medical office buildings providing outpatient care

The proposed ED expansion would add to the amount of acute care uses on the campus. Table 8 presents a summary of the existing space on the KSSMC campus as well as the proposed expansion space. As shown, the proposed ED expansion would increase the total square footage on the campus by 41,525 square feet to 805,075 square feet. However, according to Kaiser administrators, approximately 46,000 square feet of acute care space in the South Tower is undergoing rehabilitation and is not currently occupied. Therefore, 379,087 square feet of the 425,087 square foot hospital use (717,550 square feet of the 763,550 square foot campus overall) is considered to be occupied for the existing trip generation analysis.

[1] Based on patient demand forecast of 131,859 for 2018 divided by 365 days/year with a 10 percent safety factor to represent a slightly above average condition.
[2] Based on page 15 in the *Emergency Department Functional Program* (Kaiser Permanente, 2018).

TABLE 7
EXISTING BUILDING AREA[1]
KSSMC CAMPUS

Use	Existing[2]		ED Expansion	After Expansion	
	Built	Occupied		Built	Occupied
Hospital	425.1	379.1	41.5	466.6	420.6
Medical Office	338.5	338.5	-	338.5	338.5
Total	763.6	717.6	41.5	805.1	759.1

Notes:
1. All values are in represented in thousands of square feet (KSF).
2. Breakdown of existing hospital versus medical office uses and occupied versus un-occupied space provided by Kaiser South Sacramento Medical Center in Summer 2018.

Source: Fehr & Peers, 2018.

Trip Generation

This section analyzes the existing trip generation of the overall KSSMC campus, and develops trip rates for the ED expansion.

Existing Trip Generation of KSSMC

The traffic data collected in April 2018 for this study was used to calculate the existing trip generation rates of the KSSMC campus. This included the AM and PM peak period traffic counts collected at the four KSSMC campus driveway intersections below:

- Kaiser Driveway / Alta Valley Drive / Bruceville Road (#7)
- Kaiser Driveway / Bruceville Road (#8)
- Kaiser Driveway / Valley Hi Drive (#9)
- Kaiser Driveway / Wyndham Drive (#10)

For purposes of the trip generation analysis, this study uses the amount of existing occupied square footage on the KSSMC campus presented in Table 8 to estimate the campus' existing weekday AM and PM peak hour trip generation rates during the peak hours of adjacent street traffic. Table 8 presents the existing trip generation for the KSSMC campus and the trip generation rate based on occupied square footage. During the AM peak hour, 79 percent of trips were inbound. During the PM peak hour, 72 percent of trips were outbound.

TABLE 8
EXISTING CAMPUS TRIP GENERATION

Time Period	Occupied Square Feet	Observed Traffic Volume			Trip Generation Rate		
		Total	In	Out	Total	In	Out
AM Peak Hour (7:30-8:30)	717.6 KSF	1,271	1,010	261	1.77	79%	21%
PM Peak Hour (4:15-5:15)		1,482	413	1,069	2.07	28%	72%

Notes:

1. Land Use is the existing occupied square footage on the KSSMC campus and includes both hospital and outpatient (i.e., medical office) uses.
2. Based on traffic counts collected in April 2018. Note that vehicles parking along Wyndham Drive and Arroyo Vista Drive are not included in this total due to uncertainty of the proportion associated with KSSMC campus.
3. Trip Generation Rate = (observed traffic count) / (total occupied square footage)
4. KSF = thousand square feet.

Source: Fehr & Peers, 2018.

Since the existing KSSMC campus is a mix of both hospital and medical office uses, we used trip rates contained in *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers (ITE), 2017) to calibrate our trip rate data specific to hospital and medical-office uses. Table 9 presents the ITE trip generation calculation for the existing KSSMC campus and compares it to the observed trip generation data presented in Table 8.

TABLE 9
ITE TRIP GENERATION ESTIMATE
EXISTING KSSMC CAMPUS

Land Use[1]	ITE Trip Rates (per KSF)[2]				ITE Estimated Trips[3]			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Total	In / Out	Total	In / Out	Total	In / Out	Total	In / Out
Hospital[4] (379.1 KSF)	0.89	68% / 32%	0.97	32% / 68%	337	229 / 108	368	118 / 250
Medical Office[5] (338.5 KSF)	2.78	78% / 22%	3.46	28% / 72%	941	734 / 207	1,171	328 / 843
ITE Sub-total					1,278	963 / 315	1,539	446 / 1,093
Observed Trip Generation[6]					1,271	1,010 / 261	1,482	413 / 1,069
Difference of Observed versus ITE Trip Rates					-7	47 / -54	-57	-33 / -24

Notes:

1. Existing occupied square footage by land use type based on data provided by KSSMC. KSF = thousand square feet.
2. Trip rates obtained from Trip Generation Manual, 10th Ed. (Institute of Transportation Engineers, 2017).
3. Number of trips calculated using trip rates from Trip Generation Manual, 10th Ed. (Institute of Transportation Engineers, 2017).
4. Based on trip rates contained in Trip Generation Manual, 10th Ed. (Institute of Transportation Engineers, 2017) for the Hospital Land Use Category (610).
5. Based on trip rates contained in Trip Generation Manual, 10th Ed. (Institute of Transportation Engineers, 2017) for the Medical Office Land Use Category (720).
6. Observed trip generation at KSSMC based on traffic counts collected in April 2018. Trip generation during peak hour of adjacent street traffic (7:30 to 8:30 AM and 4:15 to 5:15 PM) is reported.

Source: Fehr & Peers, 2018.

Table 9 shows that the application of ITE trip rates would underestimate the KSSMC campus' observed trip generation by four percent during the PM peak hour, but are essentially identical to the KSSMC campus' observed trip generation during the AM peak hour. This suggests that the KSSMC campus has different (i.e., slightly less intensive) trip making characteristics than the sites used to develop the ITE trip rates. Therefore, this study factors the ITE peak hour trip generation rates for hospital uses (ITE Land Use Category 610), as described in detail below, to match the observed trip making at KSSMC. We have applied this same methodology to estimate trips generated for other ED expansions and medical office buildings proposed for existing campuses.

Trip Generation Calculation of ED Expansion

Table 10 presents the AM and PM peak hour trip generation of the proposed project. The proposed ED expansion would generate 37 new AM peak hour trips and 39 new PM peak hour trips, which corresponds to an approximate three percent increase in overall campus trip generation. It should be noted that this trip generation estimate assumes the ED expansion generates traffic at the same rate as the other hospital space on campus.

TABLE 10
TRIP GENERATION ESTIMATE
PROPOSED KSSMC ED EXPANSION

Facility[1]	Trip Rates (per KSF)[2]				Trips[3]			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Total	In / Out	Total	In / Out	Total	In / Out	Total	In / Out
ED Expansion (41.5 KSF)	0.89	72% / 28%	0.93	31% / 69%	37	27 / 10	39	12 / 27

Notes:
1. Existing and proposed square footage based on data provided by KSSMC. KSF = thousand square feet.
2. Proposed expansion trip rates based on calculation shown in Table 10. AM peak hour trip rate corresponds to AM peak hour trip rate in Table 10. PM peak hour trip rate of 0.97 in Table 10 reduced by four percent to yield rate of 0.93.
3. Proposed expansion trip generation calculated by multiplying the expansion square footage by the trip rates.

Source: Fehr & Peers, 2018.

Trip Distribution

Figure 5 shows the trip distribution of the project-generated trips. These percentages were derived based on existing turning movement volumes for trip patterns to and from the KSSMC. Since the proposed ED expansion would be located in the southeastern portion of the campus, it is reasonable to expect that the added trips associated with the ED expansion would primarily use the Bruceville Road driveway and, to a lesser extent, the Wyndham Drive driveway. However, since the project would also modify existing parking lots, it was necessary for the "existing plus project" analysis to consider those effects, which are described in the following section.

Parking Generation

It is not possible to precisely estimate the existing peak parking demand of the ED because it is not served by lots exclusively for its use. In lieu of this fact, the parking demand of the 200 daily patient

visits and 60 employees of the expanded ED was estimated based on planning techniques and available data as outlined below.

Member Parking Generation

Since the majority of ED visits tend to occur in the afternoon/evening, it was reasonable to estimate that about 60 percent of daily visits occur between 3 and 10 PM, which represents an average of 34 existing visits per hour. This is generally in line with the 14 patient groups observed entering the existing ED between 3:30 and 4:00 PM on May 23, 2018 (estimated to be 28 patient groups for the entire hour). Based on data from the Center for Disease Control (CDC)[3], the median wait time at the ED is assumed to be two hours. Based on this information, an estimated 68 patient/visitor groups could be present at the existing ED at once. Assuming each group utilizes one space, the patient component of the existing ED would be 68 parking spaces. This suggests that 100 spaces should be reserved for the expanded ED in Lot 8 to be used by visitors/members (based on a 50 percent net increase of existing demand). Of these 100 spaces, 15 should be ADA accessible based on the displacement of 10 ADA spaces in Lot 7 and the 2010 ADA Standards[4].

Staff Parking Generation

The additional 60 ED employees were conservatively assumed to all be present at 11 AM, and would therefore result in a 60-space increase in the demand for employee parking.

Assumed Parking Modifications

The northeastern portion of the KSSMC campus (i.e., Lot 2, Lot 5, Lot 8, and Floors 1-3 of the parking garage) was identified as the preferred location to absorb the increase in parking demand associated with the ED expansion and parking displacement associated with removal of Lot 7 and Lot 9A. For the purposes of this study, we assumed that the parking displacement and increased demand would require the following modifications to parking in the northeastern portion of the KSSMC campus:

- Convert 100 spaces in Lot 8 to ED patient/visitor parking
- Convert Lot 5 to staff parking (95 spaces)
    - The 71 displaced patient/visitors in Lot 5 at 11 AM are assumed to park in Lot 2 and Floors 1-3 of the parking garage, both of which have existing capacity

[3] https://www.cdc.gov/nchs/data/nhamcs/web_tables/2015_ed_web_tables.pdf
[4] Refer to Table 208.2 at https://www.ada.gov/regs2010/2010ADAStandards/2010ADAStandards.pdf

- Convert 65 spaces to staff parking on Floors 1-3 in the parking garage

Note that the assumptions above were based on parking availability, and the allocation of converted parking spaces in Lot 2, Lot 5, Lot 8, and Floors 1-3 of the parking garage may vary based on other considerations.

VI. Existing Plus Project Conditions

This section analyzes the potential impacts of the proposed project on the surrounding roadway network under an "existing plus project" scenario. It also includes an evaluation of the proposed project's effects on parking and internal campus circulation. The proposed ED expansion does not propose to alter access along any portion of Bruceville Road.

Traffic Forecasts

Traffic forecasts for the "existing plus project" scenario were developed through the following process:

1. Reassign trips using the existing Wyndham driveway to use a combination of the realigned ring road, roundabout, and Wyndham driveway
2. Reassign staff trips associated with 100 displaced parking spaces in Lot 8 to the parking garage on the KSSMC campus
3. Reassign existing trips accessing Lot 7 and Lot 9A to Lot 8
4. Assign project-generated trips to Lot 8 based on the trip generation presented in Table 11 and the trip distribution shown in Figure 5

Figure 6 displays the AM and PM peak hour traffic volumes at the study intersections for the "existing plus project" scenario.

Intersection Operations

Table 11 displays AM and PM peak hour delay and LOS at the eleven study intersections under "existing plus project" conditions (refer to Technical Appendix E for detailed calculations).

TABLE 11
INTERSECTION LOS – EXISTING PLUS PROJECT CONDITIONS[1]

Intersection	Traffic Control[2]	Peak Hour	Existing		Existing Plus Project	
			Delay[3]	LOS	Delay[3]	LOS
1. SR 99 SB Off Ramp / Mack Road / Alta Valley Drive	Signal	AM	9	A	9	A
		PM	43	D	43	D
2. Valley Hi Drive / Bruceville Road	Signal	AM	19	B	19	B
		PM	24	C	25	C
3. SR 99 SB Ramps / Bruceville Road	Signal	AM	20	C	20	C
		PM	19	B	19	B
4. Bruceville Road / Wyndham Drive	Signal	AM	13	B	13	B
		PM	16	B	15	B
5. Valley Hi Drive / Wyndham Drive	SSSC	AM	2 (16)	A (C)	2 (18)	A (C)
		PM	3 (21)	A (C)	3 (21)	A (C)
6. Bruceville Road / Cosumnes River Blvd	Signal	AM	39	D	41	D
		PM	57	E	57	E
7. Kaiser Driveway / Alta Valley Drive / Bruceville Road	Signal	AM	23	C	24	C
		PM	29	C	29	C
8. Kaiser Driveway / Bruceville Road	Signal	AM	12	B	20	B
		PM	8	A	12	B
9. Kaiser Driveway / Valley Hi Drive	SSSC	AM	1 (1)	A (A)	1 (1)	A (A)
		PM	1 (2)	A (A)	1 (2)	A (A)
10. Kaiser Driveway / Wyndham Drive	SSSC	AM	3 (6)	A (A)	3 (10)	A (B)
		PM	4 (8)	A (A)	4 (10)	A (B)
11. Wyndham MOB Driveway / Wyndham Drive	SSSC	AM	2 (5)	A (A)	2 (7)	A (A)
		PM	2 (6)	A (A)	2 (10)	A (A)

Notes:

1. The "existing plus project" intersection operations analysis assumed a slightly higher project trip generation (49 AM peak hour trips and 44 peak hour trips) than the project trip generation presented in Table 11 (37 AM peak hour trips and 39 PM peak hour trips) due to a revised inventory of building square footage on the KSSMC campus. As a result, the "existing plus project" intersection operations analysis is slightly conservative and the action "existing plus project" delay and LOS may be slightly improved over the results displayed above.
2. SSSC = side-street stop controlled.
3. For signalized intersections, delay (sec/veh) and LOS is reported for the overall intersection. For SSSC intersections, delay and LOS is reported for the overall intersection and worst-case movement in parentheses.

Source: Fehr & Peers, 2018.

As seen in Table 11, all intersections would continue to operate acceptably during the AM and PM peak hours under "existing plus project" conditions. LOS and delay is reduced at the Kaiser Drive/Bruceville Road intersection under "existing plus project" conditions due to rerouted traffic using the Lot 8 driveway.

Table 12 displays queueing under "existing plus project" conditions at study intersections where queue length observations were collected.

TABLE 12
QUEUE LENGTHS – EXISTING PLUS PROJECT CONDITIONS[1]

Intersection	Movement	Storage Length	Peak Hour	Existing Conditions	Existing Plus Project Conditions[2]
SR 99 Off Ramp / Mack Road / Alta Valley Drive	Northbound Right	850 ft.	AM PM	150 ft. 675 ft.	150 ft. 675 ft.
SR 99 SB Ramps / Bruceville Road	Southbound Left	800 ft.	AM PM	300 ft. 300 ft.	300 ft. 300 ft.
Bruceville Road / Cosumnes River Blvd	Westbound Through	1,300 ft.	AM PM	525 ft. 1,150 ft.	525 ft. 1,150 ft.
Bruceville Road / Kaiser Driveway	Eastbound Left	275 ft.	AM PM	100 ft. 125 ft.	125 ft. 175 ft.
	Eastbound Right	125 ft.	AM PM	100 ft. 100 ft.	125 ft. 125 ft.
	Northbound Left	75 ft.	AM PM	**225 ft.** 100 ft.	**300 ft.** 100 ft.
Wyndham Drive / Kaiser Driveway	Southbound Left	100 ft.	AM PM	75 ft. 100 ft.	75 ft. 100 ft.

Notes:
1. All queue lengths rounded up to the nearest 25 feet. Based on SimTraffic output.
2. Bold text indicates queues that exceed storage length.

Source: Fehr & Peers, 2018.

As displayed in Table 12, queueing at the above locations would remain within available storage except for the Bruceville Road / Kaiser Driveway intersection. During the AM peak hour, the northbound left turn queue of 300 feet would exceed the striped 75-foot storage length and extend into the two-way left turn median.

Parking Supply and Occupancy

Table 13 and Figure 7 display the weekday peak parking occupancy (11:00 AM) on the Kaiser South Sacramento campus by lot and space type for the "existing plus project" scenario.

TABLE 13
PEAK PARKING OCCUPANCY BY LOT
EXISTING PLUS PROJECT CONDITIONS

Parking Location	Peak Parking Occupancy at 11AM[1]					Total Parking Supply	Occupancy
	Patient & Visitor	Staff	Physician	Reserved[3]	Total		
Lot 1	71	0	0	14	85	97	88%
Lot 2	69	0	0	21	90	95	95%
Garage (Floors 1-3)	378	65	0	31	474	483	98%
Garage (Floors 4-5)	0	379	0	0	379	382	99%
Lot 5	0	95	0	5	100	100	100%
Lot 7[4]							
Lot 8	85	205	14	17	321	333	96%
Lot 9	30	0	0	16	46	46	100%
Lot 9A[4]							
Lot 10	42	0	0	16	58	58	100%
Lot 11	0	0	0	10	10	12	83%
Lot 12 & 14	150	80	0	6	236	284	83%
Lot 15[2]	0	275	0	8	283	276	103%
Lot 16	0	0	95	0	95	98	97%
Lot 17[2]	0	0	109	5	114	112	102%
Total without Wyndham MOB	***825***	***1,099***	***218***	***149***	***2,291***	***2,376***	***96%***
Wyndham MOB	119	156	8	25	308	352	88%
Total with Wyndham MOB	**944**	**1,255**	**226**	**174**	**2,599**	**2,728**	**95%**

Notes:

1. Based on counts collected on Thursday, April 5, 2018.
2. Lot 15 and Lot 17 occupancy exceeded 100 percent due to stacked employee parking and illegal parking, respectively (i.e., stacked parking and illegal parking are included in the numerator but not the denominator).
3. Reserved parking includes parking reserved for expectant mothers, ADA, electric vehicles, urgent care, etc.
4. Lot 7 and Lot 9A would be removed under this scenario.

Source: Fehr & Peers, 2018.

As displayed in Table 13 and Figure 7, overall campus parking utilization would be 96 percent (without Wyndham MOB) under the "existing plus project" scenario, which is an increase compared to the existing parking occupancy of 90 percent. The increase in parking occupancy under the "existing plus project" scenario is due to the following:

- An increase of 75 spaces in overall parking demand associated with patient and staff trips generated by the ED expansion (i.e., an increase in the numerator)
- A decrease of 85 spaces in overall parking supply associated with the removal of Lot 7 and Lot 9A (i.e., a decrease in the denominator)

The increase in parking occupancy would most affect the eastern portion of the campus. Although the eastern portion of campus has capacity to absorb the displaced parking and increased demand (based on data collected on Thursday, April 5, 2018), parking occupancy would be high (close to 100 percent) and lots within the eastern portion of campus would effectively be full during peak parking demand.

Existing Plus Project Parking Requirements Under City Code

The ED expansion would not result in a change to the number of licensed patient beds or the amount of outpatient, outpatient surgery, or administrative building square footage. Therefore, parking requirements under City Code with the ED expansion would remain the same as existing parking requirements. The ED expansion would remove Lots 7 and 9A, however, which would result in a net decrease of 85 parking spaces. Therefore, the existing plus project parking supply would be 2,376 spaces (compared to an existing parking supply of 2,461 spaces).

Table 14 compares existing and near-term parking requirements under City Code to existing plus project parking supply on the KSSMC campus.

TABLE 14
KSSMC CAMPUS PARKING REQUIREMENTS UNDER CITY CODE – EXISTING PLUS PROJECT CONDITIONS

Use	Code Requirement[1]	Existing Quantity	Near-Term Quantity	Existing Required Parking[3]	Near-Term Required Parking[3]
Hospital	1 space per patient bed	217 patient beds	275 patient beds	217 spaces	275 spaces
Medical Offices[2]	1 space per 2,000 gross square feet of building	338,463 square feet	338,463 square feet	170 spaces	170 spaces
Total Required Parking Spaces				387 spaces	445 spaces
Existing Plus Project Parking Supply				2,376 spaces	2,376 spaces
Parking Surplus over City Code Requirement				1,989 spaces	1,931 spaces

Notes:

1. Code requirement is for Urban District as defined in Sacramento City Code 17.608.030B (Vehicle Parking Requirements by Parking Districts).
2. Medical Offices square footage excludes 7300 Wyndham Drive.
3. Excludes parking associated with 7300 Wyndham Drive.

Source: Fehr & Peers, 2018.

As seen in Table 14, the existing plus project parking supply on the KSSMC campus has a surplus of approximately 2,000 spaces over City Code requirements, and would continue to do so with the near-term 58 additional patient beds.

Pedestrian Facilities

The project would construct a new pedestrian pathway along the perimeter of the ED expansion. This pathway would be shaded by landscaping and a planned trellis extending from the southern exterior wall of the ED expansion. New or repainted crosswalks would be provided at the ring road intersections with the Lot 8 driveway and the reconstructed South Tower roundabout. Additionally, the pedestrian pathway through Lot 8 would be preserved.

VII. Recommendations

This section provides recommendations to improve parking and circulation based on the analysis results of the "existing plus project" scenario.

Parking Recommendations

We provide the following recommendations for parking to accommodate the proposed ED expansion:

- Reserve 100 spaces in Lot 8 for the expanded ED to be used by ED visitors/members. Of these 100 spaces, 15 spaces should be ADA accessible.
- Convert Lot 5 from patient/visitor to staff parking (95 spaces).
- Convert 65 spaces from patient/visitor to staff parking on Floors 1-3 in the parking garage.

Note that the recommendations above are based on parking availability as of April 2018. The number of spaces to be converted to staff parking in Lot 5 and Floors 1-3 of the parking garage may change due to other considerations (e.g., staff levels, greater member parking demand, etc.).

Site Access Recommendations

The project site plan (presented in Appendix B) reflects the outcome of a robust access evaluation of the KSSMC campus to accommodate the ED expansion. Access from Wyndham Drive to the KSSMC campus was of particular consideration, and a number of access alternatives were evaluated, including:

- Relocating the Wyndham driveway approximately 200 feet to the east of its current location
- Relocating the Wyndham driveway approximately 1,000 feet to the west
- Removing the Wyndham driveway entirely

We also evaluated the above alternatives in conjunction with disconnecting the ring road. Ultimately, an option that preserved continuity of the ring road and relocated the Wyndham driveway approximately 250 feet west of the existing driveway was selected based on available real estate, benefits to on-site circulation, driveway throat depth, driveway spacing on Wyndham Drive, the location of existing utilities, and construction costs.

The relocated Wyndham driveway will be constructed with exclusive left and right southbound turn lanes and operate as a side-street stop controlled intersection. It would provide approximately 100 feet of on-site stacking, which is sufficient to accommodate four queued vehicles. The maximum queue expected under "existing plus project" conditions at this driveway would be four vehicles.

During the AM peak hour under "existing plus project" conditions, the northbound left turn queue at the Bruceville Road / Kaiser Driveway intersection would exceed the striped 75-foot turn pocket

and extend into the two-way left turn median. The City may require the Applicant to restripe the Bruceville Road two-way left turn median south of the Kaiser Driveway to extend the northbound left turn pocket in order to accommodate the maximum queue length of 300 feet.

Appendix A

Figures

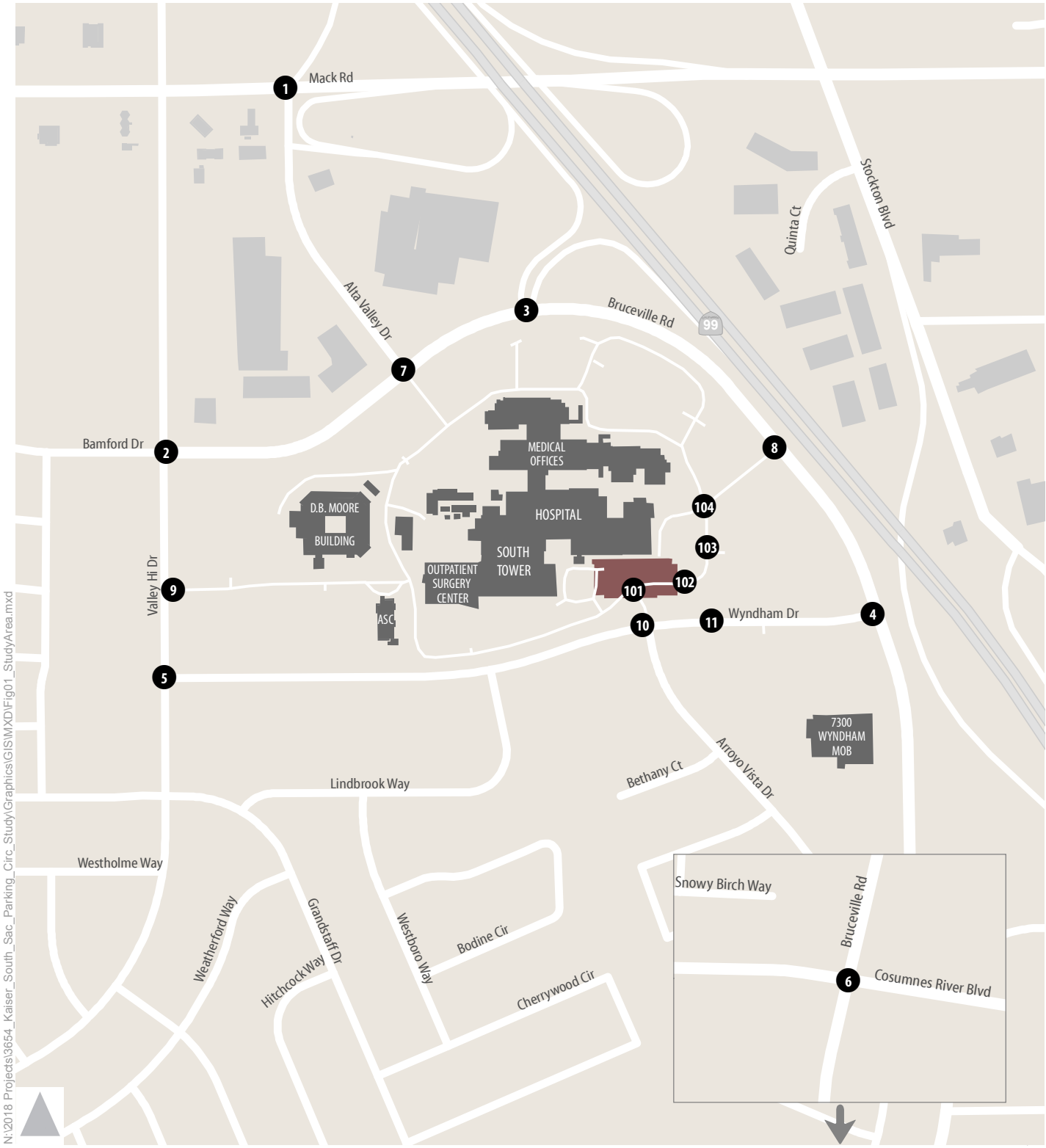
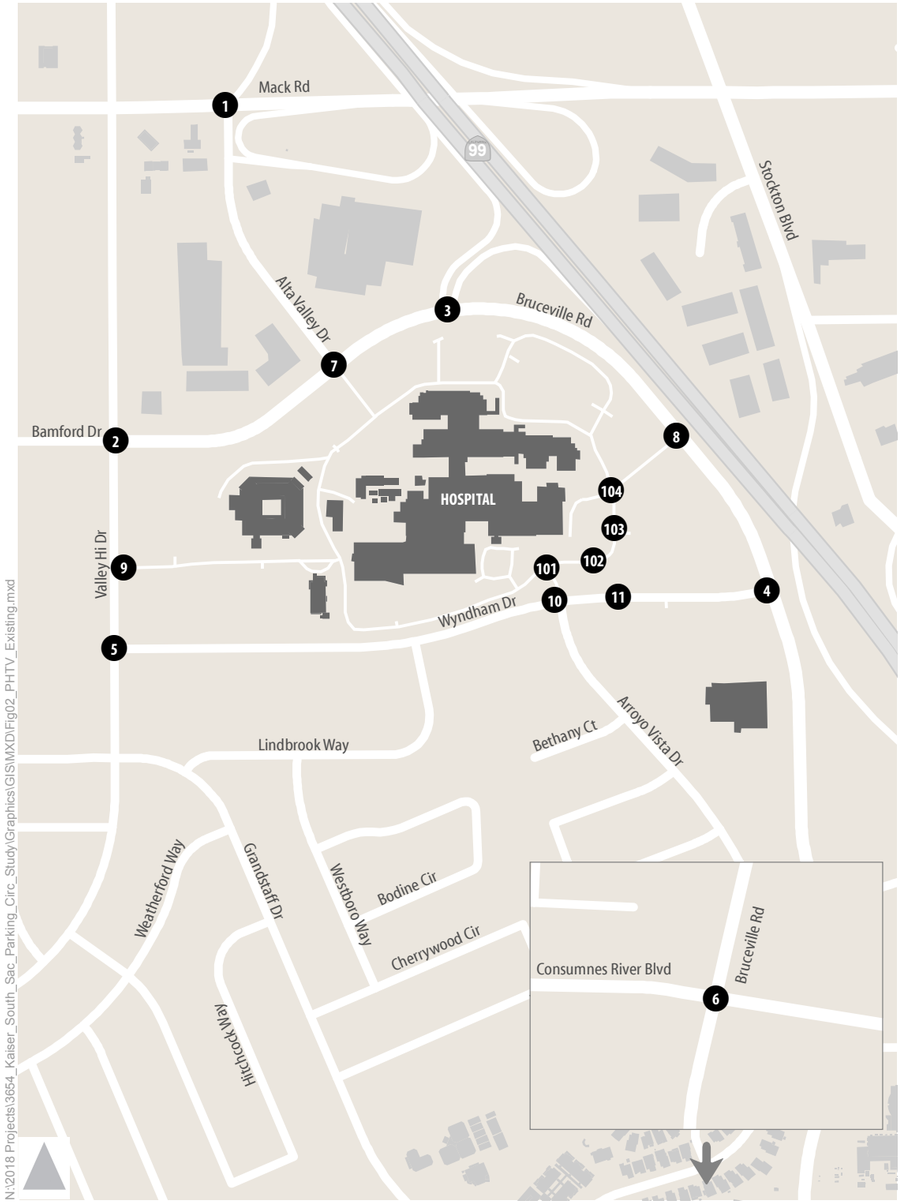
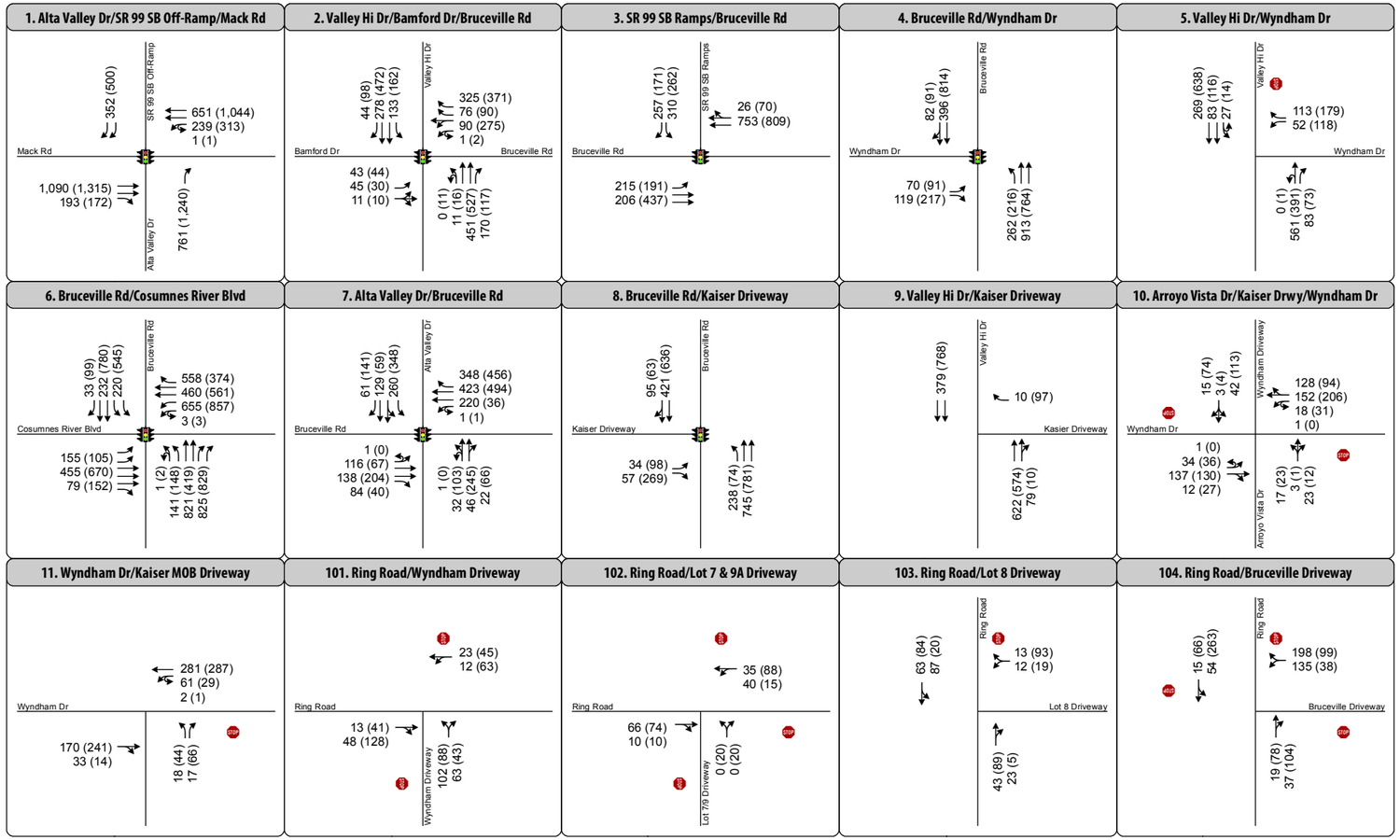


Figure 1

Study Area





Turn Lane

AM (PM) Peak Hour Traffic Volume

Traffic Signal

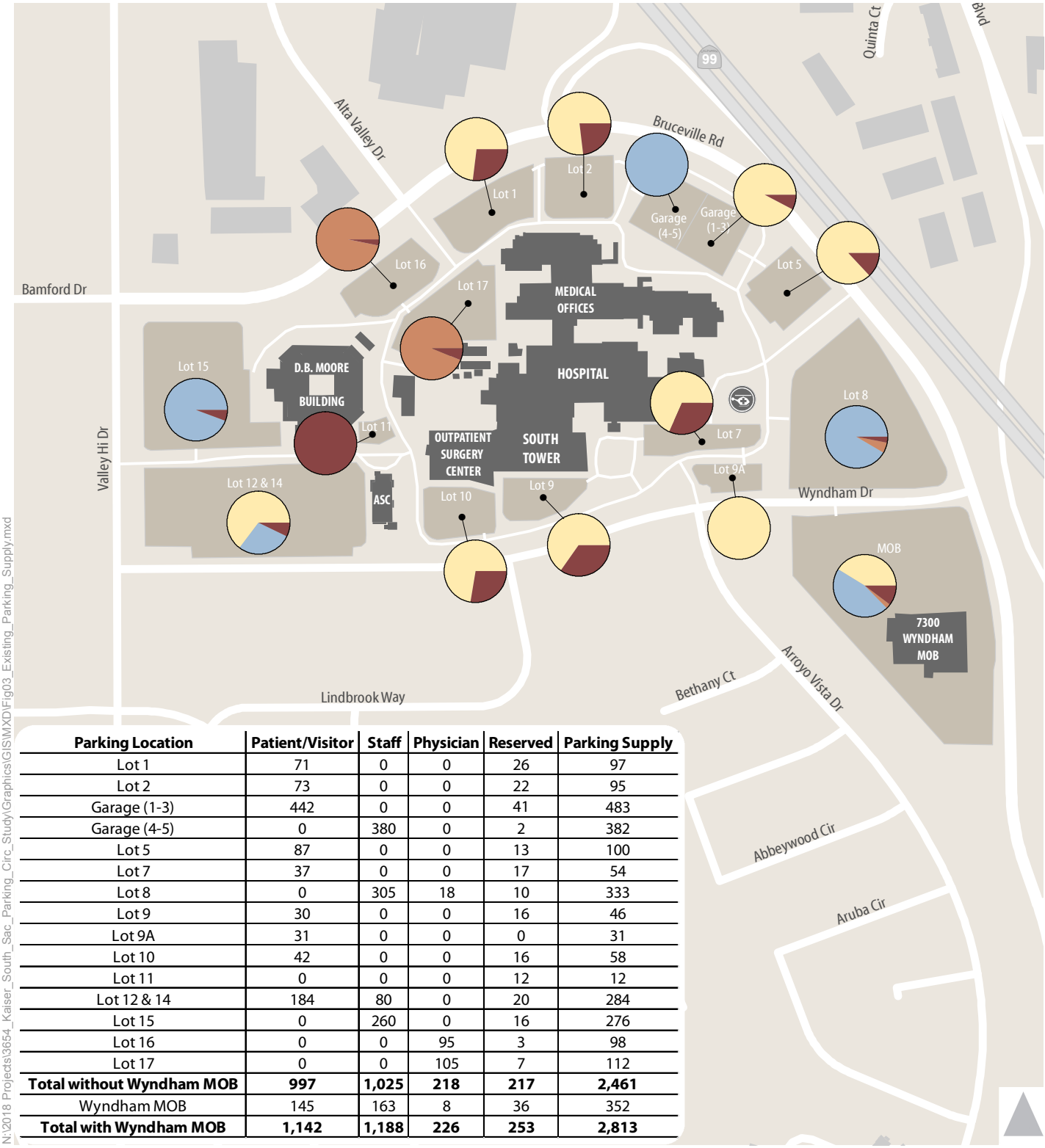
Stop Sign

1 Study Intersection

South Sacramento Medical Center

Figure 2

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions



Parking Location	Patient/Visitor	Staff	Physician	Reserved	Parking Supply
Lot 1	71	0	0	26	97
Lot 2	73	0	0	22	95
Garage (1-3)	442	0	0	41	483
Garage (4-5)	0	380	0	2	382
Lot 5	87	0	0	13	100
Lot 7	37	0	0	17	54
Lot 8	0	305	18	10	333
Lot 9	30	0	0	16	46
Lot 9A	31	0	0	0	31
Lot 10	42	0	0	16	58
Lot 11	0	0	0	12	12
Lot 12 & 14	184	80	0	20	284
Lot 15	0	260	0	16	276
Lot 16	0	0	95	3	98
Lot 17	0	0	105	7	112
Total without Wyndham MOB	**997**	**1,025**	**218**	**217**	**2,461**
Wyndham MOB	145	163	8	36	352
Total with Wyndham MOB	**1,142**	**1,188**	**226**	**253**	**2,813**

Total Parking Supply by Type

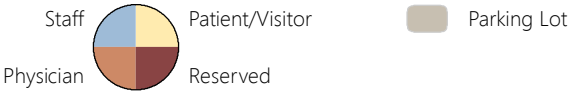


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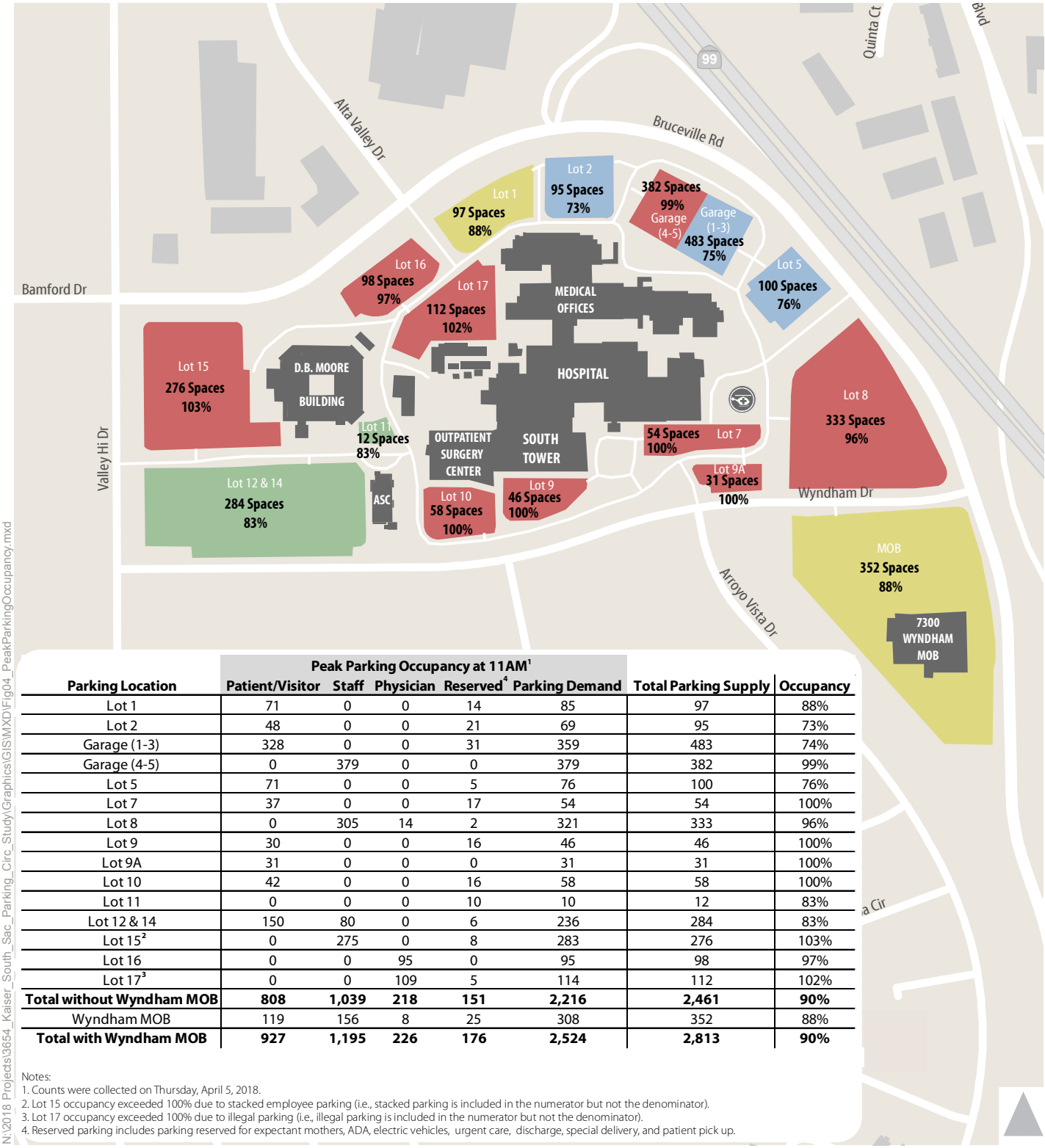
Figure 3

Existing Parking Supply



Parking Location	Peak Parking Occupancy at 11AM[1] Patient/Visitor	Staff	Physician	Reserved[4]	Parking Demand	Total Parking Supply	Occupancy
Lot 1	71	0	0	14	85	97	88%
Lot 2	48	0	0	21	69	95	73%
Garage (1-3)	328	0	0	31	359	483	74%
Garage (4-5)	0	379	0	0	379	382	99%
Lot 5	71	0	0	5	76	100	76%
Lot 7	37	0	0	17	54	54	100%
Lot 8	0	305	14	2	321	333	96%
Lot 9	30	0	0	16	46	46	100%
Lot 9A	31	0	0	0	31	31	100%
Lot 10	42	0	0	16	58	58	100%
Lot 11	0	0	0	10	10	12	83%
Lot 12 & 14	150	80	0	6	236	284	83%
Lot 15[2]	0	275	0	8	283	276	103%
Lot 16	0	0	95	0	95	98	97%
Lot 17[3]	0	0	109	5	114	112	102%
Total without Wyndham MOB	**808**	**1,039**	**218**	**151**	**2,216**	**2,461**	**90%**
Wyndham MOB	119	156	8	25	308	352	88%
Total with Wyndham MOB	**927**	**1,195**	**226**	**176**	**2,524**	**2,813**	**90%**

Notes:
1. Counts were collected on Thursday, April 5, 2018.
2. Lot 15 occupancy exceeded 100% due to stacked employee parking (i.e., stacked parking is included in the numerator but not the denominator).
3. Lot 17 occupancy exceeded 100% due to illegal parking (i.e., illegal parking is included in the numerator but not the denominator).
4. Reserved parking includes parking reserved for expectant mothers, ADA, electric vehicles, urgent care, discharge, special delivery, and patient pick up.

XX Total Parking Supply

XX% Occupancy Percentage

Occupancy Percentage
- 73% - 76%
- 77% - 83%
- 84% - 88%
- 89% - 94%
- 95% - 103%

South Sacramento Medical Center Building

N:\2018 Projects\3654_Kaiser_South_Sac_Parking_Circ_Study\Graphics\GIS\MXD\Fig04_PeakParkingOccupancy.mxd

Figure 4

Existing Weekday Peak Occupancy

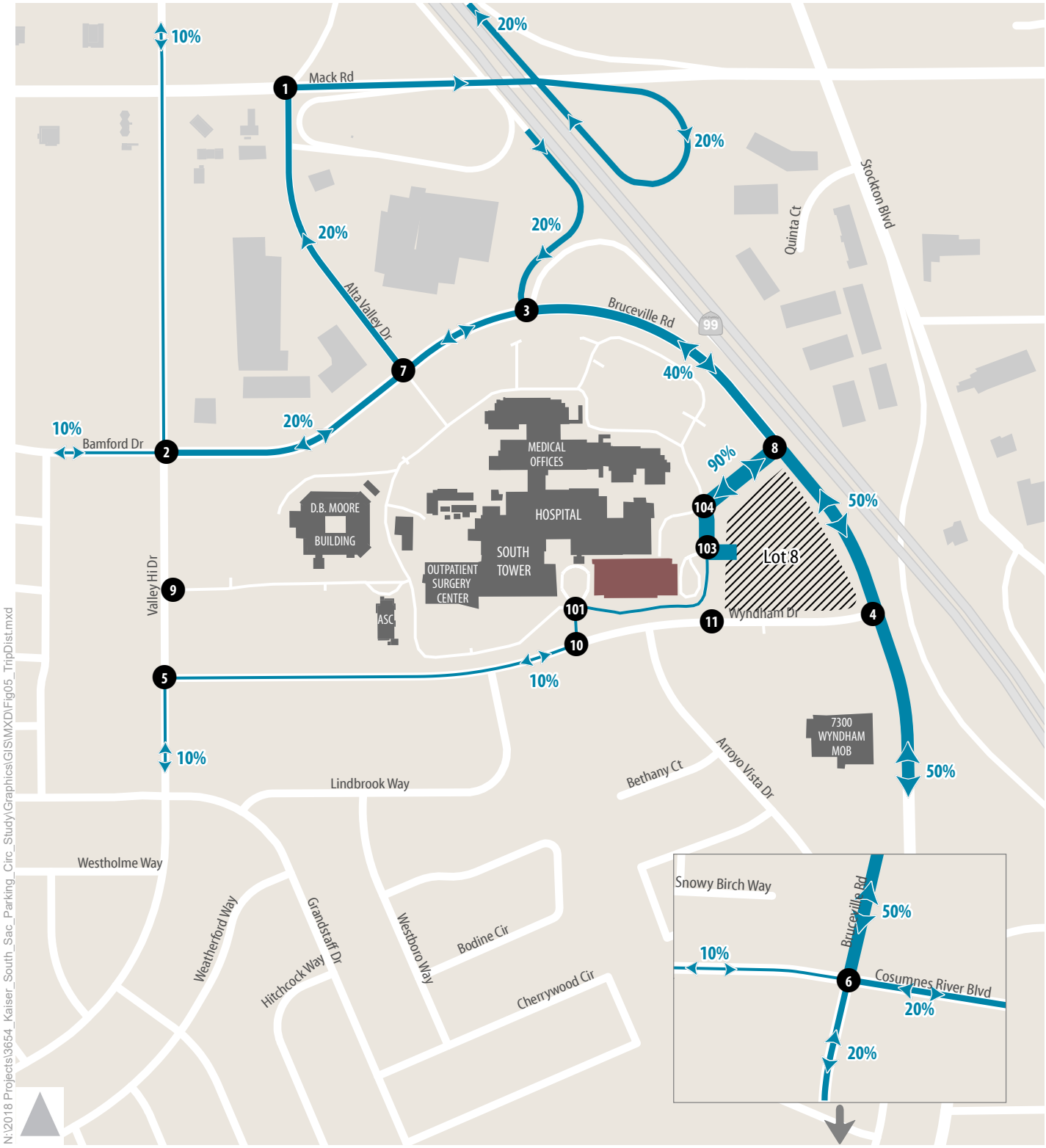
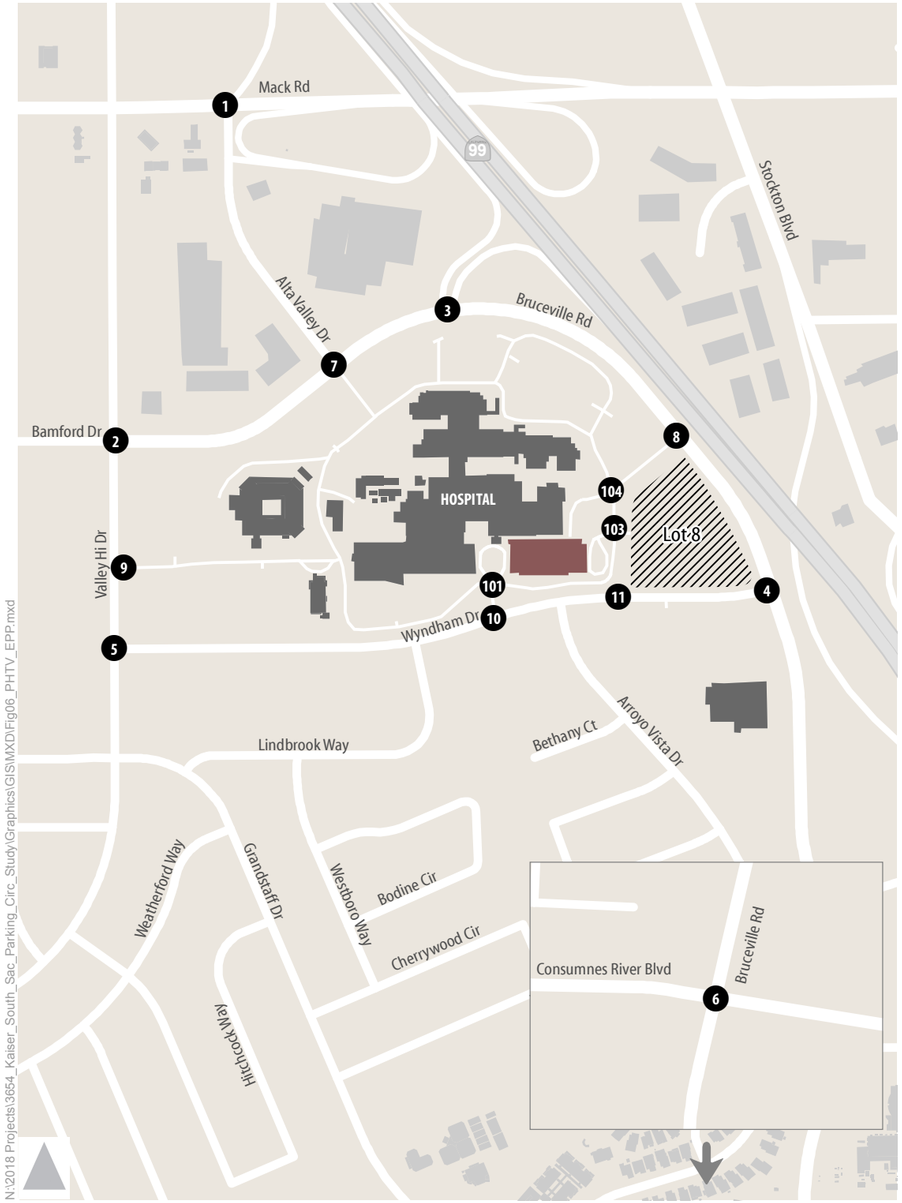


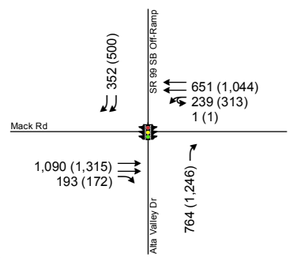
Figure 5

Trip Distribution

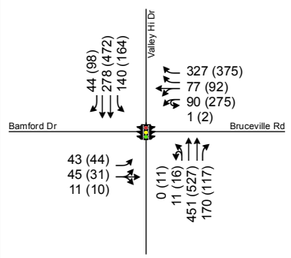


1 Study Intersection
South Sacramento Medical Center
Project Site

1. Alta Valley Dr/SR 99 SB Off-Ramp/Mack Rd

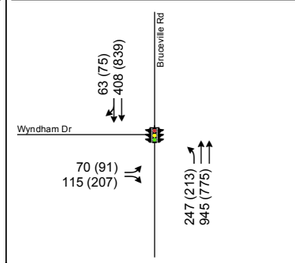


2. Valley Hi Dr/Bamford Dr/Bruceville Rd

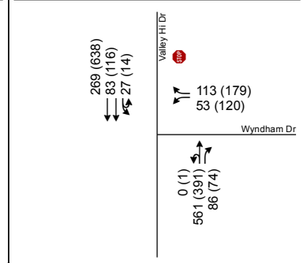


3. SR 99 SB Ramps/Bruceville Rd

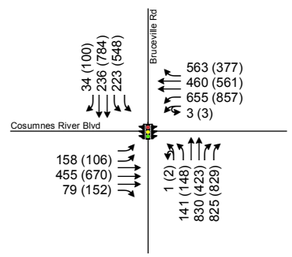
4. Bruceville Rd/Wyndham Dr



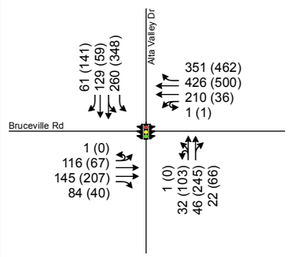
5. Valley Hi Dr/Wyndham Dr



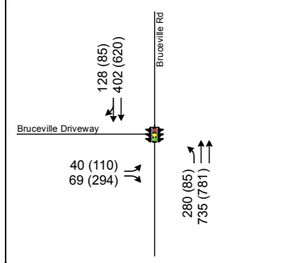
6. Bruceville Rd/Cosumnes River Blvd



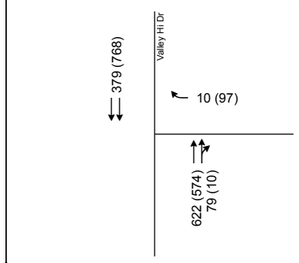
7. Kaiser Driveway/Alta Valley Dr/Bruceville Rd



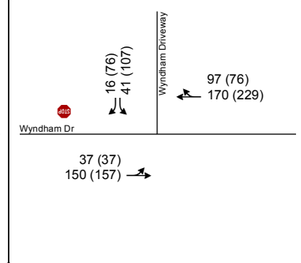
8. Bruceville Rd/Kaiser Driveway



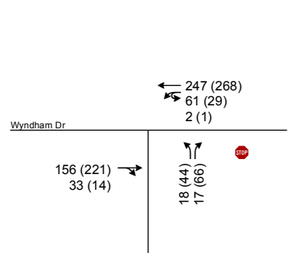
9. Valley Hi Dr/Kaiser Driveway



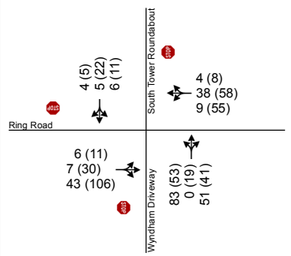
10. Wyndham Dr/Kaiser Driveway



11. Wyndham MOB Driveway/Wyndham Dr



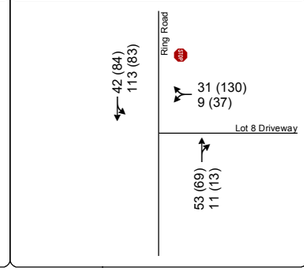
101. Ring Road/Wyndham Driveway



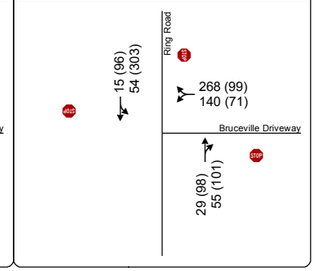
102. Ring Road/Lot 7 & 9A Driveway

Intersection Does Not Exist Under This Scenario

103. Ring Road/Lot 8 Driveway



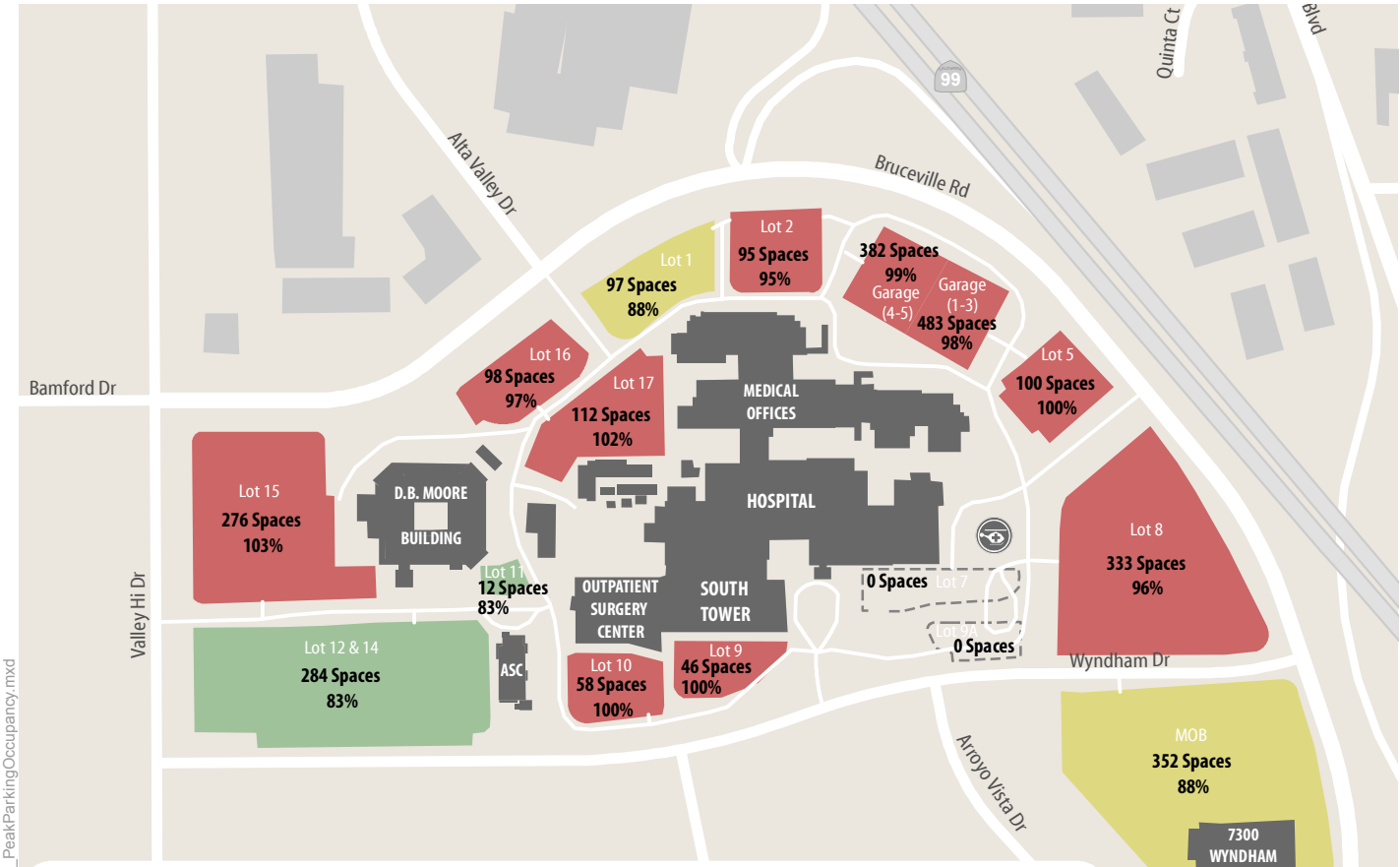
104. Ring Road/Bruceville Driveway



Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign

Figure 6

Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions



Parking Location	Peak Parking Occupancy at 11AM[1] Patient/Visitor	Staff	Physician	Reserved[4]	Parking Demand	Total Parking Supply	Occupancy
Lot 1	71	0	0	14	85	97	88%
Lot 2	69	0	0	21	90	95	95%
Garage (1-3)	378	65	0	31	474	483	98%
Garage (4-5)	0	379	0	0	379	382	99%
Lot 5	0	95	0	5	100	100	100%
Lot 7[5]	0	0	0	0	0	0	0%
Lot 8	85	205	14	17	321	333	96%
Lot 9	30	0	0	16	46	46	100%
Lot 9A[5]	0	0	0	0	0	0	0%
Lot 10	42	0	0	16	58	58	100%
Lot 11	0	0	0	10	10	12	83%
Lot 12 & 14	150	80	0	6	236	284	83%
Lot 15[2]	0	275	0	8	283	276	103%
Lot 16	0	0	95	0	95	98	97%
Lot 17[3]	0	0	109	5	114	112	102%
Total without Wyndham MOB	**825**	**1,099**	**218**	**149**	**2,291**	**2,376**	**96%**
Wyndham MOB	119	156	8	25	308	352	88%
Total with Wyndham MOB	**944**	**1,255**	**226**	**174**	**2,599**	**2,728**	**95%**

Notes:
1. Counts were collected on Thursday, April 5, 2018.
2. Lot 15 occupancy exceeded 100% due to stacked employee parking (i.e., stacked parking is included in the numerator but not the denominator).
3. Lot 17 occupancy exceeded 100% due to illegal parking (i.e., illegal parking is included in the numerator but not the denominator).
4. Reserved parking includes parking reserved for expectant mothers, ADA, electric vehicles, urgent care, discharge, special delivery, and patient pick up.
5. Lot does not exist under this scenario.

XX Total Parking Supply

XX% Occupancy Percentage

Occupancy Percentage

73% - 76%

77% - 83%

84% - 88%

89% - 94%

95% - 103%

Parking Lot Does Not Exist Under These Conditions

South Sacramento Medical Center

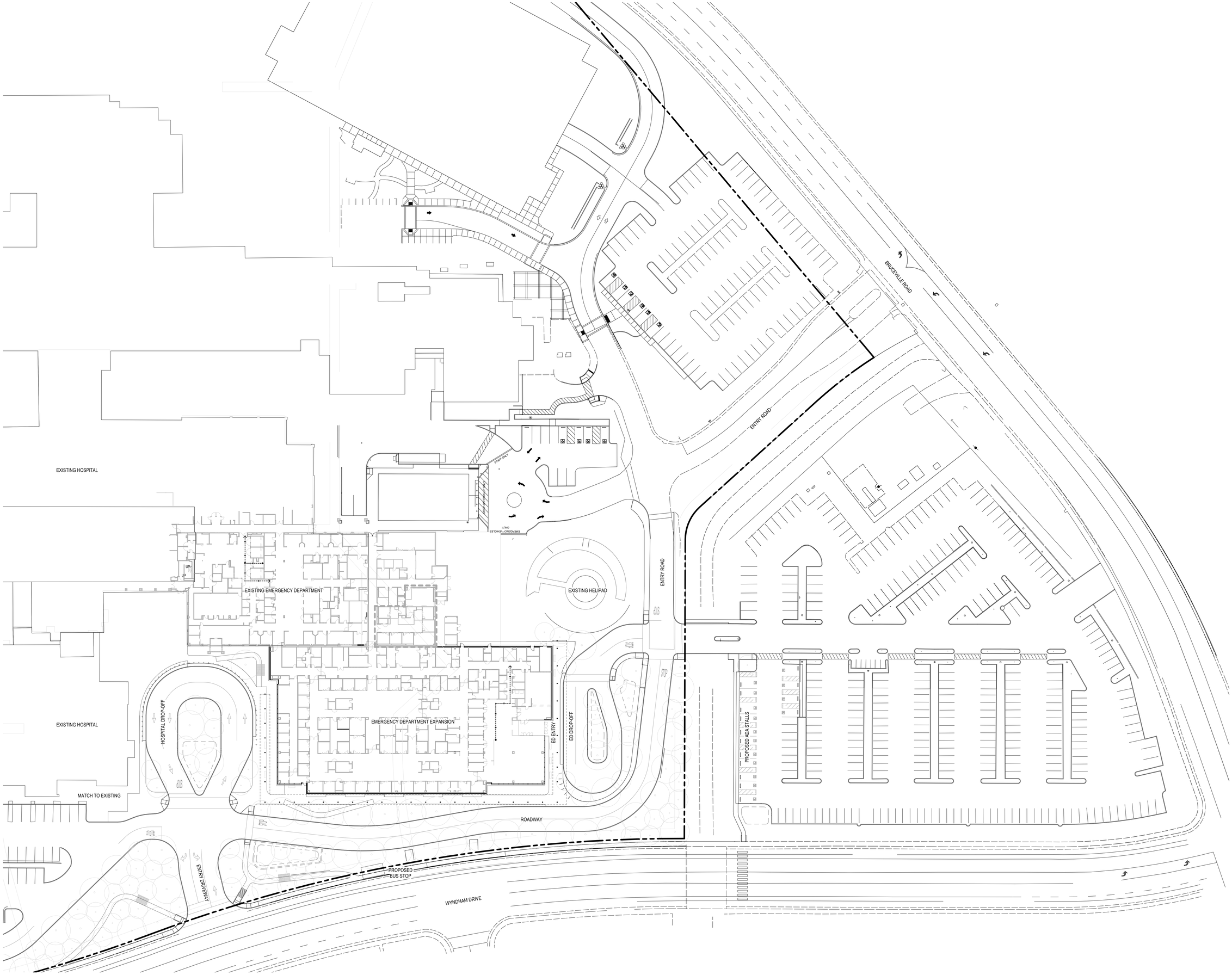
N:\2018 Projects\3654_Kaiser_South_Sac_Parking_Circ_Study\Graphics\GIS\MXD\Fig07_EPP_PeakParkingOccupancy.mxd

Figure 7

Existing Plus Project Weekday Peak Occupancy

Appendix B

Site Plan



1 LAYOUT PLAN TRAFFIC
1" = 30'-0"

2019-03-26 11:45:57 AM

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KAISER PERMANENTE
KAISER FOUNDATION
HOSPITALS

NATIONAL FACILITIES SERVICES
POST OFFICE BOX 12916
OAKLAND, CA 94604

No.	Revision Description	YYYY-MM-DD

Agency Approval

Key Plan

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Professional Seals

Facility
KAISER PERMANENTE
SOUTH SACRAMENTO
MEDICAL CENTER
SACRAMENTO, CALIFORNIA

Project
ED EXPANSION
6600 BRUCEVILLE ROAD
SACRAMENTO,
CALIFORNIA 95823

Sheet Title
PROPOSED PLAN - TRAFFIC

Scale:
1" = 30'-0"

Kaiser Project No. 160-997

HOK Project No. 17.04018.00

Sheet Number
L006

Original drawing is 48 x 36. Do not scale contents of this drawing.

Appendix C

LOS Reports - Existing Conditions

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	761	760	99.9%	6.6	0.7	A
	Subtotal	761	760	99.9%	6.6	0.7	A
SB	Left Turn						
	Through						
	Right Turn	352	357	101.3%	17.3	2.2	B
	Subtotal	352	357	101.3%	17.3	2.2	B
EB	Left Turn						
	Through	1,090	1,077	98.8%	6.5	0.6	A
	Right Turn	193	187	96.8%	2.1	0.3	A
	Subtotal	1,283	1,264	98.5%	5.9	0.5	A
WB	Left Turn	240	237	98.8%	18.9	2.5	B
	Through	651	634	97.4%	7.8	0.8	A
	Right Turn						
	Subtotal	891	871	97.8%	10.9	0.9	B
Total		3,287	3,252	98.9%	8.7	0.5	A

Intersection 2 **Valley Hi Dr/Bamford Dr-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	11	11	96.4%	35.0	15.5	C
	Through	451	444	98.4%	21.5	2.2	C
	Right Turn	170	166	97.5%	5.2	0.8	A
	Subtotal	632	620	98.1%	17.5	1.8	B
SB	Left Turn	133	136	102.2%	24.4	3.0	C
	Through	278	281	101.1%	10.7	2.6	B
	Right Turn	44	43	97.5%	2.1	1.2	A
	Subtotal	455	460	101.1%	13.8	2.7	B
EB	Left Turn	43	41	95.8%	27.5	6.8	C
	Through	45	45	99.6%	32.2	4.9	C
	Right Turn	11	12	107.3%	11.1	8.1	B
	Subtotal	99	98	98.8%	28.1	3.9	C
WB	Left Turn	91	86	94.8%	26.7	4.8	C
	Through	76	79	104.1%	28.1	5.1	C
	Right Turn	325	331	101.9%	24.5	5.2	C
	Subtotal	492	497	100.9%	25.4	3.7	C
Total		1,678	1,674	99.8%	19.3	2.5	B

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	310	320	103.2%	25.9	3.3	C
	Through						
	Right Turn	257	263	102.3%	13.0	2.2	B
	Subtotal	567	583	102.8%	20.2	2.4	C
EB	Left Turn	215	208	96.7%	33.1	6.4	C
	Through	206	204	99.2%	7.5	2.2	A
	Right Turn						
	Subtotal	421	412	97.9%	19.8	4.0	B
WB	Left Turn						
	Through	753	741	98.3%	20.6	4.1	C
	Right Turn	26	26	101.2%	16.5	6.4	B
	Subtotal	779	767	98.4%	20.5	4.0	C
Total		1,767	1,762	99.7%	20.3	2.6	C

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	262	253	96.6%	26.6	3.1	C
	Through	913	907	99.3%	7.4	0.7	A
	Right Turn						
	Subtotal	1,175	1,160	98.7%	11.6	0.7	B
SB	Left Turn						
	Through	396	399	100.7%	14.9	2.2	B
	Right Turn	82	88	107.0%	12.2	3.3	B
	Subtotal	478	486	101.8%	14.5	2.1	B
EB	Left Turn	70	64	91.0%	29.1	7.8	C
	Through						
	Right Turn	119	119	100.3%	10.1	1.3	B
	Subtotal	189	183	96.8%	17.0	2.8	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,842	1,829	99.3%	12.9	0.7	B

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	561	555	98.9%	0.7	0.1	A
	Right Turn	83	85	102.3%	0.4	0.1	A
	Subtotal	644	640	99.3%	0.6	0.1	A
SB	Left Turn	110	109	99.4%	5.5	2.0	A
	Through	269	269	100.1%	0.2	0.1	A
	Right Turn						
	Subtotal	379	379	99.9%	1.6	0.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	52	49	94.4%	16.4	6.0	C
	Through						
	Right Turn	113	110	97.4%	4.8	1.0	A
	Subtotal	165	159	96.5%	8.3	1.7	A
Total		1,188	1,177	99.1%	2.1	0.4	A

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	142	143	100.5%	33.6	7.9	C
	Through	821	824	100.3%	46.7	4.2	D
	Right Turn	825	847	102.7%	14.3	3.0	B
	Subtotal	1,788	1,814	101.4%	30.0	2.7	C
SB	Left Turn	220	222	101.1%	63.6	3.8	E
	Through	232	227	97.7%	47.6	10.2	D
	Right Turn	33	34	103.9%	7.6	2.3	A
	Subtotal	485	483	99.6%	51.9	5.6	D
EB	Left Turn	155	157	101.2%	51.9	7.6	D
	Through	455	466	102.5%	51.3	4.9	D
	Right Turn	79	79	99.4%	7.6	1.8	A
	Subtotal	689	702	101.8%	46.3	4.3	D
WB	Left Turn	658	663	100.7%	51.0	3.3	D
	Through	460	468	101.7%	42.8	5.8	D
	Right Turn	558	558	100.0%	27.1	5.3	C
	Subtotal	1,676	1,688	100.7%	40.9	2.0	D
Total		4,638	4,687	101.1%	38.7	2.2	D

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	33	33	100.0%	28.7	11.1	C
	Through	46	46	100.7%	32.2	7.4	C
	Right Turn	22	20	92.3%	5.5	4.0	A
	Subtotal	101	100	98.6%	25.5	7.0	C
SB	Left Turn	260	253	97.1%	25.9	2.6	C
	Through	129	125	96.9%	26.5	5.3	C
	Right Turn	61	64	105.4%	5.4	1.6	A
	Subtotal	450	442	98.2%	23.3	2.8	C
EB	Left Turn	117	116	99.1%	35.2	4.5	D
	Through	138	139	100.4%	24.6	4.4	C
	Right Turn	84	82	97.7%	4.9	1.2	A
	Subtotal	339	337	99.3%	23.1	2.9	C
WB	Left Turn	221	212	95.7%	37.4	7.5	D
	Through	423	423	100.0%	23.8	3.4	C
	Right Turn	348	343	98.6%	10.2	2.0	B
	Subtotal	992	978	98.6%	22.0	3.0	C
Total		1,882	1,856	98.6%	22.7	2.4	C

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	238	234	98.4%	26.6	5.8	C
	Through	745	738	99.1%	9.2	2.7	A
	Right Turn						
	Subtotal	983	972	98.9%	13.7	3.2	B
SB	Left Turn						
	Through	421	426	101.1%	7.7	1.3	A
	Right Turn	95	98	102.7%	6.7	1.3	A
	Subtotal	516	523	101.4%	7.5	1.1	A
EB	Left Turn	34	31	92.1%	36.0	11.8	D
	Through						
	Right Turn	57	60	104.6%	3.8	0.9	A
	Subtotal	91	91	99.9%	14.5	4.1	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,590	1,587	99.8%	11.8	2.2	B

Intersection 9 **Valley Hi Dr/Kaiser Dwy** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	622	614	98.7%	0.6	0.1	A
	Right Turn	79	78	98.6%	0.4	0.2	A
	Subtotal	701	692	98.7%	0.5	0.1	A
SB	Left Turn						
	Through	379	379	99.9%	1.3	0.1	A
	Right Turn						
	Subtotal	379	379	99.9%	1.3	0.1	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn	10	8	78.0%	0.4	0.7	A
	Subtotal	10	8	78.0%	0.4	0.7	A
Total		1,090	1,078	98.9%	0.8	0.1	A

Intersection 10 **Wyndham Dwy-Arroyo Vista Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	17	18	104.7%	6.8	1.8	A
	Through	3	4	123.3%	4.0	5.8	A
	Right Turn	23	22	95.7%	3.6	1.5	A
	Subtotal	43	44	101.2%	5.6	1.8	A
SB	Left Turn	42	39	91.9%	7.2	3.3	A
	Through	3	3	103.3%	3.9	4.4	A
	Right Turn	15	14	96.0%	3.3	3.3	A
	Subtotal	60	56	93.5%	6.2	3.0	A
EB	Left Turn	35	35	100.3%	6.9	3.2	A
	Through	137	137	99.8%	2.9	0.3	A
	Right Turn	12	13	108.3%	2.3	0.7	A
	Subtotal	184	185	100.4%	3.6	0.6	A
WB	Left Turn	19	18	95.8%	2.7	1.2	A
	Through	152	146	96.2%	2.9	0.6	A
	Right Turn	128	130	101.2%	1.1	0.3	A
	Subtotal	299	294	98.3%	2.1	0.4	A
Total		586	578	98.7%	3.2	0.6	A

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	18	16	88.9%	6.9	1.4	A
	Through						
	Right Turn	17	17	101.2%	2.8	0.5	A
	Subtotal	35	33	94.9%	5.2	1.1	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	170	164	96.6%	0.7	0.2	A
	Right Turn	33	34	101.5%	0.4	0.2	A
	Subtotal	203	198	97.4%	0.6	0.2	A
WB	Left Turn	63	63	100.0%	3.6	0.7	A
	Through	281	278	99.0%	1.5	0.2	A
	Right Turn						
	Subtotal	344	341	99.2%	1.9	0.2	A
Total		582	572	98.3%	1.7	0.2	A

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	1,240	1,206	97.2%	123.2	35.5	F
	Subtotal	1,240	1,206	97.2%	123.2	35.5	F
SB	Left Turn						
	Through						
	Right Turn	500	502	100.3%	21.0	2.2	C
	Subtotal	500	502	100.3%	21.0	2.2	C
EB	Left Turn						
	Through	1,315	1,312	99.8%	8.6	1.1	A
	Right Turn	172	175	101.5%	2.2	0.3	A
	Subtotal	1,487	1,487	100.0%	7.8	1.0	A
WB	Left Turn	314	313	99.8%	28.0	3.1	C
	Through	1,044	1,045	100.1%	12.2	2.1	B
	Right Turn						
	Subtotal	1,358	1,358	100.0%	15.8	2.0	B
Total		4,585	4,552	99.3%	42.5	9.2	D

Intersection 2 **Valley Hi Dr/Bamford Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	27	26	97.0%	44.4	12.3	D
	Through	527	532	100.9%	26.4	2.1	C
	Right Turn	117	118	100.5%	6.0	0.8	A
	Subtotal	671	676	100.7%	23.7	1.7	C
SB	Left Turn	162	161	99.1%	30.7	5.0	C
	Through	472	465	98.6%	15.5	2.5	B
	Right Turn	98	98	100.2%	2.7	0.7	A
	Subtotal	732	724	98.9%	17.1	2.5	B
EB	Left Turn	44	39	88.0%	33.9	7.8	C
	Through	30	30	98.3%	35.8	11.7	D
	Right Turn	10	11	113.0%	7.7	6.2	A
	Subtotal	84	80	94.6%	31.7	5.7	C
WB	Left Turn	277	276	99.6%	30.9	5.4	C
	Through	90	88	97.4%	32.7	8.8	C
	Right Turn	371	375	101.0%	34.3	6.1	C
	Subtotal	738	738	100.0%	32.8	3.0	C
Total		2,225	2,217	99.6%	24.8	2.0	C

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	262	263	100.4%	28.1	3.0	C
	Through						
	Right Turn	171	177	103.6%	14.7	3.7	B
	Subtotal	433	440	101.7%	22.7	3.0	C
EB	Left Turn	191	193	100.9%	30.6	5.2	C
	Through	437	442	101.1%	6.4	1.3	A
	Right Turn						
	Subtotal	628	635	101.1%	13.7	2.0	B
WB	Left Turn						
	Through	809	805	99.5%	21.1	2.6	C
	Right Turn	70	75	106.4%	17.9	4.5	B
	Subtotal	879	879	100.0%	20.8	2.6	C
Total		1,940	1,954	100.7%	19.0	2.1	B

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	216	220	101.7%	34.2	3.9	C
	Through	764	767	100.4%	6.3	0.7	A
	Right Turn						
	Subtotal	980	987	100.7%	12.9	1.5	B
SB	Left Turn						
	Through	814	814	99.9%	18.5	3.4	B
	Right Turn	91	89	97.3%	14.9	2.6	B
	Subtotal	905	902	99.7%	18.2	3.3	B
EB	Left Turn	91	87	95.9%	40.6	7.0	D
	Through						
	Right Turn	217	224	103.4%	14.0	2.7	B
	Subtotal	308	312	101.2%	21.2	2.7	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,193	2,200	100.3%	16.2	2.0	B

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	1	1	90.0%	7.1	4.2	A
	Through	391	388	99.3%	0.6	0.1	A
	Right Turn	73	74	101.2%	0.4	0.1	A
	Subtotal	465	463	99.5%	0.6	0.1	A
SB	Left Turn	130	129	99.5%	4.6	0.8	A
	Through	638	630	98.7%	0.4	0.0	A
	Right Turn						
	Subtotal	768	759	98.8%	1.2	0.1	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	118	121	102.5%	21.2	5.6	C
	Through						
	Right Turn	179	180	100.7%	4.0	0.4	A
	Subtotal	297	301	101.4%	11.0	2.8	B
Total		1,530	1,523	99.6%	2.9	0.5	A

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	146	97.6%	40.0	7.3	D
	Through	419	409	97.6%	56.8	7.8	E
	Right Turn	829	828	99.9%	19.4	3.6	B
	Subtotal	1,398	1,384	99.0%	32.4	3.8	C
SB	Left Turn	545	524	96.1%	97.4	16.8	F
	Through	780	762	97.7%	67.9	10.0	E
	Right Turn	99	103	103.7%	15.9	3.4	B
	Subtotal	1,424	1,388	97.5%	75.8	10.9	E
EB	Left Turn	105	109	104.1%	54.8	12.2	D
	Through	670	674	100.5%	65.0	4.5	E
	Right Turn	152	150	98.9%	25.0	4.8	C
	Subtotal	927	933	100.7%	57.5	3.7	E
WB	Left Turn	860	838	97.4%	79.1	17.8	E
	Through	561	570	101.7%	68.3	7.9	E
	Right Turn	374	386	103.2%	11.6	2.0	B
	Subtotal	1,795	1,794	99.9%	61.7	10.8	E
Total		5,544	5,499	99.2%	57.3	5.5	E

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	103	100	97.2%	39.8	5.9	D
	Through	245	245	99.9%	36.9	5.2	D
	Right Turn	66	70	106.1%	14.4	8.0	B
	Subtotal	414	415	100.2%	33.9	4.8	C
SB	Left Turn	348	347	99.7%	34.2	4.6	C
	Through	59	58	97.5%	33.4	5.6	C
	Right Turn	141	146	103.5%	7.0	1.9	A
	Subtotal	548	551	100.5%	26.9	3.1	C
EB	Left Turn	67	62	92.5%	40.3	7.0	D
	Through	204	205	100.7%	26.5	6.2	C
	Right Turn	40	42	104.0%	3.6	0.7	A
	Subtotal	311	309	99.4%	26.8	4.6	C
WB	Left Turn	37	38	102.7%	64.1	16.7	E
	Through	494	493	99.8%	35.8	4.4	D
	Right Turn	456	454	99.5%	18.4	3.4	B
	Subtotal	987	985	99.8%	28.7	3.6	C
Total		2,260	2,259	100.0%	28.9	3.1	C

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	74	74	99.3%	19.2	3.1	B
	Through	781	779	99.7%	6.1	1.1	A
	Right Turn						
	Subtotal	855	853	99.7%	7.3	1.1	A
SB	Left Turn						
	Through	636	639	100.5%	6.4	1.3	A
	Right Turn	63	66	104.4%	4.4	1.1	A
	Subtotal	699	705	100.9%	6.3	1.2	A
EB	Left Turn	98	97	99.1%	21.6	4.2	C
	Through						
	Right Turn	269	262	97.4%	7.8	1.6	A
	Subtotal	367	359	97.9%	11.3	2.2	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,921	1,917	99.8%	7.7	1.1	A

Intersection 9 **Valley Hi Dr/Valley Hi Dwy** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	574	574	100.1%	0.5	0.1	A
	Right Turn	10	9	86.0%	0.2	0.2	A
	Subtotal	584	583	99.8%	0.5	0.0	A
SB	Left Turn						
	Through	768	760	99.0%	1.5	0.2	A
	Right Turn						
	Subtotal	768	760	99.0%	1.5	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn	97	100	103.5%	0.7	0.3	A
	Subtotal	97	100	103.5%	0.7	0.3	A
Total		1,449	1,443	99.6%	1.0	0.1	A

Intersection 10 **Wyndham Dwy-Arroyo Vista Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	23	23	98.7%	8.2	3.3	A
	Through	1	2	150.0%	5.7	5.7	A
	Right Turn	12	11	93.3%	3.9	1.6	A
	Subtotal	36	35	98.3%	7.3	2.5	A
SB	Left Turn	113	118	104.0%	8.7	2.2	A
	Through	4	5	132.5%	5.0	4.0	A
	Right Turn	74	76	103.1%	5.5	1.2	A
	Subtotal	191	199	104.2%	7.4	1.5	A
EB	Left Turn	36	35	96.4%	6.8	1.5	A
	Through	130	132	101.3%	3.2	0.4	A
	Right Turn	27	28	102.2%	2.9	0.7	A
	Subtotal	193	194	100.5%	3.8	0.4	A
WB	Left Turn	31	30	95.8%	2.9	0.8	A
	Through	206	210	101.7%	2.5	0.7	A
	Right Turn	94	96	102.6%	1.1	0.4	A
	Subtotal	331	336	101.4%	2.1	0.5	A
Total		751	764	101.8%	4.1	0.6	A

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	44	46	104.5%	9.5	3.8	A
	Through						
	Right Turn	66	69	104.1%	4.1	0.6	A
	Subtotal	110	115	104.3%	6.1	1.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	241	244	101.1%	1.1	0.2	A
	Right Turn	14	16	111.4%	0.5	0.2	A
	Subtotal	255	259	101.6%	1.0	0.1	A
WB	Left Turn	30	28	93.3%	4.1	1.1	A
	Through	287	290	101.0%	1.4	0.3	A
	Right Turn						
	Subtotal	317	318	100.3%	1.6	0.3	A
Total		682	692	101.4%	2.1	0.5	A

Appendix D

Queueing Reports - Existing Conditions

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through	875	100	9	150	18	200	47	0%	0%
	Right Turn	875	25	0	25	0	25	0	0%	0%
WB	U/Left Turns	225	100	13	150	24	175	26	0%	0%
	Through	1,875	75	6	125	13	150	24	0%	0%
NB	Right Turn	200	25	0	25	0	25	0	0%	0%

Intersection 2 **Valley Hi Dr/Bamford Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	950	50	4	75	6	75	15	0%	0%
	Shared	950	50	6	75	11	100	17	0%	0%
NB	Left Turn	75	25	2	50	5	50	12	0%	0%
	Through	400	125	8	175	17	225	40	26%	0%
	Right Turn	100	50	5	100	15	125	40	1%	0%
SB	Left Turn	100	75	5	125	15	150	31	5%	0%
	Through	950	75	6	125	16	150	35	2%	0%
	Right Turn	950	25	1	25	5	50	26	0%	0%
WB	U/Left Turns	100	50	6	100	12	150	22	0%	0%
	Left/Through	425	75	9	125	20	175	45	4%	0%
	Right Turn	425	100	7	175	14	200	23	9%	0%

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	100	4	150	5	125	0	27%	0%
	Through	375	75	15	175	22	225	43	0%	0%
SB	Left Turn	875	150	14	250	25	275	47	15%	0%
	Right Turn	125	100	11	175	34	225	67	2%	0%
WB	Through	1,000	150	11	250	22	275	30	0%	0%
	Through/Right	1,000	175	14	300	22	350	30	0%	0%
0										

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	125	50	5	100	14	125	28	1%	0%
	Right Turn	300	50	7	100	16	150	35	1%	0%
NB	Left Turn	125	125	7	200	12	225	16	9%	0%
	Through	1,000	125	11	225	22	250	58	3%	0%
SB	Through	650	100	7	150	13	200	59	0%	0%
	Through/Right	650	100	7	175	13	225	39	0%	0%
0										

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	350	25	1	25	7	25	20	0%	0%
	Right Turn	25	25	1	25	5	50	12	0%	0%
SB	U/Left Turns	75	50	4	75	9	100	20	1%	0%
	Through	75	25	0	25	0	25	0	0%	0%
WB	Left Turn	100	50	5	75	12	100	30	0%	0%
	Right Turn	300	50	3	75	10	100	22	0%	0%
0										

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	225	100	13	175	38	225	60	0%	0%
	Through	1,250	200	12	275	22	300	40	15%	0%
	Right Turn	75	50	5	100	9	100	0	1%	0%
NB	U/Left Turns	250	25	8	75	24	125	33	0%	0%
	Left Turn	950	75	9	150	17	150	26	0%	0%
	Through	950	325	22	450	49	525	120	2%	0%
	Right Turn	325	200	22	325	28	350	36	0%	0%
SB	Left Turn	275	175	19	225	14	250	27	0%	0%
	Through	775	125	7	175	14	200	30	0%	0%
	Right Turn	300	25	1	50	4	50	15	0%	0%
WB	U/Left Turns	250	275	16	400	27	375	1	8%	0%
	Left Turn	250	325	19	450	34	475	50	25%	0%
	Through	1,300	200	8	300	36	400	144	2%	0%
	Right Turn	1,300	275	25	450	61	525	91	0%	0%

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	U/Left Turns	100	75	10	125	18	150	11	7%	0%
	Through	775	75	7	150	20	225	39	2%	0%
	Right Turn	150	25	2	50	6	75	11	0%	0%
NB	U/Left/Through	200	50	6	100	16	125	32	0%	0%
	Through/Right	200	25	2	50	4	50	30	0%	0%
SB	Left Turn	100	75	7	150	12	150	2	8%	0%
	Left/Through	625	75	11	150	25	175	44	5%	0%
	Through	625	50	7	100	13	125	28	0%	0%
	Right Turn	150	25	1	50	6	75	8	0%	0%
WB	U/Left Turns	125	125	9	200	7	200	1	20%	0%
	Through	375	150	12	300	21	400	23	15%	0%
	Right Turn	125	125	4	200	7	175	0	4%	0%

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	275	50	7	75	12	100	27	0%	0%
	Right Turn	125	50	2	75	6	100	24	0%	0%
NB	Left Turn	475	125	10	200	21	225	37	0%	0%
	Through	650	75	11	150	16	200	46	0%	0%
SB	Through	1,000	50	7	100	11	125	23	0%	0%
	Through/Right	1,000	75	8	125	20	150	27	0%	0%
0										

Intersection 9 **Valley Hi Dr/Valley Hi Dwy** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
WB	Right Turn	150	25	1	25	7	25	12	0%	0%
NB	Through	350	25	0	25	0	25	0	0%	0%
	Through/Right	350	25	0	25	0	25	0	0%	0%
SB	Through	475	25	0	25	0	25	0	0%	0%
0										

Intersection 10 **Wyndham N. Dwy-Arroyo Vista Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	U/Left Turns	75	25	2	50	5	50	19	0%	0%
	Through/Right	525	25	1	25	6	25	15	0%	0%
NB	Shared	275	25	3	50	3	75	10	0%	0%
SB	Shared	100	50	3	75	6	75	9	0%	0%
WB	U/Left Turns	75	25	1	25	7	25	14	0%	0%
	Through/Right	375	25	2	25	11	50	24	0%	0%

Intersection 11 **Wyndham S. Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through/Right	375	25	0	25	3	25	8	0%	0%
NB	Left Turn	200	25	2	50	4	50	11	0%	0%
	Right Turn	200	25	3	50	4	50	12	0%	0%
WB	U/Left Turns	75	25	3	50	5	75	17	0%	0%
	Through	75	25	0	25	0	25	0	0%	0%
0										

Intersection 12 **Alta Valley Dr** **0**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	25	75	5	100	4	100	11	0%	14%
SB	Through	125	25	2	25	15	75	38	0%	0%
WB	Right Turn	625	25	2	50	6	75	5	0%	0%
0										

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through	875	150	10	225	16	250	34	0%	0%
	Right Turn	875	25	0	25	0	25	0	0%	0%
NB	Right Turn	875	375	11	625	23	675	54	0%	0%
SB	Right Turn	1,750	150	11	225	22	250	28	0%	0%
WB	U/Left Turns	225	150	10	225	16	275	22	3%	0%
	Through	875	125	16	225	35	300	70	0%	0%

Intersection 2 **Valley Hi Dr/Bamford Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	950	50	4	75	7	75	17	0%	0%
	Shared	950	50	7	75	16	100	28	0%	0%
NB	U/Left Turns	75	50	6	75	16	150	38	1%	0%
	Through	400	150	9	225	16	275	51	34%	0%
	Right Turn	100	75	9	150	21	175	2	0%	0%
SB	Left Turn	100	100	9	150	19	175	10	10%	0%
	Through	950	125	9	200	21	225	35	13%	0%
	Right Turn	950	25	2	50	6	75	16	0%	0%
WB	U/Left Turns	100	100	8	175	7	150	1	6%	0%
	Left/Through	425	150	14	250	35	325	73	19%	0%
	Right Turn	425	125	8	200	13	225	23	18%	0%

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	100	4	150	4	125	0	28%	1%
	Through	375	100	18	175	28	200	23	1%	0%
SB	Left Turn	875	150	11	225	18	300	54	13%	0%
	Right Turn	125	75	9	150	25	200	75	1%	0%
WB	Through	1,000	125	12	225	16	275	36	0%	0%
	Through/Right	1,000	225	15	325	21	400	55	0%	0%
0										

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	125	75	7	125	14	150	23	3%	0%
	Right Turn	300	100	9	175	22	200	47	5%	0%
NB	Left Turn	125	150	8	225	9	250	13	13%	0%
	Through	1,000	100	8	200	17	250	55	1%	0%
SB	Through	650	150	8	225	24	275	44	0%	0%
	Through/Right	650	175	7	250	18	300	42	0%	0%
0										

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Right Turn	25	25	1	25	5	50	15	0%	0%
		350	25	1	25	10	50	29	0%	0%
SB	U/Left Turns	75	50	2	75	5	100	16	1%	0%
	Through	275	25	0	25	2	25	7	0%	0%
WB	Left Turn	100	75	9	100	16	125	25	2%	0%
	Right Turn	300	50	4	75	19	125	46	0%	0%
0										

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	225	150	24	325	34	275	19	0%	0%
	Through	1,250	325	20	400	23	475	32	38%	0%
	Right Turn	75	75	4	125	5	100	0	4%	0%
NB	U/Left Turns	250	25	7	75	19	125	22	0%	0%
	Left Turn	950	75	6	150	10	150	21	0%	0%
	Through	950	200	19	325	32	450	78	0%	0%
	Right Turn	325	225	20	325	31	350	24	1%	0%
SB	Left Turn	275	375	27	525	24	475	3	35%	0%
	Through	850	425	64	675	129	750	127	27%	1%
	Right Turn	300	75	25	275	73	425	1	0%	0%
WB	U/Left Turns	250	350	8	425	10	400	0	38%	0%
	Left Turn	250	475	26	600	16	525	1	50%	0%
	Through	1,925	550	161	1,000	273	1,150	331	18%	0%
	Right Turn	1,925	125	12	200	20	225	16	0%	0%

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	100	50	7	100	15	125	24	2%	0%
	Through	350	75	8	125	19	150	40	4%	0%
	Right Turn	150	25	3	50	7	50	16	0%	0%
NB	Left/Through	450	175	15	250	20	300	26	0%	0%
	Through/Right	450	100	13	200	23	225	33	0%	0%
SB	Left Turn	100	100	5	175	5	150	1	13%	0%
	Left/Through	650	150	10	225	25	275	53	19%	0%
	Through	650	50	5	75	12	100	27	0%	0%
	Right Turn	150	50	4	100	11	125	23	0%	0%
WB	U/Left Turns	125	50	12	125	31	175	41	1%	0%
	Through	375	225	16	425	33	475	29	25%	1%
	Right Turn	125	150	6	200	8	175	0	12%	0%

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	275	75	6	125	21	175	51	1%	0%
	Right Turn	125	75	5	125	9	125	2	1%	0%
NB	Left Turn	75	50	3	100	11	100	15	2%	0%
	Through	650	100	8	150	15	200	27	2%	0%
SB	Through	1,000	50	7	100	14	125	31	0%	0%
	Through/Right	1,000	75	7	125	12	150	15	0%	0%
0										

Intersection 9 **Valley Hi Dr/Valley Hi Dwy** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	275	25	0	25	3	25	8	0%	0%
	Through/Right	275	25	1	25	9	50	21	0%	0%
WB	Right Turn	150	25	3	50	7	50	17	0%	0%
0										
0										

Intersection 10 **Wyndham Dwy-Arroyo Vista Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	25	3	50	5	50	10	0%	0%
	Through/Right	525	25	1	25	6	25	15	0%	0%
NB	Shared	275	25	3	50	3	50	14	0%	0%
SB	Shared	100	75	2	100	3	100	6	0%	2%
WB	Left Turn	75	25	2	25	5	50	12	0%	0%
	Through/Right	375	25	2	25	11	50	22	0%	0%

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Left Turn	200	50	4	75	7	75	20	0%	0%
	Right Turn	200	50	3	75	4	75	9	0%	0%
WB	U/Left Turns	75	25	2	50	5	50	11	0%	0%
0										
0										

Intersection 13 **Alta Valley Dr** **0**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Right Turn	100	50	2	75	5	75	15	0%	0%
NB	Through	650	250	78	500	130	550	123	0%	0%
WB	Right Turn	100	25	2	25	4	50	0	0%	0%
0										

Appendix E

LOS Reports - Existing Plus Project Conditions

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing + Project Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	764	763	99.8%	6.8	0.6	A
	Subtotal	764	763	99.8%	6.8	0.6	A
SB	Left Turn						
	Through						
	Right Turn	352	350	99.5%	17.3	2.4	B
	Subtotal	352	350	99.5%	17.3	2.4	B
EB	Left Turn						
	Through	1,090	1,095	100.4%	6.7	1.0	A
	Right Turn	193	192	99.6%	2.2	0.3	A
	Subtotal	1,283	1,287	100.3%	6.0	0.9	A
WB	Left Turn	240	242	100.8%	19.4	2.1	B
	Through	651	656	100.8%	7.3	0.8	A
	Right Turn						
	Subtotal	891	898	100.8%	10.6	1.1	B
Total		3,290	3,298	100.2%	8.6	0.6	A

Intersection 2 **Valley Hi Dr/Bamford Dr-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	11	9	84.5%	33.8	20.7	C
	Through	451	450	99.8%	21.3	2.3	C
	Right Turn	170	174	102.4%	4.8	0.6	A
	Subtotal	632	633	100.2%	17.1	1.6	B
SB	Left Turn	140	139	98.9%	20.4	4.9	C
	Through	278	281	101.1%	10.6	1.9	B
	Right Turn	44	45	102.7%	1.5	0.7	A
	Subtotal	462	465	100.6%	12.6	2.1	B
EB	Left Turn	43	39	91.2%	28.6	6.9	C
	Through	45	46	103.1%	23.1	6.5	C
	Right Turn	11	13	116.4%	6.9	4.7	A
	Subtotal	99	98	99.4%	22.8	4.0	C
WB	Left Turn	91	89	97.9%	30.7	5.5	C
	Through	77	79	102.2%	29.5	7.3	C
	Right Turn	327	325	99.4%	27.4	4.4	C
	Subtotal	495	493	99.6%	28.3	3.8	C
Total		1,688	1,689	100.1%	19.4	1.5	B

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	317	306	96.5%	29.0	4.5	C
	Through						
	Right Turn	257	258	100.4%	14.0	3.6	B
	Subtotal	574	564	98.2%	22.0	4.1	C
EB	Left Turn	215	216	100.3%	31.8	4.5	C
	Through	213	216	101.3%	7.1	1.5	A
	Right Turn						
	Subtotal	428	431	100.8%	19.8	2.5	B
WB	Left Turn						
	Through	749	745	99.4%	19.1	3.4	B
	Right Turn	26	26	99.6%	13.7	4.2	B
	Subtotal	775	771	99.4%	18.9	3.4	B
Total		1,777	1,766	99.4%	20.1	2.2	C

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	247	240	97.1%	30.2	2.9	C
	Through	945	943	99.8%	8.0	1.2	A
	Right Turn						
	Subtotal	1,192	1,183	99.2%	12.5	1.1	B
SB	Left Turn						
	Through	408	401	98.3%	13.6	1.8	B
	Right Turn	63	64	102.2%	8.1	2.8	A
	Subtotal	471	465	98.8%	12.8	1.6	B
EB	Left Turn	70	66	94.0%	26.0	4.3	C
	Through						
	Right Turn	115	118	102.3%	11.0	3.3	B
	Subtotal	185	183	99.1%	16.8	3.4	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,848	1,832	99.1%	13.0	0.9	B

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	561	561	100.1%	0.8	0.1	A
	Right Turn	86	89	103.0%	0.5	0.2	A
	Subtotal	647	650	100.5%	0.8	0.1	A
SB	Left Turn	110	110	99.7%	5.5	1.9	A
	Through	269	271	100.7%	0.2	0.1	A
	Right Turn						
	Subtotal	379	381	100.4%	1.7	0.7	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	53	51	95.8%	17.5	7.4	C
	Through						
	Right Turn	113	109	96.5%	5.5	1.8	A
	Subtotal	166	160	96.3%	9.2	3.0	A
Total		1,192	1,191	99.9%	2.3	0.5	A

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	142	137	96.7%	40.4	8.7	D
	Through	830	839	101.0%	48.8	5.1	D
	Right Turn	825	836	101.3%	14.2	3.4	B
	Subtotal	1,797	1,812	100.8%	32.4	4.0	C
SB	Left Turn	223	220	98.7%	63.5	6.2	E
	Through	236	235	99.5%	43.1	7.0	D
	Right Turn	34	35	103.2%	6.9	1.5	A
	Subtotal	493	490	99.4%	49.8	4.8	D
EB	Left Turn	158	154	97.7%	49.8	5.4	D
	Through	455	449	98.7%	53.7	5.5	D
	Right Turn	79	80	101.0%	9.8	2.6	A
	Subtotal	692	683	98.7%	48.0	3.3	D
WB	Left Turn	658	664	100.9%	52.3	5.2	D
	Through	460	465	101.1%	47.6	4.9	D
	Right Turn	563	561	99.6%	27.0	7.5	C
	Subtotal	1,681	1,690	100.5%	43.1	3.4	D
Total		4,663	4,675	100.3%	40.6	2.0	D

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	33	33	100.6%	33.1	9.6	C
	Through	46	47	102.8%	32.4	8.4	C
	Right Turn	22	22	97.7%	5.6	3.0	A
	Subtotal	101	102	101.0%	25.6	5.6	C
SB	Left Turn	260	254	97.7%	28.5	4.8	C
	Through	129	130	100.4%	27.9	3.4	C
	Right Turn	61	57	93.9%	6.1	1.7	A
	Subtotal	450	441	98.0%	25.3	3.2	C
EB	Left Turn	117	117	99.7%	37.6	7.2	D
	Through	145	152	105.1%	24.8	4.2	C
	Right Turn	84	87	103.3%	4.3	0.5	A
	Subtotal	346	356	102.9%	25.0	3.0	C
WB	Left Turn	211	210	99.3%	38.1	4.6	D
	Through	426	429	100.6%	25.1	3.4	C
	Right Turn	351	349	99.5%	12.2	2.1	B
	Subtotal	988	988	100.0%	23.4	3.0	C
Total		1,885	1,886	100.1%	24.2	2.4	C

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	280	282	100.8%	39.9	3.2	D
	Through	735	734	99.9%	18.8	3.0	B
	Right Turn						
	Subtotal	1,015	1,016	100.1%	24.7	3.3	C
SB	Left Turn						
	Through	402	397	98.7%	11.4	2.8	B
	Right Turn	128	126	98.5%	10.1	2.4	B
	Subtotal	530	523	98.7%	11.1	2.6	B
EB	Left Turn	40	39	96.3%	35.3	9.9	D
	Through						
	Right Turn	69	71	102.5%	3.7	1.3	A
	Subtotal	109	109	100.2%	15.7	6.2	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,654	1,649	99.7%	20.0	2.6	B

Intersection 9 **Valley Hi Dr/Kaiser Dwy** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	622	634	102.0%	0.5	0.1	A
	Right Turn	79	75	94.9%	0.5	0.2	A
	Subtotal	701	709	101.2%	0.5	0.1	A
SB	Left Turn						
	Through	379	384	101.2%	1.3	0.2	A
	Right Turn						
	Subtotal	379	384	101.2%	1.3	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn	10	11	107.0%	0.6	0.7	A
	Subtotal	10	11	107.0%	0.6	0.7	A
Total		1,090	1,104	101.2%	0.8	0.1	A

Intersection 10 **Wyndham Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	41	40	97.8%	10.3	3.9	B
	Through						
	Right Turn	16	17	107.5%	8.1	3.8	A
	Subtotal	57	57	100.5%	9.6	3.8	A
EB	Left Turn	37	35	94.6%	5.4	1.1	A
	Through	150	151	100.6%	2.9	0.2	A
	Right Turn						
	Subtotal	187	186	99.4%	3.3	0.3	A
WB	Left Turn						
	Through	170	169	99.6%	1.4	0.3	A
	Right Turn	97	91	94.1%	0.4	0.2	A
	Subtotal	267	261	97.6%	1.1	0.2	A
Total		511	504	98.6%	3.0	0.6	A

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing + Project Conditions**
Volume and Delay by Movement **AM Peak Hour**

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	18	17	95.0%	7.0	1.4	A
	Through						
	Right Turn	17	18	104.1%	3.3	0.8	A
	Subtotal	35	35	99.4%	5.4	1.1	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	156	162	104.1%	0.4	0.2	A
	Right Turn	33	33	100.9%	0.3	0.3	A
	Subtotal	189	196	103.5%	0.4	0.1	A
WB	Left Turn	63	62	98.4%	3.6	0.5	A
	Through	247	249	100.8%	1.6	0.2	A
	Right Turn						
	Subtotal	310	311	100.3%	2.0	0.2	A
Total		534	542	101.4%	1.7	0.2	A

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing + Project Conditions**
Volume and Delay by Movement **PM Peak Hour**

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	1,246	1,210	97.1%	91.2	49.2	F
	Subtotal	1,246	1,210	97.1%	91.2	49.2	F
SB	Left Turn						
	Through						
	Right Turn	500	503	100.7%	21.2	2.2	C
	Subtotal	500	503	100.7%	21.2	2.2	C
EB	Left Turn						
	Through	1,315	1,326	100.9%	8.6	0.8	A
	Right Turn	172	178	103.5%	2.1	0.3	A
	Subtotal	1,487	1,504	101.2%	7.8	0.7	A
WB	Left Turn	314	298	94.8%	26.2	2.8	C
	Through	1,044	1,047	100.3%	11.6	1.9	B
	Right Turn						
	Subtotal	1,358	1,345	99.1%	14.8	2.0	B
Total		4,591	4,563	99.4%	33.8	13.8	C

Intersection 2 **Valley Hi Dr/Bamford Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	27	26	95.9%	47.6	13.1	D
	Through	527	531	100.7%	28.1	2.3	C
	Right Turn	117	119	101.5%	5.8	0.5	A
	Subtotal	671	675	100.6%	24.7	2.1	C
SB	Left Turn	164	159	97.0%	28.0	5.0	C
	Through	472	479	101.6%	16.7	2.3	B
	Right Turn	98	101	103.4%	3.2	1.4	A
	Subtotal	734	740	100.8%	17.4	2.0	B
EB	Left Turn	44	43	97.5%	37.3	6.9	D
	Through	31	33	105.8%	36.0	7.9	D
	Right Turn	10	9	89.0%	8.6	6.4	A
	Subtotal	85	85	99.5%	34.3	6.0	C
WB	Left Turn	277	281	101.5%	26.9	4.6	C
	Through	92	96	103.8%	31.3	6.5	C
	Right Turn	375	370	98.6%	35.7	5.9	D
	Subtotal	744	747	100.3%	31.9	3.6	C
Total		2,234	2,246	100.6%	25.0	2.1	C

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	265	268	101.1%	31.3	10.5	C
	Through						
	Right Turn	171	174	101.9%	15.7	8.5	B
	Subtotal	436	442	101.4%	25.3	10.0	C
EB	Left Turn	191	180	94.3%	35.2	9.9	D
	Through	440	447	101.6%	7.6	3.9	A
	Right Turn						
	Subtotal	631	627	99.4%	15.3	5.9	B
WB	Left Turn						
	Through	821	824	100.4%	24.6	11.0	C
	Right Turn	70	67	95.3%	24.4	14.7	C
	Subtotal	891	891	100.0%	24.6	11.3	C
Total		1,958	1,961	100.1%	21.8	9.1	C

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	213	215	100.8%	34.0	3.7	C
	Through	775	776	100.2%	6.1	1.0	A
	Right Turn						
	Subtotal	988	991	100.3%	12.3	1.4	B
SB	Left Turn						
	Through	839	849	101.2%	16.1	2.7	B
	Right Turn	75	75	99.7%	11.0	4.2	B
	Subtotal	914	924	101.1%	15.7	2.8	B
EB	Left Turn	91	92	101.3%	37.2	8.9	D
	Through						
	Right Turn	207	215	103.9%	15.0	3.3	B
	Subtotal	298	307	103.1%	21.8	4.4	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,200	2,222	101.0%	15.0	1.6	B

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing + Project Conditions**
Volume and Delay by Movement **PM Peak Hour**

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	1	1	50.0%	#DIV/0!	#DIV/0!	#DIV/0!
	Through	391	399	102.0%	0.6	0.1	A
	Right Turn	74	73	99.1%	0.3	0.1	A
	Subtotal	466	473	101.5%	0.6	0.1	A
SB	Left Turn	130	137	105.7%	4.3	1.4	A
	Through	638	636	99.7%	0.4	0.1	A
	Right Turn						
	Subtotal	768	773	100.7%	1.1	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	120	121	101.1%	20.4	3.5	C
	Through						
	Right Turn	179	174	97.4%	4.4	0.5	A
	Subtotal	299	296	98.9%	11.0	1.7	B
Total		1,533	1,542	100.6%	2.9	0.6	A

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	146	97.4%	38.4	4.4	D
	Through	423	417	98.6%	55.9	7.2	E
	Right Turn	829	836	100.9%	20.0	3.4	B
	Subtotal	1,402	1,399	99.8%	32.4	2.8	C
SB	Left Turn	548	545	99.4%	103.7	24.7	F
	Through	784	786	100.3%	67.2	14.3	E
	Right Turn	100	104	103.7%	18.9	12.3	B
	Subtotal	1,432	1,435	100.2%	77.7	16.4	E
EB	Left Turn	106	107	100.8%	49.6	7.6	D
	Through	670	668	99.6%	64.7	4.7	E
	Right Turn	152	150	98.7%	21.7	6.0	C
	Subtotal	928	924	99.6%	55.8	4.3	E
WB	Left Turn	860	850	98.9%	116.1	25.2	F
	Through	561	548	97.7%	70.7	5.5	E
	Right Turn	377	388	102.9%	12.8	2.8	B
	Subtotal	1,798	1,786	99.4%	80.7	13.1	F
Total		5,560	5,545	99.7%	63.8	7.0	E

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	103	103	99.8%	39.6	9.7	D
	Through	245	242	98.7%	38.5	8.4	D
	Right Turn	66	69	103.9%	16.4	8.7	B
	Subtotal	414	413	99.8%	34.9	7.2	C
SB	Left Turn	348	345	99.1%	37.0	5.6	D
	Through	59	61	102.9%	32.2	8.2	C
	Right Turn	141	135	95.7%	6.8	1.6	A
	Subtotal	548	540	98.6%	28.8	3.9	C
EB	Left Turn	67	70	103.9%	50.8	13.0	D
	Through	207	202	97.7%	24.5	7.7	C
	Right Turn	40	42	104.5%	3.3	0.7	A
	Subtotal	314	314	99.9%	26.9	6.6	C
WB	Left Turn	37	38	102.2%	52.9	20.4	D
	Through	500	494	98.7%	37.0	11.1	D
	Right Turn	462	469	101.5%	30.0	23.6	C
	Subtotal	999	1,000	100.1%	34.2	16.6	C
Total		2,275	2,267	99.7%	32.0	9.0	C

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	85	84	99.1%	33.9	5.8	C
	Through	781	786	100.6%	10.5	2.3	B
	Right Turn						
	Subtotal	866	870	100.5%	12.6	2.6	B
SB	Left Turn						
	Through	620	626	101.0%	11.2	2.5	B
	Right Turn	85	88	103.8%	9.3	4.5	A
	Subtotal	705	714	101.3%	11.0	2.6	B
EB	Left Turn	110	106	96.2%	31.7	3.7	C
	Through						
	Right Turn	294	301	102.4%	7.8	1.3	A
	Subtotal	404	407	100.7%	14.3	1.0	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,975	1,991	100.8%	12.4	1.4	B

Intersection 9 **Valley Hi Dr/Valley Hi Dwy** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	574	594	103.5%	0.4	0.1	A
	Right Turn	10	10	99.0%	0.2	0.1	A
	Subtotal	584	604	103.4%	0.4	0.1	A
SB	Left Turn						
	Through	768	762	99.3%	1.6	0.2	A
	Right Turn						
	Subtotal	768	762	99.3%	1.6	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn	97	96	98.5%	4.3	0.8	A
	Subtotal	97	96	98.5%	4.3	0.8	A
Total		1,449	1,462	100.9%	1.3	0.1	A

Intersection 10 **Wyndham Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	107	106	99.3%	10.2	1.9	B
	Through						
	Right Turn	76	83	109.2%	6.0	1.3	A
	Subtotal	183	189	103.4%	8.4	1.4	A
EB	Left Turn	37	36	97.6%	5.8	0.9	A
	Through	157	163	103.9%	2.8	0.2	A
	Right Turn						
	Subtotal	194	199	102.7%	3.4	0.2	A
WB	Left Turn						
	Through	229	233	101.6%	1.3	0.2	A
	Right Turn	76	73	96.2%	0.4	0.1	A
	Subtotal	305	306	100.2%	1.1	0.2	A
Total		682	694	101.8%	3.7	0.5	A

SimTraffic Post-Processor **Kaiser Parking Circulation Study**
Average Results from 10 Runs **Existing + Project Conditions**
Volume and Delay by Movement **PM Peak Hour**

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	44	42	95.7%	9.9	3.1	A
	Through						
	Right Turn	66	67	101.8%	3.7	0.5	A
	Subtotal	110	109	99.4%	6.2	1.8	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	221	226	102.1%	0.7	0.2	A
	Right Turn	14	15	105.0%	0.1	0.1	A
	Subtotal	235	240	102.3%	0.6	0.2	A
WB	Left Turn	30	29	96.0%	3.4	0.8	A
	Through	268	263	98.1%	1.3	0.1	A
	Right Turn						
	Subtotal	298	292	97.9%	1.4	0.1	A
Total		643	641	99.8%	2.0	0.3	A

Appendix F

Queueing Reports - Existing Plus Project Conditions

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through	875	100	5	175	13	200	37	0%	0%
	Right Turn	875	25	0	25	0	25	0	0%	0%
SB	Right Turn	750	100	7	175	20	200	25	0%	0%
WB	U/Left Turns	225	100	9	175	15	200	25	0%	0%
	Through	1,875	75	5	125	14	150	46	0%	0%
NB	Right Turn	925	25	0	100	0	150	0	0%	0%

Intersection 2 **Valley Hi Dr/Bamford Dr-Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	950	50	3	75	8	75	15	0%	0%
	Shared	950	50	6	75	15	100	18	0%	0%
NB	Left Turn	75	25	3	50	5	50	12	0%	0%
	Through	400	125	7	175	17	200	24	27%	0%
	Right Turn	100	50	4	100	15	150	44	0%	0%
SB	Left Turn	100	75	9	125	17	150	26	4%	0%
	Through	950	75	8	125	15	150	40	3%	0%
	Right Turn	950	25	1	25	7	50	18	0%	0%
WB	U/Left Turns	100	50	4	100	12	150	19	0%	0%
	Left/Through	425	75	8	150	15	175	23	5%	0%
	Right Turn	425	100	8	175	17	200	38	10%	0%

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	100	5	150	6	125	0	28%	0%
	Through	375	75	18	175	29	200	33	0%	0%
SB	Left Turn	875	150	14	250	25	300	56	16%	0%
	Right Turn	125	100	13	175	36	225	58	2%	0%
WB	Through	1,000	150	13	225	23	275	31	0%	0%
	Through/Right	1,000	175	13	275	23	300	41	0%	0%
0										

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	125	50	4	100	10	100	7	1%	0%
	Right Turn	300	50	4	100	9	125	19	0%	0%
NB	Left Turn	125	125	11	200	16	225	20	10%	0%
	Through	1,000	125	17	225	38	275	105	3%	0%
SB	Through	300	75	5	150	11	175	19	0%	0%
	Through/Right	300	100	8	150	11	200	20	0%	0%
0										

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	350	25	1	25	10	25	28	0%	0%
	Right Turn	25	25	2	25	9	50	21	0%	0%
SB	U/Left Turns	75	50	5	75	10	100	25	1%	0%
	Through	275	25	1	25	7	25	18	0%	0%
WB	Left Turn	100	50	5	75	11	100	24	0%	0%
	Right Turn	300	50	4	75	15	100	30	0%	0%
0										

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	225	100	13	175	35	275	43	0%	0%
	Through	1,250	200	8	275	19	325	28	14%	0%
	Right Turn	75	50	7	100	7	100	0	1%	0%
NB	U/Left Turns	250	25	9	100	28	150	35	0%	0%
	Left Turn	950	75	11	150	19	175	20	0%	0%
	Through	950	350	34	500	83	625	169	3%	0%
	Right Turn	325	200	18	350	27	350	26	0%	0%
SB	Left Turn	275	175	13	225	16	250	22	0%	0%
	Through	775	100	9	175	18	200	28	0%	0%
	Right Turn	300	25	2	50	7	75	22	0%	0%
WB	U/Left Turns	250	275	16	375	17	375	1	9%	0%
	Left Turn	250	325	18	425	24	500	24	27%	0%
	Through	1,300	175	14	300	31	325	83	3%	0%
	Right Turn	1,300	275	29	425	61	500	99	0%	0%

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	U/Left Turns	100	75	5	125	6	150	4	6%	0%
	Through	775	75	8	125	14	200	27	1%	0%
	Right Turn	150	25	3	50	7	75	14	0%	0%
NB	U/Left/Through	200	50	5	100	10	125	15	0%	0%
	Through/Right	200	25	3	50	10	50	36	0%	0%
SB	Left Turn	100	75	5	150	8	150	1	7%	0%
	Left/Through	625	100	11	150	25	200	66	7%	0%
	Through	625	75	6	125	9	150	23	0%	0%
	Right Turn	150	25	2	50	5	75	10	0%	0%
WB	U/Left Turns	125	125	9	200	10	200	1	20%	0%
	Through	375	150	19	300	32	400	27	14%	0%
	Right Turn	125	125	10	175	10	175	0	4%	0%

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	275	50	4	75	12	100	25	0%	0%
	Right Turn	125	50	5	75	9	100	27	0%	0%
NB	Left Turn	425	150	9	250	16	300	46	0%	0%
	Through	650	125	13	225	32	300	57	0%	0%
SB	Through	1,000	75	8	125	16	150	28	0%	0%
	Through/Right	1,000	100	9	175	24	200	42	0%	0%
0										

Intersection 9 **Valley Hi Dr/Kaiser Dwy** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
WB	Right Turn	150	25	1	25	6	25	15	0%	0%
NB	Through	350	25	0	25	0	25	0	0%	0%
	Through/Right	350	25	0	25	0	25	0	0%	0%
SB	Through	475	25	0	25	0	25	0	0%	0%
0										

Intersection 10 **Wyndham Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	25	3	50	6	50	11	0%	0%
	Through	75	25	0	25	0	25	0	0%	0%
SB	Left Turn	100	50	4	75	5	75	10	0%	0%
	Right Turn	100	25	2	50	2	50	0	0%	0%
WB	Through/Right	175	25	1	25	5	25	13	0%	0%
0										

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through/Right	400	25	0	25	3	25	10	0%	0%
NB	Left Turn	200	25	3	50	3	50	10	0%	0%
	Right Turn	200	25	3	50	4	50	9	0%	0%
WB	U/Left Turns	75	25	3	50	6	75	11	0%	0%
	Through	75	25	0	25	0	25	0	0%	0%
0										

Intersection 12 **Valley Hi Dr/Kaiser Dwy** **Uncontrolled**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	25	75	3	100	3	100	12	0%	13%
SB	Through	125	25	3	25	17	75	28	0%	0%
WB	Right Turn	625	25	3	50	9	50	9	0%	0%
0										

Intersection 1 **SR 99 Off Ramp-Alta Valley Dr/Mack Rd-Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Through	875	150	7	200	23	225	37	0%	0%
	Right Turn	875	25	0	25	0	25	0	0%	0%
SB	Right Turn	750	150	8	225	16	250	31	0%	0%
WB	U/Left Turns	225	150	13	225	16	250	25	2%	0%
	Through	1,875	125	12	225	24	275	46	1%	0%
NB	Right Turn	950	375	6	575	7	625	8	0%	0%

Intersection 2 **Valley Hi Dr/Bamford Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	950	50	6	75	8	100	17	0%	0%
	Shared	950	50	4	75	11	100	25	0%	0%
NB	U/Left Turns	75	50	8	100	25	150	44	1%	0%
	Through	400	150	11	225	20	275	43	36%	0%
	Right Turn	100	75	9	150	24	175	2	0%	0%
SB	Left Turn	100	100	13	175	22	175	1	10%	0%
	Through	950	125	13	200	25	225	38	14%	0%
	Right Turn	950	25	2	50	10	75	19	0%	0%
WB	U/Left Turns	100	100	5	175	8	150	1	5%	0%
	Left/Through	425	150	8	250	14	325	43	18%	0%
	Right Turn	425	125	11	200	18	250	28	18%	0%

Intersection 3 **SR 99 Off Ramp/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	100	7	150	6	125	0	27%	1%
	Through	375	100	19	175	31	200	33	1%	0%
SB	Left Turn	875	150	16	225	25	300	70	13%	0%
	Right Turn	125	75	6	150	25	225	62	1%	0%
WB	Through	1,000	125	13	225	33	275	48	0%	0%
	Through/Right	1,000	225	17	350	41	425	87	0%	0%
0										

Intersection 4 **Bruceville Rd/Wyndham Dr** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	125	75	6	125	11	150	16	4%	0%
	Right Turn	300	100	11	175	21	225	48	4%	0%
NB	Left Turn	125	125	9	200	17	225	22	12%	0%
	Through	1,000	100	11	200	25	250	53	1%	0%
SB	Through	275	150	7	250	9	275	8	0%	0%
	Through/Right	275	175	5	275	12	275	7	0%	1%
0										

Intersection 5 **Valley Hi Dr/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Right Turn	25	25	1	25	4	25	8	0%	0%
		350	25	1	25	9	25	21	0%	0%
SB	U/Left Turns	75	50	6	75	9	100	17	1%	0%
WB	Left Turn	100	75	5	125	12	125	14	3%	0%
	Right Turn	300	50	5	100	18	125	45	0%	0%
0										

Intersection 6 **Bruceville Rd-Arroyo Vista Dr/Cosumnes River Blvd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	225	150	14	325	23	275	23	0%	0%
	Through	1,250	325	24	400	22	475	31	37%	0%
	Right Turn	75	75	4	125	4	100	0	4%	0%
NB	U/Left Turns	250	25	4	100	14	150	17	0%	0%
	Left Turn	950	75	7	150	14	175	28	0%	0%
	Through	950	225	16	325	51	425	91	0%	0%
	Right Turn	325	225	17	350	20	350	5	1%	0%
SB	Left Turn	275	425	28	525	17	475	1	46%	0%
	Through	850	500	100	775	155	825	67	29%	3%
	Right Turn	300	125	32	375	84	425	0	0%	0%
WB	U/Left Turns	250	375	9	425	16	375	0	49%	0%
	Left Turn	250	500	27	600	36	525	1	57%	0%
	Through	1,925	825	240	1,425	356	1,450	346	16%	0%
	Right Turn	1,925	125	8	200	21	250	39	0%	0%

Intersection 7 **Alta Valley Dr/Bruceville Rd** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	100	75	6	100	10	125	11	4%	0%
	Through	350	75	8	125	13	150	28	3%	0%
	Right Turn	150	25	4	50	8	75	12	0%	0%
NB	Left/Through	450	175	11	275	15	300	31	0%	0%
	Through/Right	450	100	12	225	18	225	23	0%	0%
SB	Left Turn	100	100	8	175	10	150	0	14%	0%
	Left/Through	650	125	22	250	49	300	78	20%	0%
	Through	650	50	5	75	8	100	9	0%	0%
	Right Turn	150	50	4	100	9	100	12	0%	0%
WB	U/Left Turns	125	50	10	125	29	175	8	1%	0%
	Through	375	225	20	425	33	475	18	22%	1%
	Right Turn	125	150	8	200	4	175	0	12%	0%

Intersection 8 **Bruceville Rd-Alta Valley Dr/Bruceville Dwy** **Signal**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	275	75	10	125	29	175	53	2%	0%
	Right Turn	125	75	5	125	10	125	8	1%	0%
NB	Left Turn	75	50	4	75	7	100	15	2%	0%
	Through	325	75	6	150	16	200	42	1%	0%
SB	Through	1,000	50	4	100	8	125	13	0%	0%
	Through/Right	1,000	75	6	125	12	125	22	0%	0%
0										

Intersection 9 **Valley Hi Dr/Valley Hi Dwy** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
WB	Right Turn	150	50	2	75	6	100	17	0%	0%
0										
0										

Intersection 10 **Wyndham Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
EB	Left Turn	75	25	3	50	6	50	17	0%	0%
SB	Left Turn	75	50	2	75	5	100	9	0%	1%
	Right Turn	75	50	3	75	5	75	10	0%	0%
WB	Through/Right	175	25	2	25	8	25	13	0%	0%
0										

Intersection 11 **Wyndham MOB Dwy/Wyndham Dr** **Side-street Stop**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Left Turn	200	50	4	75	7	100	23	0%	0%
	Right Turn	200	50	3	75	9	75	14	0%	0%
WB	U/Left Turns	75	25	2	50	5	50	19	0%	0%
0										
0										

Intersection 12 **Alta Valley Dr** **0**

Direction	Lane Group	Storage (ft)	Average Queue (ft) Average	Average Queue (ft) Std. Dev.	95th Queue (ft) Average	95th Queue (ft) Std. Dev.	Maximum Queue (ft) Average	Maximum Queue (ft) Std. Dev.	Block Time Pocket	Block Time Upstream
NB	Through	25	50	3	75	7	100	10	0%	30%
SB	Through	125	25	4	50	23	75	55	0%	0%
WB	Right Turn	625	25	3	50	7	75	17	0%	0%
0										