

Memorandum

Date: December 9, 2020
To: Karen Hong, Stanford Lands, Buildings and Real Estate
From: Ellen Poling, Fehr & Peers
Subject: Responses to AECOM Peer Review of the LBRE Replacement Building Resubmittal

WC19-3607.00

This memorandum transmits draft responses to the comments in AECOM's October 28, 2020 peer review of the LBRE Replacement Building resubmittal.

Comment RI-2: Given potential community concern, AECOM respectfully reiterates that we believe the Searsville and Campus Drive intersection should be analyzed as part of this project. In addition, this intersection is within ¼ mile radius of the project site.

Response: To provide more background on Stanford's interpretation of the quarter-mile distance reference: the guidance document *Scoping of Project-Specific Transportation Studies under Stanford GUP Conditions of Approval G.11* (January 16, 2002) refers to including analysis of crossings within a quarter-mile distance of project sites. This guidance has been interpreted in Local Access and Circulation Studies prepared under the 2000 GUP as referring to pedestrian facilities, as a quarter-mile is typically considered a convenient walking distance for trips between a project site and uses such as parking, Marguerite stops, or other on-campus purposes. Local Access and Circulation Studies have generally limited the traffic operations analysis to project driveways serving site-generated traffic and intersections directly adjacent to project sites, because the purpose of the traffic analysis in the studies is to assess site operations and safety.

As shown in the Local Access and Circulation Study Table 3, the Project is expected to add 12 peak hour trips to the Campus Drive/ Searsville Road intersection, similar to the trips added at the Searsville Road/Fremont Road intersection.



At the County's request, Fehr & Peers has updated the Local Access and Circulation Study to include the Campus Drive West/Searsville Road intersection. We used counts which were conducted as part of a greater West Campus area count at the same time that the baseline counts for the LBRE Replacement Building Local Access and Circulation Study were conducted, and these counts were used for the new analysis. The analysis indicates that the intersection would continue to operate at LOS A overall, with the stop-controlled Searsville approach operating at LOS C or better for all scenarios (Existing and Existing With Project).

Comment RI-3, Part 1: What is the meaning of "the current eastbound leg will not be part of the modified intersection" as stated in the response by Fehr & Peers dated 9/24/2020? While Plan C9.0 showed Intersection 2 having only 3 approaches, the intersection was analyzed as a 4-leg AWSC? In addition, plan C9.0 indicated that the current stop signs at Intersection 2 will be removed with no replacement. As such, the plan appears to present Intersection 2 as a yield-controlled roundabout. This is different from how Intersection 2 was analyzed in Synchro. The AECOM review indicated a problem with what precisely is the control for this intersection given that it is different between the striping plan, the Synchro analysis and the narrative. Please clarify and streamline the plan for this intersection.

Comment RI-3, Part 2: In addition, AECOM recommends that the County require the intersections requested by Menlo Park including Sand Hill and Alpine Roads considering both regular vehicles and heavy truck traffic to determine the impact of this project, if any, due to the re-routing of trips. Additional intersections suggested by AECOM and/or Menlo Park include:

- Stock Farm and Sand Hill Roads
- Sand Hill Road and Santa Cruz Ave
- Alpine Road and Junipero Serra Blvd
- Alpine Road and Alpine Access Road/Piers Lane

Response to Part 1: To clarify the prior response regarding the reconfigured intersection of Fremont Road/LBRE Equipment Shed Driveway: Fehr & Peers did not provide a "With Project" analysis of this intersection, because on inspection it would operate well as a yield-control traffic circle (not a modern roundabout), especially given the extremely low volumes (the Project would not add peak hour trips), and the removal of the fourth leg as part of project construction. As requested, we will update the Local Access and Circulation Study to include an analysis of the intersection as a three-leg roundabout for the Existing With Project case, since there is not a separate Highway Capacity Manual methodology for traffic circles. The analysis indicates that the intersection would operate at LOS A in both peak hours in the Existing With Project case.



Please note that the updated analysis applies the latest Highway Capacity Manual methodology, HCM 6 as opposed to the 2010 HCM, which results in very small (less than one second) delay differences at the original three intersections.

Response to Part 2: Regarding the requested addition of the four off-campus intersections: Evaluation of off-campus intersections would be inconsistent with the protocol that the County and Stanford use for conducting project-specific traffic studies. The 2000 Community Plan/ General Use Permit EIR provided an analysis of the cumulative effects of background traffic growth plus the development anticipated to occur under the 2000 General Use Permit. To date, background traffic growth has not exceeded the levels forecasted in the 2000 EIR. Further, development under the 2000 General Use Permit has not added the trips that were forecasted to occur because Stanford has achieved the No Net New Commute Trips standard. Therefore, there have been no offsite increases in transportation effects of the 2000 GUP beyond the levels forecasted by the 2000 GUP EIR.

When reviewing a 2000 GUP project that requires a project-specific traffic study, the question is whether the project will change the conditions anticipated by the 2000 EIR such that a new or substantially more significant impact would occur, compared to the impact disclosed in that document. For a project that reallocates square footage from one development district to another one, such as the LBRE Building, the analysis focuses upon whether external trip distribution would change compared to the distribution forecasted in the GUP EIR. External trip distribution is primarily affected by the location of parking lots and structures, not by the location of campus buildings.

The Scoping document referenced above states that external intersections are to be assessed via a GUP EIR Intersection Evaluation Report. The GUP EIR Intersection Evaluation involves two stages, as described below.

Stage A Screening Analysis

The Stage A screening analysis provides a description of the Project's effect on the running total of parking spaces added to the Campus under the 2000 GUP. The "cumulative running totals" of built/approved parking spaces by campus development district are compared to the totals analyzed in the GUP EIR. Under the methodology agreed upon by Stanford and the County of Santa Clara, if the running total exceeds the GUP EIR build-out total in any area, a Stage B analysis would be prepared as described below.



Stage B Impact Assessment and Mitigation Approach

The intent of the Stage B analysis is to provide a comparison of the intersection volumes at the GUP analysis intersections using the GUP EIR trip generation and distribution assumptions with the intersections volumes that would result from the cumulative running totals identified in the Stage A screening analysis. As originally envisioned in the Conditions of Approval, the report would identify the number of trips the Project would add to each GUP intersection, as well as the cumulative running total of other GUP projects approved to date. The running total would be compared to the GUP build-out trip total as reported in the GUP EIR. If the current total exceeds the GUP EIR build-out total at any intersection, further Stage B impact analysis would be conducted at the affected intersections.

As individual projects have been assessed under the GUP, none, including the LBRE project, have required a Stage B assessment, because the projects have all been shown to be consistent with the original GUP EIR traffic analysis assumptions regarding trip distribution external to the campus.

Here, the LBRE Replacement Building GUP EIR Intersection Evaluation Report (December 2019) finds that the LBRE Project would not result in impacts on external intersections exceeding those identified in the 2000 GUP EIR, because the parking in each development district, including the West Campus Development District, would remain consistent with the 2000 GUP allocation.

As noted in the LBRE Replacement Building Local Access and Circulation Study, some LBRE employees would shift their location to the Searsville Lot. However, the reduction in commuter parking in the Searsville Lot means that some others currently parking in that lot would park in other campus parking lots, as part of a campus-wide shift in which employees will make use of new lots in the East Campus Development District, the Escondido Village Development District, and the Quarry Development District. The total number of parking spaces within each Development District would be consistent with the forecasts used to distribute trips in the 2000 EIR. Therefore, it is not expected that the project would result in changes to external intersections that differ from the changes predicted to occur in the 2000 EIR.

While additional external intersection analysis is not required by the 2000 GUP conditions of approval, Fehr & Peers has performed a sensitivity analysis to show that even under extreme worst-case conditions assuming that every trip associated with the LBRE building, using 2000 GUP EIR trip generation rates, is a newly added trip at the intersections referenced by AECOM¹, the

¹ With the exception of Alpine Road/Alpine Access Road/Piers Lane, which was not studied in the 2000 GUP EIR.



impacts at the intersections would not exceed the impacts that were identified in the 2000 GUP EIR. Again, this is a highly conservative analysis given that (a) the work schedules of many of the LBRE employees necessitate commuting outside the AM and PM peak hours; (b) some LBRE employees likely use the Sand Hill Road corridor today to access the existing facilities at Bonair; and (c) some other employees currently using the Searsville lot will shift to other lots in the Central or East Campus Districts.

For this sensitivity analysis, Fehr & Peers estimated the total traffic generated by the LBRE Replacement Building Project using staff trip generation rates from the 2000 GUP EIR; added the two peak hour external truck round trips projected in the LBRE Replacement Building Local Access and Circulation Study; and added 100 percent of the Project trips to the 2016 peak hour volumes at Sand Hill Road/Stock Farm Road, Sand Hill Road/Santa Cruz Avenue, and Alpine Road/Santa Cruz Avenue/Junipero Serra Boulevard. We also included traffic projections from three projects in the West Campus area and Menlo Park – the Stanford Hospitals Renewal and Replacement Project, the Center for Academic Medicine Project, and the Middle Plaza Project. Note that a 2019 count at Sand Hill Road/Santa Cruz Avenue/Junipero Serra Boulevard showed slightly lower volumes than the 2016 counts, so we used the higher 2016 counts for this intersection rather than the later count.

Table 1 presents the trip generation estimate, and Charts 1 and 2 show the resulting combined volume (2016 counts + other projects + extreme worst case LBRE Replacement Building project). The total volume at each intersection is well below the 2010 volume forecast in the 2000 GUP EIR.

Table 1: LBRE Project Trip Generation Using 2000 GUP EIR Rates

# Staff		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
295	Rates (1):	0.166	0.051	0.217	0.06	0.134	0.194
	Trips	49	15	64	18	40	57
External Truck Trips		2	2	4	2	2	4
Total Trips		51	17	68	20	42	61

(1) Trips per person; rates taken from 2000 GUP EIR Table 4.4-18.



Chart 1: AM Peak Hour Volume Comparison

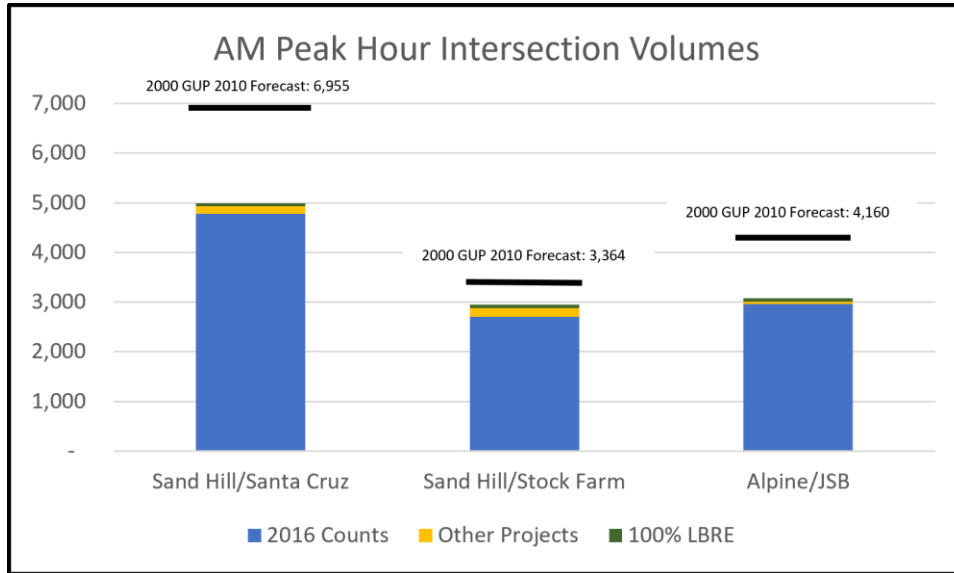
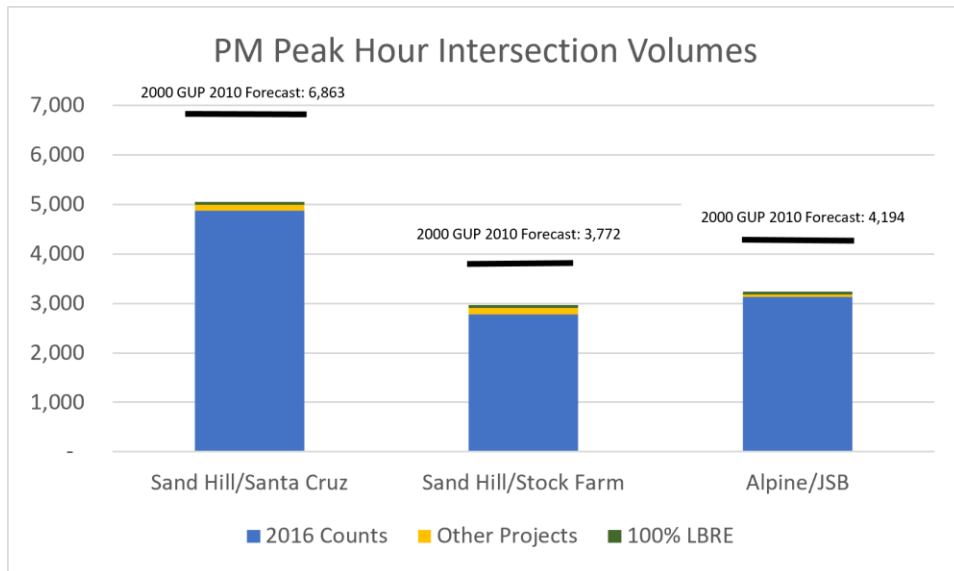


Chart 2: PM Peak Hour Volume Comparison



Comment TR-2: AECOM requests that Stanford provide the truck distribution and route assumptions for peer review so as to better evaluate and address Menlo Park's concerns.



Response: Stanford does not track the origins of the various vendor trips to and from the campus. As noted in the LBRE Local Access and Circulation Study, the LBRE facility serves approximately 15 external truck round trips to campus on a daily basis, and approximately two round trips during each peak hour, which would not change with the relocation of the facility. The report notes that most of these vehicles are single-unit trucks, including standard pick-up trucks, as opposed to larger tractor-trailer trucks. If all 15 daily round trips were split evenly between Alpine Road (via Campus Drive West), Sand Hill Road to/from the east (via Stock Farm Road), and Sand Hill Road to/from the west (via Stock Farm Road), this would correspond to five daily additional truck round trips (ten one-way trips) on each of those external roadway segments. Split over the period of 8 AM to 5 PM, this corresponds to about one additional one-way truck trip per hour. This would not generally affect the safety or comfort of pedestrians and bicyclists using the roadways.

Regarding the significance of a specific truck volume increase: Fehr & Peers reviewed year 2015 truck volumes from San Mateo County's Alpine Road Corridor Study Project (March 2017), which indicated 975 trucks (FHWA classification 5 – 13) on Alpine Road north of I-280. Eighty-two of these were larger tractor-trailer trucks (FHWA classification 8 – 13). The theoretical ten one-way project truck trips described above would represent a one percent increase in the total truck volume. Given that most of the Project truck trips are not of the larger classification, the additional Project trips would also constitute a small percentage of the 82 larger trucks on Alpine Road (based on the 2015 count). If one truck round-trip per day were a larger truck, this would constitute 2.4 percent of the 2015 larger truck volume.

Comment OU-1: We respectfully request that the materials be updated to correct for the errors rather than simply transmitted via separate memorandum.

Response: Fehr & Peers will provide the updated analysis in an updated Local Access and Circulation Study, along with the other modifications noted above.