From:	Dan McLellan
To:	DSD EAS
Subject:	Draft EIR Response from Dan McLellan
Date:	Friday, September 25, 2015 1:04:11 PM
Attachments:	Traffic Review.pdf Environ Comment Ltr.pdf

Dear San Diego City Officials:
Prior to the start of conducting the rushed Environmental Impact Report for a new stadium at Mission Valley, I submitted five letters as part of the public comment period. Those letters addressed the following concerns: the high likelihood of the existence of contaminated dirt on the site, fill dirt, parking, needed road infrastructure improvements, and encouraged a comprehensive look at alternatives.
In addition to this letter to respond to the Draft EIR, I am submitting two professional studies: Ramboll Environ and Gibson Transportation Consulting. These reports show that the Draft EIR made multiple erroneous assumptions and ultimately were not able to mitigate significant number of issues.
As it now stands , the Draft EIR is an incomplete EIR. I strongly urge the city to not validate the EIR and save the tax payers further losses from lawsuits.

Contaminated Dirt: I brought to the attention that there was likely 10s of thousand of cubic yards of contaminated dirt at the site that would need to be removed. I was shocked to learn the Draft EIR estimates there is 920,000 cubic yards of polluted dirt. This dirt will need to be removed and the remaining soil treated with chemicals that could have an adverse affect on ground water and the San Diego River.
The removal of the dirt alone will be an enormous expense with a huge environmental impact. A dirt truck only carries 16 cubic yards of dirt. That means it would take an estimated 57,500 truck loads to remove the dirt.
Disposing of the dirt is another major obstacle. Apparently the closest facility that will take contaminated dirt is in Arizona. This means each of the 57,500 loads would have at least a four hour round trip. Assuming the disposal site is only 100 miles away, that would mean 5,750,000 miles would have to be driven in fuel inefficient vehicles, or about 231 trips around the earth.

Fill Dirt: If there is 920,000 cubic yards of contaminated dirt at the Mission Valley site, then it will take multiple millions of cubic yards of fill dirt to complete the project. It has previously been reported that enough fill dirt will need to be brought in to rise the entire 166 acres up to Friars Road level.

Understanding that fill dirt is only brought in at 16 cubic yards per load; this means over hundreds of thousands of loads will be needed. This will add an immense amount of traffic to Mission Valley.

Moving so much dirt will also have a significant environmental impact, and an unknown amount of water will be needed to compact the dirt. We are currently in the middle of one of the worst droughts in our region's history. There is no reason for us to take on this project at this time when a better alternative exists downtown.

Parking: The Draft EIR confirms a serious reduction of parking spots, while over estimating the use of alternative transportation. Gibson Transportation Consulting is critical of the Draft EIR's assessment of the number of passengers that will ride the Trolley to games. I believe their criticism did not go far enough. Ridership was at an

all-time high at an average of 15,202 passengers per game in 2014, according to MTS.

As a frequent Trolley rider, I do not see the capability of game day ridership to Mission Valley dramatically rising in the future. The appeal of the Trolley is that it offers a quick exit from a congested parking lot. If I do not leave the game a few minutes early, I already expect a wait time of around an hour to board. If wait times were to increase much more, the appeal of the Trolley would be gone.

Without a significant investment in additional public transportation, the new stadium would lack sufficient parking and access to events.

Mission Valley is virtually land lock, limiting pedestrian access. One of the appeals of relocating the stadium to downtown is that attendees to games could access the stadium in all directions by all forms of transportation, including public. Additional parking would need to be added downtown, but a downtown site would capitalize on existing public and private lots.

Infrastructure: In my previous letters I brought to the attention of 16 known road related infrastructure improvements that would be needed. These infrastructure improvements were proposed by the Chargers in 2003, and the team made CSAG aware of them in a secure website. CSAG, however, ignored them in their report.

1. Friars Road/SR 163 Interchange Roadway & Ramp Improvements including improvements at Friars Road and Frazee Road Intersection

2. Friars Road/Interstate 15 Exchange, Roadway and Ramp Improvements

3. Friars Road/Qualcomm Way, Ramps and Intersection Improvements

4. Texas Street/Camino Del Rio South Intersection Improvements

5. Camino Del Rio South/Interstate 15 North bound improvements

6. Friars Road/Mission Center Road, Ramp and Intersection improvements

7. Rancho San Diego Road/ Ward Road, Intersection Signalization

8. Friars Road/Mission Center Drive, Interchange Improvements

9. Interstate 8 Hook Ramps Westbound from Camino Del Rio South to near Interstate 805

10. Camino Del Rio South to 4 lanes from Fenton Parkway/Mission Center Parkway to Interstate 805

11. Camino Del Rio North to 4 lanes, from Fenton Parkway/Mission Center Parkway to Interstate 15

12. Mission Center Parkway Bridge over Interstate 8, widen to 4 lanes

13. Bridge over San Diego River at Fenton Parkway

14. South Development Road Connection offsite, west to Fenton Parkway

15. Western Development Road Connection, offsite to Northside Drive

16. Extend Murphy Canyon Road South to development area

The Gibson Transportation Consulting report confirms that roadways would be significantly impacted at these specific locations and thus it is reasonable to conclude that these infrastructure improvements are in fact needed. Making these improvements will come at both a significant economic and environmental cost.

With the knowledge that there is substantial dirt related and infrastructure expenses not accounted for, it is reasonable to asses that cost for this project will dramatically increase. It is also reasonable to asses that the total cost for building a new stadium in Mission Valley will be significantly greater than building a multi-use facility downtown that would include an estimated 240,000 square feet of convention space. The downtown proposal is estimated to cost $1.2 billion, while a new stadium in Mission Valley is currently estimated to cost $1.1 billion.

Alternatives: Perhaps most concerning about the Draft EIR is that it was dismissive of alternatives for where a new stadium could go, and what else could be done for the public good with the land in Mission Valley.

This is a major shortcoming and appears to be motivated by politics.

If our elected officials are truly concerned about keeping the Chargers and Comic-Con in San Diego, then it is time that we have an honest discussion about a multi-use facility downtown.

Sincerely,

Dan McLellan

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RAMBOLL ENVIRON

ENVIRONMENT
& HEALTH

REVIEW OF
THE STADIUM RECONSTRUCTION PROJECT, SAN DIEGO, CALIFORNIA
DRAFT ENVIRONMENTAL IMPACT REPORT

Date: September 22, 2015

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Ramboll Environ US Corporation (Ramboll Environ) has reviewed the Air Quality (AQ), Greenhouse Gas (GHG), Noise, Hazards, Biological Resources, and Hydrology Sections of the Draft Environmental Impact Report (EIR) for the Stadium Reconstruction Project in the City of San Diego. Our findings reflect the conclusions reached given the time available for our review and information provided. To the extent that additional information or time is provided, our findings may change.

Air Quality

1. Page 4.1-16. The Draft EIR reaches a conclusion indicating that "the project would not conflict with or obstruct implementation of the applicable air quality plan" without substantial evidence. The analysis indicates that because the project retains the current land use as a stadium, emissions with a stadium use are currently accounted for the RAQS. This analysis has assumed that the growth and land use changes incorporated by SANDAG anticipate that this existing use remains going forward. The analysis further assumes that the Project's changes (i.e., the increased events) are then also consistent with the assumptions used by SANDAG and incorporated into the RAQS. Substantial evidence for this issue might include an actual evaluation of information and assumptions that was included in or relied upon by the RAQS.

2. Page 4.1-18. The Draft EIR incorrectly categorizes the impact in Table 4.1-5 regarding the daily construction emissions for ROG as less than significant. The Draft EIR's own analysis shows that it is significant. Given that it is a significant impact, what are the mitigation measures that the project will include to address this significant impact? 1-19. The Draft EIR does not provide substantial evidence to support their conclusion regarding what the ambient air quality impacts would be. The Draft EIR appears to rely solely upon the mass emissions estimate to conclude that "construction emissions would potentially violate the ambient air quality standard or contribute substantially to an existing violation." Typically, a modelling analysis is performed to estimate the potential ambient air quality concentrations to determine if such an impact would occur and/or to assess the severity of the impact. The Draft EIR should include additional data to accurately model the Project impacts. Based upon the data provided in the Draft EIR, and

assumptions to fill in the data gaps not provided by the Draft EIR, there would be significant impacts on nearby sensitive receptors from construction emissions. As shown in Tables 1a and 1b, there would be ambient air quality violations for NO_2, PM_{10}, and $PM_{2.5}$ as a result of construction emissions. Based on these estimates, the Draft EIR should appropriately evaluate the potential ambient air quality impacts and properly disclose the potential impacts. If the impacts are as estimated here, the Project should consider additional mitigation measures to address these significant impacts. These could include, but are not limited to, adjustments to construction schedule, use of alternatively fueled construction equipment, and use of electricity from power poles rather than generators. The SCREEN3 run is also attached for reference.

3. While the Project has committed to Tier 4 construction equipment, consideration should be made regarding the availability of Tier 4 construction equipment to ensure that the mitigation measure can be achieved. In January 2015, the final stage of the Tier 4 off-road engine exhaust emission standards became effective and nearly all newly manufactured engines will be Tier 4 compliant. However, due to the long useful life of construction and industrial equipment, some older equipment including low level Tier 0, 1, and 2 equipment will remain in service. The California Air Resource Board In-Use Offroad Diesel Regulation recognizes this issue and currently does not require all fleets to be entirely Tier 4 equipment. Given the scale of this Project and the potential construction schedule, it is not clear that Tier 4 equipment will be available for all equipment as assumed in the analysis. If Tier 4 equipment is not used, the emissions can be much higher than reported in the Draft EIR. For example, a Tier 3 scraper emission factor is nearly 8 and 10 times higher than a Tier 4 scraper.[1] The Draft EIR should include greater discussion on the Tier 4 equipment availability issue since it does assume all equipment will meet Tier 4 requirements and represent the analysis appropriately.

4. The Draft EIR identifies a range of significant air quality impacts yet it does not include very many potentially feasible mitigation measures. It is also not clear if the Draft EIR has included all mitigation measures consistent with its assumptions in the analysis. Based on other mitigation measures included in projects within the San Diego region, the Draft EIR should consider if the following measures are feasible to reduce emissions:

   a. Construction:

      i. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area;

      ii. Notably this appears to be included in the analysis; however, there is not a specific mitigation measure to correlate to this assumption;

      iii. Cover loads in haul trucks or maintain at least six inches of free-board when traveling on public roads;

      iv. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets or wash trucks and equipment before entering public streets;

[1] CalEEMod Appendix D. Table 3.5. Available at: http://caleemod.com/. Accessed: September, 2015.

v. Apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for four consecutive days); and

vi. When feasible, construction operations will use electric construction power instead of diesel-powered generators to provide adequate power for man/material hoisting, crane, and general construction operations.

b. Operations:

i. Transportation Demand Management measures as listed in CAPCOA Guidance.[2]

5. Page 4.1-19. The Draft EIR does not adequately evaluate the implosion of the existing stadium to ensure that the proposed mitigation is adequate. The San Diego Air Pollution Control District Rule 51 states "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowls or animals." While the Draft EIR provides discussion to suggest that the implosion will not lead to a violation of ambient air quality standards, the analysis has not provided adequate analysis to demonstrate that the implosion will not create a nuisance violation. Given the close proximity of the nearby sensitive receptors, the Draft EIR should provide sufficient analyses and mitigation measures to address the potential for an acute impact on nearby residents (i.e., a nuisance violation) or biological resources.

6. Page 4.1-20. The Draft EIR does not provide adequate documentation to understand if the potential sources of criteria pollutant and air toxic emissions from operations have been included. The Draft EIR appears to rely upon the CalEEMOd default "arena" land use category to estimate the emissions for natural gas and area source emissions. If this is the case, the Draft EIR likely does not account for various emission sources that could contribute substantially to the criteria pollutant and air toxic contaminant emission inventory. The Draft EIR should discuss the potential for emissions from these sources and include emission estimates as appropriate:

a. emergency generators or temporary generators,

b. natural gas usage from cooking activities which may occur in restaurants,

c. charcoal or barbeque burning that may occur during tailgating activities,

d. street sweepers cleaning the parking lot areas,

e. pyrotechnics (i.e., fireworks and other such displays), and

f. mobile sources from special events (e.g., supercross?).

7. Page 4.1-21. The Draft EIR appears to incorrectly develop a baseline/existing conditions emissions inventory based on CalEEMod default parameters. This "arena" land use category is not an

[2] Available at: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf. Accessed: September, 2015.

appropriate basis for a stadium. In CalEEMod, the "arena" land use category is defined as: large ***indoor*** [emphasis added] structures in which spectator events are held. These events vary from professional ice hockey and basketball to non-sporting events such as concerts, shows, or religious services. Arenas generally have large parking facilities, except when located in or around the downtown of a large city.[3] Furthermore, according to Page 3-6 of Appendix J of the Draft EIR, the stadium will include stadium operations facilities, restaurants, merchandise facilities, team locker facilities, media facilities, and administrative facilities. We also do not believe that the "arena" land use category in CalEEMod adequately represents such stadium uses based on the definition in the CalEEMod documentation as cited above. The Draft EIR does not provide substantial evidence to support the baseline/existing conditions emission inventory reported.

8. Page 4.1-29. The Draft EIR contains inconsistent information regarding the health risk assessment results. Table 4.1-11 shows a maximum cancer risk of 7 in a million (less than significant), while the text indicates a maximum cancer risk of 14 in a million (significant). There is also not sufficient disclosure of the assumptions relied upon in the analysis to evaluate what may be the correct answer, nor is there sufficient disclosure to review and verify if the analysis was done correctly unless the models are completely re-run using the electronic files.

    a. Most notably, it is unclear what mitigation is incorporated into the health risk assessment if any. While a commitment to use Tier 4 engines is stated on page 4.1-36, it is not clear if this was incorporated into the analysis. Given that Tier 4 engines are not universally available, if the health risk assessment had assumed Tier 4 engines, then the analysis may have provided a false sense of the mitigation measure effectiveness given the potential inability for the Project to actually use all Tier 4 construction equipment.

9. Page 4.1-29. The Draft EIR does not perform a health risk assessment for operational emissions. Given the Project's close proximity to residents, and the Project moving of the stadium closer to the residents, and the increase in frequency of events, the Draft EIR should include additional evaluation of the potential health risk impacts associated with operational emissions.

10. Page 4.1-36. The Draft EIR does not provide an adequate mitigation measure to account for the reduction in mobile emissions that appear to be incorporated in the Draft EIR. The Draft EIR appears to take credit for a substantial reduction in mobile emissions that is in large part due to a shift in transportation modes. There should be an associated mitigation measure or project design feature to ensure that this mode shift is achieved. The effect of this purported mode shift is a reduction in emissions relative to the baseline/existing conditions. Thus, if the shift does not actually occur, emissions will be higher than disclosed in the Draft EIR.

11. Page 4.1-37. The Draft EIR does not provide adequate information regarding how the mitigated emissions were developed. While the emissions appear to have changed, there is not adequate information provided to substantiate how those emission estimates were developed. The Draft EIR should include more detail on what assumptions were incorporated to estimate the mitigated emissions to ensure that the mitigation measures appropriately correlate to those anticipated reductions.

[3] Available at: http://caleemod.com/. Accessed: September, 2015.

12. Appendix B. The Draft EIR Appendix B also does not contain substantial evidence to support the assumptions incorporated into the analyses. Additional information is required to adequately disclose the basis for the assumptions used in the CalEEMod model runs. As a result, there is not adequate information to meaningfully evaluate the project's emissions. For example, the Draft EIR should be more clearly identified what emission sources are accounted for and what the bases are for those emission estimates, the trip generation and trip length estimates for each scenario evaluated, the event specific assumptions that may have been incorporated, the estimates for the natural gas usage. Typically, for such a complex analysis, supporting tables would be prepared and included, at a minimum within the technical appendix, in conjunction with CalEEMod output files. Given that there was also some sort of processing of the data from the various CalEEMod runs, it is reasonable to expect that the technical report would provide information to illustrate how the output from the CalEEMod runs were compiled. There should also be clear references to information from other sections such as traffic and greenhouse gas to ensure consistency of the assumptions between the different resource areas. It appears that the air quality and greenhouse gas sections have entirely different estimates for the natural gas usage. The Draft EIR should also identify what project design features and/or mitigation measures are quantitatively incorporated into the analyses.

Greenhouse Gas

13. Page 4.5-22. The Draft EIR does not provide substantial evidence to support the GHG calculations. As discussed in the air quality comments, additional information is required to adequately disclose the basis for the assumptions used in the CalEEMod model runs. Notably, it is not clear what the default assumptions used within CalEEMod versus site-specific information are, nor is it clear how they derived their factors to determine the business-as-usual emissions inventory. While some explanation is provided in the text, without further evidence, they appear to be numbers pulled out of thin air. Similarly, as was discussed with air quality, it is not clear that the GHG emissions inventory has appropriately accounted for all of the potential emissions sources. Given this lack of information, it is not possible to meaningfully review to evaluate the project's GHG emissions. Most notably, more substantiation should be provided regarding the basis of reductions from the business-as-usual scenario.

14. Page 4.5-22. The Draft EIR appears to have incorrectly estimated the potential reductions from a business-as-usual scenario. The Draft EIR indicates in footnote 10 that the mobile source reduction would be higher than other land development projects because "the on-road motor vehicles for the visitors to the stadium would primarily be passenger vehicles." This does not appear to be a fair assessment considering that the Draft EIR assumes that 10% of the trips are charter buses. Consider also that for stadium events, many "non-customer" trips are likely heavy-duty trucks bringing equipment and other supplies to the stadium. The use of a county-wide fleet mix is typically used on almost all projects to ensure that this variety of vehicle use is accounted for for all types of trips for a given project. Furthermore, comparing the Project's fleet mix to a residential land use development project would also show that it is more likely a residential land use development project will have a greater proportion of light duty vehicles. The Draft EIR appears to have conveniently assumed a higher level of passenger vehicles to improve the emissions reduction from a business-as-usual standard.

15. If we evaluate the Draft EIR's GHG inventory using a reduction from business-as-usual scenario using the standard practice technique to estimate such reductions, the Project is significant for GHG. As shown in Table 2a, the weighted average reduction associated with Pavley I and the Low Carbon Fuel Standard (i.e., the two regulations the Draft EIR took credit for) is only 22.1% and 23.9% for the running and starting exhaust, respectively. Applying the higher value of these estimates instead of the 31.2% value reported in the Draft EIR shows the Project would not meet the significance threshold for GHG (see Table 2b). It is important that assumptions for the GHG analysis be substantiated otherwise incorrect conclusions can be misleading.
16. Table 4.5-4. The percent reduction from BAU is incorrect for the water emissions source category. Based on the numbers shown, the reduction is only 5.2% (i.e., 27/520), whereas the table lists it as a 15.7% reduction. This should be re-evaluated and the correct results should be reported.
17. Page 4.5-23. The Draft EIR does not provide adequate analysis or discussion regarding how the Project will meet the state's goals for 2030 and 2050 GHG reductions.

Noise

18. Figure of measurement results for Saturday 7/11/2015 as found in Appendix A of the Draft EIR's Appendix K). The Draft EIR does not adequately characterize the existing conditions. The measured sound levels at LT-3 during the daytime on Saturday were clearly influenced by a particularly loud source or activity, likely a source very near the measurement location since it only affected this measurement. This source/activity was not identified in the DEIR, and upon review of the measured sound levels on the other days, the Saturday daytime levels do not appear to be representative of more typical ambient conditions. The seemingly inflated measured sound level of 64 dBA was then used to characterize the ambient level at LT-3 during Saturday daytime hours, when it appears that the levels are more generally in the upper 50s dBA during that time period (i.e., the levels on Wednesday-Friday and on Sunday were lower during that period. Use of an inflated ambient sound level would lead to lower calculated increases in sound levels due to a project, which could obscure a potentially significant noise impact. The source of the elevated levels should be identified, and it should be determined whether it is a recurrent activity that truly affects levels to the degree suggested, or additional ambient measurements should be taken, since the measured levels do not appear to represent typical ambient conditions. Assuming the lower, more accurate values in the upper 50s dBA were applied (a reasonable assumption unless more refined information is presented), impacts due to construction activities causing increases over existing ambient levels could be even greater than identified in the Draft EIR.
19. Pages 4.11-24 - 4.11-25. The Draft EIR does not identify the source sound levels for 'Events' for the impacts analysis. The Draft EIR does not identify the operational source sound levels for any of the events (i.e., crowd, supercross bikes, concert) assessed in the Draft EIR. Without identification of the source sound levels, it is not possible to conduct a review of the noise impact analysis. In other words, based on the information in the Draft EIR, it is impossible to complete a meaningful review of the project's noise impacts. Although there are copious field notes from a concert event and references to crowd noise, the Draft EIR does not identify these source sound levels. The Draft EIR also does not identify Supercross motorbike sound levels.

20. In addition, there is no indication if other related game day activities, such as tailgating or parking lot activities, were considered in any of the modeling efforts (tailgating and parking lot activities can be a substantial noise source as identified in The 49ers Stadium Project Draft EIR, July 2009). The Draft EIR does not consider sound levels from RaceLegal and other street-legal drag racing events. Sound levels from these types of events/activities could exceed sound levels from the other types of events and should be considered in detail. Particularly since the calendar for Qualcomm Stadium indicates these events occur on a somewhat regular basis.[4] As such, the Draft EIR has not provided substantial evidence to support its conclusions.

21. Page 4.11-35 – 4.11-36. The Draft EIR does not report the model-calculated event sound levels for the operational impacts analysis. The analysis of Issue 2 regarding noise impacts (i.e., "Would the project result in the exposure of people to noise levels which exceed the City's adopted noise ordinance?") should focus on the noise levels generated by on-site sources and compare these levels to the City's noise limits. But instead, the discussion of impact analysis for Issue 2 focuses on the high ambient sound levels and the Issue 1 conclusion regarding increases over ambient levels. This focus is not particularly relevant to the issue of whether or not event sound levels would comply with the noise ordinance standards. Strangely, it is only in the conclusion regarding the potential significance of impacts (Page 4.11-36) that the Draft EIR mentions that operational noise levels would exceed the noise limits. This tends to obscure this very important point regarding facility-related noise. Furthermore, the Draft EIR does not identify for which events, at which receptors, or by how much the noise ordinance standards would be exceeded due to event noise. Nor does it mention how often this would be expected to occur. All this information needs to be provided to allow a full evaluation of the magnitude of noise impacts that would be expected at the residential receivers in the vicinity of the stadium. Given that the Project is expected to result in substantially more annual events than currently (Table 3-4) and would also bring the stadium closer to sensitive receptors, the magnitude of how much each event type would exceed the City's noise limits needs to be clearly and unambiguously revealed.

22. Page 4.11-36. Given that the Draft EIR states that event sound levels are expected to exceed the City's noise ordinance standards, the Draft EIR is remiss in not explaining why this is allowed. Nor does it identify any measures to ensure that the facility fully complies with the laws of the City.

23. Page 4.11-25. The Draft EIR appears to underestimate potential event sound levels.

    a. The Draft EIR states that the stadium exterior wall was considered in the noise modeling as a "tall, round barrier" (the height was not identified). Figures 4.15-24 and 4.15-26 in the Visual Effects and Neighborhood Characteristics section of the EIR show large stadium openings to the NW and SE. If the noise analysis for the Draft EIR modeled the exterior of the stadium as a shell with no gaps, and if the large openings displayed in Figures 4.15-24 and 4.15-26 will be included in the future stadium design, then the model-calculated event sound levels identified in the EIR are likely grossly underestimated. If this is the case, then the Draft EIR would show much louder noise events than currently disclosed, which translates into substantially increased impact levels.

[4] http://www.sandiego.gov/qualcomm/pdf/calendar.pdf

b. The Supercross sound levels may also be underestimated. The modeling methodology is not clearly identified in the Noise section of the Draft EIR, but the discussion of methodology suggests that CadnaA's roadway noise module was used to estimate sound levels from the racing Supercross bikes. This methodology would be expected to grossly underestimate sound levels from a Supercross race as described below.

   i. The maximum sound level of 20 bikes revving at the start of a race is approximately 108 dBA at a distance of 50 feet based on sound level data specifically identified for motocross bikes.[5] Assuming two races per hour, each lasting approximately 25 minutes, the average hourly level (Leq) would be expected to be approximately 6 dBA lower than the maximum at the start, or approximately 102 dBA at 50 feet. Using CadnaA's TNM roadway module, and assuming 20 racers each complete 20 laps during a race and two races occur per hour, the estimated hourly Leq is 75 dBA at 50 feet. This is a difference of 27 dBA in the two methodologies. A simple model was set up in CadnaA to compare the two methodologies. The simple model setup did not include much terrain but did consider the heights of the stadium walls, stadium floor/race track, and receivers. Using CadnaA's TNM roadway module and an assumption of 800 motorcycles an hour (i.e., 20 racers making 20 laps per race and two races per hour), the modeled sound level was 51 dBA at the nearest residence on the hillside overlooking the stadium (LT-2). Using a line source and the expected sound level of actual motocross bikes (i.e., 102 dBA at 50 feet), the modeled sound level was 65 dBA at LT-2. This modeled level exceeds the San Diego noise limit of 45 dBA and would result in an increase over ambient levels of approximately 6 dBA (and the modeled level does not include crowd or other event-related noises). This simple modeling analysis indicates Supercross events, if modeled using the appropriate source sound levels and methodology, are likely to result in significant noise impacts. These significant noise impacts were not identified in the Draft EIR.

c. The above issues with the modeled event sound levels could also affect the findings in the Biological Resources section as regards noise. The conclusions in the section regarding operational noise impacts to sensitive species, particularly along Murphy Canyon Creek, should be revisited once the noise modelling issues identified above have been resolved.

24. Page 4.11-38. The Draft EIR has not incorporated adequate mitigation measures. The only operational mitigation measure, NOI-1, focuses solely on the sound amplification system. Given the issues regarding the modeling identified above and the likelihood that not all significant noise impacts were identified and considered in the Draft EIR, additional noise mitigation measures should be explored for all of the events. The additional measures could include measures such as, but not necessarily limited to: Relocation of stadium to somewhere other than the northwest corner of the site; Design of stadium to ensure exterior shell with no large openings; Restriction on hours of noisy events (e.g., all noisy events should conclude by 10 PM); Requirement of a noise variance for each event expected to exceed the City's noise limits.

[5] Harris Miller Miller & Hanson, Inc. Review of Environmental Sound Study report on proposed motocross park at Sunset City in Charlton, MA. March 11, 2015.

25. Page 4.11-24. The Draft EIR has incorrectly assessed the noise impacts from construction traffic. The Draft EIR underestimated the traffic noise level increase during construction. Construction could result in up to 125 hourly truck trips added to the existing traffic on the roadways. The noise analysis assumed that one truck would be equivalent to three cars. While this approach might be appropriate for the assessment of traffic impacts, a single heavy-duty truck typically produces much more noise than three cars. The noise emitted from a single heavy truck traveling 45 mph on a road 50 feet away would result in an hourly Leq of 48 dBA. The noise emitted from three automobiles traveling 45 mph on a road 50 feet away would result in an hourly Leq of 42.[6] The noise analysis should have considered the existing volumes and vehicle mix on the area roadways (to identify the existing number of cars and trucks) and then added 125 heavy trucks to the calculation to assess the increase in noise levels from construction trucks. If this were completed in the Draft EIR, it appears that it would have resulted in higher calculated increases over ambient levels due to construction-related truck traffic.

Hazards

26. Page 4-6.33. The Draft EIR does not adequately evaluate the potential hazards associated with moving the stadium closer to the Kinder Morgan Energy Partners Mission Valley Terminal (KMEP MVT). The existing stadium structure is 1,400 feet from the edge of the nearest petroleum storage tank of the KMEP MVT, and the distance from the nearest KMEP MVT storage tank to the proposed stadium would be 550 feet. The Draft EIR acknowledges that there would be a significant risk to the stadium in the event of a large fire at the KMEP MVT, as well as an additional hazard in the event of a large spill at the KMEP MVT that results in offsite migration of a flammable vapor mixture followed by a vapor cloud fire or an explosion if an ignition source is encountered. The Draft EIR references a 2014 draft study at another location (Carson, California) of a storage tank release that indicated that flammable vapor hazards may extend 1,500 feet, but the Draft EIR does not provide any further details regarding the assumptions associated with this study and whether the study is relevant to the KMEP MVT and the stadium project. By citing a potential impact distance that encompasses both the existing stadium location and the proposed stadium location without providing additional quantitative analysis, the Draft EIR fails to distinguish the substantially greater risks associated with moving the stadium closer to the KMEP MVT. A vapor mixture resulting from evaporation of a volatile petroleum substance after a release will disperse such that the likelihood of ignition decreases with increasing distance from the source. In addition, the impacts associated with an explosion are substantially greater for a stadium location closer to the fuel storage tanks because the overpressure and the radiant heat are greater. The EIR should include a site-specific analysis of the hazards associated with moving the stadium closer to the KMEP MVT facility.

    As an example, Ramboll Environ calculated the potential offsite impacts associated with an explosion of a gasoline storage tank at the KMEP MVT. The largest tanks at the KMEP MVT is 100,000 barrels, based on information posted on KMEP MVT's website.[7] Using USEPA's RMP*Comp model and assuming a 100,000-gallon gasoline tank and using pentane as a surrogate for gasoline

[6] Federal Highway Administration Traffic Noise Model (FHWA TNM) LookUp Program, v 2.0, 12/17/2004.

[7] Available at: http://www.kindermorgan.com/business/products_pipelines/mission_valley.aspx. Accessed: September 2015.

(based on their similar heats of combustion), the distance to USEPA's prescribed flammable endpoint of an overpressure of 1 pound per square inch (psi) is approximately 12,300 feet, or 2.3 miles.[8] This demonstrates the need for the draft EIR to include a quantitative site-specific analysis of the potential impact zone.

27. Page 4.6-34.The Draft EIR does not provide substantial evidence to support the proposed mitigation. The Draft EIR discusses design features of the proposed stadium that would reduce the significance of the impact of a fire incident at the KMEP MVT, including the use of fire-resistant and fire rated materials for the stadium exterior and construction of a 12- to 20-foot retaining wall and stadium reinforcement on the northeastern property line between the parking lot and the KMEP MVT. However, these design features would not necessarily protect stadium occupants from the hazards of a major incident at the KMEP MVT. According to the USEPA document Evaluating Chemical Hazards in the Community: Using an RMP's Offsite Consequence Analysis (EPA 550-B-99-015; May 1999), the endpoint used for evaluating offsite consequences associated with flammable materials represents a blast wave capable of breaking glass or radiant heat intense enough to blister human skin. These impacts would not be mitigated by the proposed design features because blast impacts can occur well above 20 feet and because fire-proofing only protects against the spread of a fire but does not protect against overpressure impacts.

28. Page 4.6-34. The Draft EIR states that the likelihood of a major fire incident at the KMEP MVT is low but does not provide adequate support for this conclusion. The Draft EIR states that the likelihood of a fire hazard from the KMEP MVT facility is considered relatively low because design and operation of the KMEP MVT facility is governed by Title 49 U.S.C., Subtitle B, Chapter I, Subchapter D, Part 195 (Transportation of Hazardous Liquids by Pipeline) and other regulations. This is not sufficient justification because the EIR acknowledges that there have been nationwide incidences of fires involving large fuel storage tanks; some of these incidences undoubtedly occurred at facilities that are governed by the same regulations as the KMEP MVT. The KMEP MVT is not registered with USEPA's Risk Management Plan (RMP) program, as indicated on the USEPA facility database at https://echo.epa.gov, and thus is not subject to USEPA's regulations pertaining to management of process safety hazards and risks, (40 CFR 68). In addition, the KMEP MVT is likely exempt from OSHA's comparable Process Safety Management (PSM) regulations (29 CFR 1910.118).Facilities that are not subject to RMP or PSM are not required to implement the rigorous process safety and release prevention programs associated with RMP/PSM facilities. The Draft EIR should provide support for its conclusion regarding the low likelihood of an incident based on tangible evidence that the KMEP MVT has adequately addressed process safety risks.

29. Page 4.6-25. The Draft EIR identifies the presence of known contamination at the site; however, the Draft EIR appears to defer evaluation of how this issue will be addressed. The Draft EIR estimates that 920,000 cubic yards of soil will be exported and that this soil may be impacted by organo-chlorine pesticides and historic contamination from KMEP MVT. The Draft EIR indicates that HAZ-2, HAZ-5, HAZ-6, and HAZ-7 will mitigate these to less than significant. Notably, HAZ-2 indicates that a Contaminated Soils and Groundwater Management Plan shall be developed prior to

[8] Note that site-specific details were not provided by the Draft EIR to rigorously evaluate the endpoint.

any on-site grading. Without additional information, we are unable to determine if the Contaminated Soils and Groundwater Management Plan will adequately protect nearby sensitive receptors from this hazard.

Biological Resources

30. Throughout Section 4.2 – CEQA requires that a Lead Agency respond to all comments provided by expert agencies. The California Department of Fish and Wildlife (CDFW) provided comments on the Notice of Preparation of the DEIR on July 20, 2015. Review of the DEIR indicates that it does not effectively respond to a number of the comments provided. These are listed below:

    a. Comment 2, which suggest determining an adequate buffer width for development from the outside edge of the riparian habitat, and states that edge effects can penetrate up to 650 feet into habitat. The project as designed would be 235 feet from the MHPA. The Draft EIR should be revised to include consideration of additional buffer.

    b. Comment 6 suggests the Draft EIR include a discussion of the project's conformance with the City of San Diego's River Natural Resource Management Plan. The Draft EIR should be revised to include the suggested discussion.

    c. Comment 9 states that the Draft EIR should include a figure depicting the location of BMPs in relation to the development footprint. As stated in the Draft EIR, a SWPPP would be developed for the project with appropriate BMPs. The Draft EIR should be revised to include the SWPPP as an appendix and provide the suggested figure showing the location of BMPs to ensure they are within the development footprint and provide support for the conclusion that impacts with regard to edge effects and stormwater would be less than significant.

    d. Comment 11 states that the Draft EIR should provide a complete assessment of the flora and fauna within and adjacent to the project area. The Draft EIR is deficient in regard to this project. A thorough assessment of rare plants and rare natural communities following CDFW's protocols for surveying and evaluating impacts to special status species should be conducted and an inventory of rare, threatened and endangered species within the area of potential effect should include focused species-specific surveys conducted in coordination with the CDFW and US Fish and Wildlife Service. The one-day biological survey and lists of incidental observations provided in Appendix C do not suffice to provide an adequate environmental baseline of the project site and surrounding area with respect to threatened, endangered and sensitive species.

31. Page 4.2-57. The Draft EIR concludes that impacts to Biological Resources are less than significant with mitigation (potentially significant without mitigation), relying on 19 fairly generic, vague mitigation measures, which should be revised based on the concerns identified. Further, the Draft EIR should be amended to provide analysis that supports its conclusion that impacts would be reduced to less than significant levels with the suggested mitigation. Specific concerns with individual mitigation measures are provided below:

    a. BIO-2 – The text of the mitigation measure is repeat of text within the analysis. Since no analysis of pollutant load was conducted in the EIR, there is no way by which to determine if the mitigation measure would result in a change or reduction of pollutant loads. Therefore, the impact analysis conclusion is speculative.

b. BIO-3 – The mitigation measure is vague and defers any determination of how to reduce impacts to a later unspecified date. Therefore, it is unclear if the mitigation measure would actually reduce impacts to less than significant levels.

c. BIO-5 – The mitigation measure is vague, stating that BMPs would be followed without providing any specific measures. No method for monitoring or verifying that any impacts were reduced or avoided.

d. BIO-6 – The mitigation measure only requires "consideration" of features to reduce impacts, therefore, there is no obligation to reduce, avoid or minimize impacts.

e. BIO-8 – The mitigation measure involves monitoring and does not specify any action to be taken if an impact is found, but rather that the City "consider" appropriate measures. Monitoring would not reduce, avoid, or minimize impacts.

f. BIO-9, 10, 11 – These measures involve only the hiring of a qualified biologist for mitigation monitoring and record-keeping. Therefore, these measures would not reduce, avoid, or minimize any impacts.

g. BIO-13 – Rather than delineating the location of sensitive areas in order to design the project to avoid impacts, the mitigation measure suggests that the project limits be delineated, which would not necessarily reduce, avoid or minimize impacts.

h. BIO-17 – No analysis is conducted to indicate that implementation of the mitigation measure would effectively reduce noise to approved levels during construction. Therefore, the conclusion that impacts would be less than significant with mitigation is unsubstantiated.

32. Page 4.2-51. The Project appears to conflict with HCP MSCP requirements to avoid direct discharge to the San Diego River and reduce noise impacts during breeding season. Even though the Project is on the same site as the existing stadium, the Project is "new construction" and therefore is required to avoid any discharge into the MHPA. Specifically, the San Diego MSCP Sub-Area Plan states: "All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA." Reducing the current rate of discharge is not compliant with the HCPMSCP. This should be considered a significant and unavoidable impact and the EIR should evaluate an alternative that would avoid the discharge or mitigate for the effect.

33. Page 4.2-35/46. Regular flooding of MCC would require flood protection measures that would direct floodwaters around stadium. Although the design has not been completed or analyzed, the EIR nonetheless concludes hydrology of MCC would not change. The information provided in the EIR is not sufficient to determine if the conclusion is accurate or not. There is no data or analysis to substantiate a finding of less than significant.

34. Page 4.2-43. The analysis of impacts related to lighting assumes that the addition of 52 events per year would result in less than significant impacts without providing any details specifying how many events would be during the day vs. night and the approximate timing of the additional events

(i.e., would the events average 1 additional event per week or would they likely be clustered over a few month period?). Without the additional information and analysis, the impact evaluation and effectiveness of the proposed mitigation cannot be adequately assessed.

35. Page 4.2-5. The environmental baseline and analysis is predicated on the results of a one-day biological survey, which was conducted via meandering, transects and views of habitat via binoculars. The species lists are based on incidental observations and habitat mapping, although displayed in increments down to 1/10th an acre, is roughly estimated. Although one special status plant species was observed, no protocol-level surveys were conducted to determine if additional individuals were present in other locations that may be indirectly impacted. The review of historic occurrences of special status species provided in the Biological Technical Report used SANGIS and USFWS databases but does not mention review of the California Natural Diversity Database (even though the CNDDB is listed as a reference in the EIR), therefore, additional occurrences may be possible but are unknown.

36. Page 4.2-35. Potential impacts related to hydrology (e.g. bank erosion, flow rates during flooding) are not adequately evaluated, as discussed in greater detail below, and such impacts could lead to significant impacts to special status species and associated habitat. The reduction of the floodplain area during construction has the potential to increase flow rates that can significantly impact vegetation along both Murphy Canyon Creek and the San Diego River downstream of Murphy Canyon Creek. This may include direct impacts on the San Diego sagewort, a special status species known to be present on the south side of the site. Changes in vegetation may potentially affect aquatic and riparian species utilizing these habitats including the Federal listed (under ESA) bell's vireo and southwest willow flycatcher. These potential effects were alluded to in the EIR, but were not quantified and should be considered potentially significant. Loss of habitat could be interpreted as "take" under the Endangered Species Act, and discussion of the relationship between this "take" and coverage under the HCP MSCP should be discussed. Additionally, the potential need for off-site mitigation for impacts to this habitat due to changes in hydrology should be evaluated in accordance with the HCP MSCP and City of San Diego CEQA Significance Criteria.

37. Appendix C (Biological Technical Report). In addition, the EIR does not contain any discussion of the California gnatcatcher or the San Diego fairy shrimp, both of which have records of historic occurrence near the project area. These are listed in appendix C but are not discussed in the EIR. Since both species are listed under the Federal Endangered Species Act, consideration of the species in the EIR is important.

38. Page 4.2-35. The EIR identifies potentially significant impacts to sensitive species due to the introduction of non-native plant species but does not include any mitigation measures that would minimize the potential for this impact. BIO-5 and BIO-15 address the need to landscape with native plants and follow a SWPPP; mitigation measures need to be developed that directly address the potential for invasive species to be introduced as a result of construction vehicle traffic.

Hydrology

39. In several locations, within the DEIR makes clear, the fact that Murphy Canyon Creek overflows into the Project property during flood events greater than a 10-year flood event (p. 4.2-48, last paragraph; p. 4.2-29, 2nd paragraph; p. 4.8-22, 3rd and 4th paragraphs). , The existing project is

therefore impacted by flood flows over the floodplain that is occupied by the existing stadium yet the DEIR does not provide a description of the area affected by the 10-year event or other events less than the 100-year event nor does the DEIR provide an evaluation of Project effects on the 10- to 100- year flood flows. The hydrology section needs a discussion regarding the frequency and extent of existing flooding in the Project area. The document should have a figure depicting the extent of water in a 10-, 25-, and 50- year event under current conditions and under proposed conditions. Without this information, it is impossible to review the DEIR and determine the significance of the project on flooding for 10-, 25-, and 50- year events. As discussed in these comments, based on the limited information that is included in the DEIR, unless more detailed modeling or analysis is provided, the only conclusion that can be reached is that the project will have a significant impact on hydrology during 10-, 25-, and 50- year events. There is not substantial evidence in the DEIR to support that such impacts will be less than significant.

40. Page 4.8-27 indicates that "Once demolition of the existing stadium and regrading is complete; there would be approximately no net change in available floodplain on the site." In fact, the proposed stadium would be 2 acres larger than the existing stadium, so there will be a small decrease in floodplain area. Given the surrounding residences, freeways and sensitive biological resources, the Draft EIR must model the implications of this long-term loss of floodplain area to determine if it is significant.

41. Page 4.8-33. The Draft EIR does not adequately address the frequency and effect of flooding on the Project site due to runon from the reach of Murphy Canyon Creek upstream of the site. For instance, page 4.8-33, third full paragraph, indicates that "runon is also anticipated from the 100-year floodplain of Murphy Canyon Creek to the north". However, on page 4.8-29, third paragraph, and page 4.8-33, first full paragraph, indicates that the upstream reach of Murphy Canyon Creek just north of the Project site has a 50-year storm event flow capacity, which will overtop and potentially flow onto the Project site from the north in an event larger than a 50-year storm. If Murphy Canyon Creek floods the site from the north in a 50-year or greater storm, the extent of the 50-year floodplain also needs to be presented and the effects of the project on the 50-year floodplain needs to be addressed. There is not substantial evidence in the Draft EIR to support that such impacts will be less than significant.

42. Page 4.8-29. The Draft EIR has not adequately address the potential backwatering of Murphy Canyon Creek during the construction phase. During construction, the area of the floodplain will be substantially reduced. This may result in backwatering of Murphy Canyon Creek which could increase flooding upstream of the project, may push stormflows into properties to the east of the Project site, and may concentrate flows in a narrower floodplain area resulting in increased erosion and subsequent habitat modification along reach of the San Diego River to the south of the Project site. The magnitude of this potential effect has not been addressed. The Draft EIR should include discussion regarding the frequency and extent of existing flooding in the Project area, which should also include a figure depicting the extent of water in a 10-, 25-, and 50- year event under current conditions and under proposed conditions. Page 4.8-29 indicates that "Project proponents would be required to design site conditions such that floodplain impacts to upstream/downstream properties along the San Diego River and Murphy Canyon Creek are limited or eliminated to the satisfaction of the City of San Diego and FEMA." Since the Draft EIR does not include an analysis of the magnitude

of likely effects, it is not clear that this condition can be met with the proposed approach to construction and demolition. Based on the limited information that is included in the Draft EIR, unless more detailed modeling or analysis is provided. In the absence of further information, the current information suggests that the Project would have a significant impact on hydrology during 10-, 25-, and 50- year events.

43. Page 4.8-27. The Draft EIR does not adequately evaluate the potential reduction of the floodplain area during construction. This reduction of flood plain area during construction has the potential to increase flow rates and flood heights in Murphy Canyon Creek upstream of the Project site, resulting in increased local flooding of other properties. On page 4.8-27, last paragraph, the Draft EIR acknowledges this; however, the DEIR does not contain any analysis of the potential magnitude of this effect. The effects from this situation are potentially significant and should be evaluated further in the EIR.

44. Page 4.8-29. The Draft EIR does not adequately evaluate the expected increase in base flood evaluation as it relates to FEMA regulations. As indicated in the Draft EIR, FEMA regulations allow construction in the floodplain provided that development does not increase base flood elevation by more than 1 foot. The Draft EIR assumes this is the case but does not include an evaluation of the expected increase in base flood elevation, which would be most pronounced during construction. Using a simplified approach to estimate the expected change in base flood elevation, the water could rise by as much as 2.4 feet in a 10-year event. For the purposes of this estimate, we calculated the quantity of water that would be displaced by the new stadium and assumed that the water in the floodplain could not go anywhere but up (as it is already flooded). This calculation is equivalent to calculating the increase in height of water in a vessel when that water is poured from a vessel with a large circumference into a vessel with a small circumference. While this simplified approach over-estimates the potential impact since it does not factor in changes in runoff rates, it suggests that an increase in base flood elevation exceeding one foot is possible during the construction period. The runoff rates could range from near zero to 100 percent and cannot be estimated without a hydrologic model. While this approach over-estimates the potential impact, it provides a rough metric for evaluating the increase of flooding that will occur during this type of storm event. This is more information than is provided in the DEIR. Based on the evidence provided by this calculation, 10-year flooding events may be significantly impacted by the project during the 3-5 year construction period. Thus, the effects of the Project on flooding, including 10-year events, which could occur during construction, needs to be evaluated using a hydraulic model to ensure appropriate conclusions are reached. The information provided in the Draft EIR is insufficient to determine project effects on hydrology during construction.

45. Page 4.8-7. The Draft EIR fails to acknowledge the contributions of runoff from the Project parking lot on local water quality. The Draft EIR appears to only discuss adjacent land uses. The Draft EIR should include additional analysis and discussion on this issue.

46. Pages 4.8-30 to 4.8-32, the Draft EIR reaches conclusions regarding changes to local hydrology that are not supported by substantial evidence. The Draft EIR concludes that “Overall, the proposed Project would not result in negative impacts to local hydrology or decrease hydraulic conveyance capacity at the site.” This section of the Draft EIR only addresses post-construction conditions and

does not address changes in the floodplain and water conveyance during flood events during construction. Further analyses regarding the changes during construction are required to substantiate the conclusions as presented.

47. Page 4.8-41. The Draft EIR reaches conclusions that are not supported by substantial evidence regarding the Project's impact on flooding. On page 4.8-34, the Draft EIR discusses the impacts on hydrology, stating that "this impact [floodplain displacement and subsequent hydrology effects during construction] would apply to only catastrophic events associated with extremely large and rare storms that have a 1% probability of occurrence or less (i.e., 0.2% probability for 500-year storm) in any given year." The Draft EIR concludes on page 4.8-41 regarding this subject that "the Project would have a less than significant impact on flood hazard and site runoff in its post-construction condition, but would have a significant and unavoidable impact to the area's floodplain during extremely large and rare storms (100-year or greater return frequency) during the 3-to-5-year construction period." The same conclusion is presented in the first full paragraph on pages 4.8-41 and 5-9. According to the Draft EIR, the Project area floods during any event greater than a 10-year event. Therefore, the probability in any one year of generating flood impacts is at least 10 percent, and it is possible that more than one 10-year flood event could occur during the construction period. Therefore, the conclusion that the Project would have a significant and unavoidable impact to the area's floodplain only during extremely large and rare storms (100-year or greater return frequency) during the 3-to-5-year construction period is not correct. The Draft EIR should include an assessment of the Project's impacts on flooding during flood events ranging between 10-year and 100-year events during construction to determine whether the Project will have significant impacts on flooding.

48. Pages 4.8-43 to 4.8-45 regarding erosion and sedimentation. The Draft EIR does not adequately address the potential effects of changes in flooding during construction on erosion and sedimentation. Diversion of flood flows during 10-year or greater flood events has the potential to increase flow rates within the floodplain which could cause erosion of the banks along the San Diego River, particularly in the reach to the south of the Project area. The Draft EIR does not address protection of disturbed soils on-site during construction. The Draft EIR should address potential impacts to erosion and sedimentation during construction that may be caused by diversion of flood waters in 10-year or greater flood events. We also note that the DEIR assumes that the SWPPP will be sufficient to address pollutant protection. Without further analysis, it is not clear if this approach is adequate. The SWPPP will likely require substantial protection of possible sources of sediment and water pollution (e.g. stockpiles of materials, soil, equipment, solvents, etc.) which may result in further displacement of floodplain area, which may further exasperate impacts on hydrology during construction.

49. Page 4.8-48. The Draft EIR does not provide substantial evidence to support the conclusion that no significant impacts on hydrology and water quality are anticipated to occur as a result of implementation of the Project. The effects of the Project during construction on flooding may be substantial. The DEIR has not adequately addressed potential project effects on flooding during 10-year or greater flood events. No analysis of project impacts on the smaller (less than 100-year) flood events during the construction phase has been presented in the document. Without this analysis, it cannot be concluded that the Project will have no significant impacts on hydrology. The

document assumes that the CLOMR process through FEMA will address flood frequency issues and that construction of a new facility while the old facility remains on site will be feasible, but no evidence has been provided to support that assumption.

50. On page 4.8-24, the Draft EIR does not provide substantial evidence to support its conclusions regarding how the Project will meet the requirements of the Land Development Code. The Draft EIR states that "All development with the floodway and floodplain would be required to be consistent with the Land Development Code, Section 143.0145, Flood Hazard Areas". The Land Development Code requires, among other things, that in floodways "any *encroachment*, including *fill*, new construction, significant modifications, and other *development* is prohibited unless *certification* by a registered professional engineer is provided demonstrating that *encroachments* will not result in any increase in *flood* levels during the occurrence of the *base flood* discharge except as allowed under Code of Federal Regulations Title 44, Chapter 1, Part 60.3(c)(13)." Both Code of Federal Regulations Title 44, Chapter 1, Part 60.3(c)(13) and the Land Development Code allow for an increase in the base flood elevation of up to 1 foot. As was described earlier, the Draft EIR does not contain sufficient information to determine if this condition can be met. The Land Development code also requires that "Development shall not significantly adversely affect existing sensitive biological resources on-site or off-site." The diversion of flood waters around the new facility may result in increased flow rates in Murphy Creek Canyon and the reach of the San Diego River south of the site. The increased flows may cause increased bank erosion, subsequently affecting habitat for sensitive species, including species listed under the Federal Endangered Species Act. The Draft EIR does not include sufficient analysis of the likely Project effects on hydrology during flood events and the subsequent effects on flows, bank erosion, and habitat to supports the Draft EIR's conclusions regarding consistency with the Land Development Code.

Alternatives

51. Page 8-3. The Draft EIR appears to reject all "alternative sites" and does not include any alternative sites in the considered list of Alternatives (i.e., see Table 8-1). The Draft EIR includes a relatively cursory discussion regarding the rejection of the Downtown "alternative sites" (e.g., see page 8-9). Given the Project objectives provided, these "alternative sites" are quickly rejected based on the narrowness and specificity of the Project objectives. There is also minimal discussion regarding the potential benefits of an "alternative site", and specifically a Downtown alternative site. This approach misses the opportunity to identify the potential benefits of the "alternative site", which might address some of the significant impacts that the Project has (e.g., the hydrology issues at the Project site) and one of the biggest issues associate with stadium projects (i.e., traffic and associated air quality and GHG emissions). The Project analysis focuses heavily on how the Project may reduce related traffic and AQ and GHG emissions through a modal shift in transportation. The Downtown alternative provides an ideal situation that may create even greater benefit regarding modal shifts in transportation and reducing air quality and GHG emissions. Given the Project's significant impacts, and given the primary environmental issues associated with a stadium, the Draft EIR should include an "alternative site" in the analysis that is not rejected outright to more completely disclose what options are available to balance the many potential environmental impacts associated with such a stadium project.

52. Page 8-14. The Draft EIR includes qualitative analyses of the alternatives that appears to only superficially assess how each alternative may compare to the Project. A more substantive analysis of the alternatives would provide a more substantial basis for the conclusions reached. For example, the air quality discussion is completely qualitative, and some alternatives are identified to have less and more GHG emissions. The magnitude of these differences can be important distinctions regarding if an alternative is environmentally superior. Given the magnitude of some of the significant impacts as reported for the Project, the Draft EIR should include additional substantiation for the conclusions reached regarding the alternatives analysis.

CLOSING

We appreciate the opportunity to perform this review. Please feel free to call Eric Lu at (949) 798-3650 if you have any comments or questions.

Very truly yours,

Eric C. Lu, MS, PE
Principal

EL:eg

Attachments

TABLES

Table 1a. Estimating Ambient Air Quality Impacts from Onsite Construction Emissions
Stadium Reconstruction Project
San Diego, California

Estimated Daily Mitigated Construction Emissions (from Table 4.1-13)[1]						
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily Construction Emissions (lbs/day)						
2016	9	277	372	1	12	6
2017	18	363	543	1	19	9
2018	55	126	408	1	5	2
2019	73	491	861	2	53	16
2020	27	420	478	2	125	36
Threshold of Significance (lbs./day)	137	250	550	250	100	55
Significant Impact?	No	**Yes**	**Yes**	No	**Yes**	No

SCREEN3 [2]	
Emission Rate (g/s) =	1
Area under construction (m^2) =	44,444
Max. Emission Conc. for Unit Emission ($\mu g/m^3$) =	53

Max. Daily On-site Emissions[3]						
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mass Emissions (in lb/day)	69	466	818	2	119	34
Mass Emissions (in g/s)	1.09	7.35	12.88	0.03	1.87	0.54
Emissions Concentration ($\mu g/m^3$) [4]	58	392	688	2	100	29

Notes:

[1] Maximum daily construction emissions data obtained from EIR Section 4.1, Table 4.1-13.

[2] Using SCREEN3 for unit emission rate (1 g/s) maximum emission concentration is 53.42 $\mu g/m^3$ at a distance of 131 m from the project site. This is based on the activity area being 1/4 of the entire Project site, which is assumed since no other information was provided to estimate what area of the site might be worked on at any given time.

[3] Based on CalEEMod output file for construction emissions, it is assumed that 95% of the max. daily emissions are on-site emissions.

[4] Calculating emissions concentration using max. concentration from SCREEN3 (53 $\mu g/m^3$) for 1 g/s.

Abbreviations:

CO - carbon monoxide
lbs - pounds
NOx - nitrogen oxides
SO_2 - sulfur dioxide
g/s - grams per second
µg - microgram
PM_{10} - coarse particulate matter
$PM_{2.5}$ - fine particulate matter
ROG - reactive organic gas
m^2 - square meter
m^3 - cubic meter

Table 1b. Comparison of Estimated Construction Ambient Air Quality Impacts to AAQS
Stadium Reconstruction Project
San Diego, California

Project + Background [1]								
Pollutant	**Averaging Time**	**Maximum Incremental Impact ($\mu g/m^3$)**	**Background Pollutant Concentration[2] ($\mu g/m^3$)**	**Maximum Project + Background Concentration ($\mu g/m^3$)**	**CAAQS Threshold ($\mu g/m^3$) [6]**	**Above Significant Threshold?**	**NAAQS Threshold ($\mu g/m^3$) [6]**	**Above Significant Threshold?**
NO_2 [3,4,5]	1-hour	314	141	455	339	*Yes*	188	*Yes*
	Annual	235	26	262	57	*Yes*	100	*Yes*
CO	1-hour	688	3,437	4,125	23,000	No	40,000	No
	8-hour	688	2,406	3,094	10,000	No	10,000	No
PM_{10}	24-hour	100	92	192	50.0	*Yes*	150.0	*Yes*
	Annual	8	25	33	20.0	*Yes*	--	--
$PM_{2.5}$	24-hour	29	37	66	--	--	35.0	*Yes*
	Annual	2	10	12.6	12.0	*Yes*	12.0	*Yes*

Notes:
[1] Annual concentrations are estimated using an adjustment ratio to estimate annual concentrations from 1-hour concentrations based on USEPA guidance.
[2] Maximum from monitoring stations closest to project site, historical data for years 2012 - 2014.
[3] Impacts from CalEEMod are reported as NO_X. The analysis assumes a 80% of NO_X to NO_2 for 1-hour thresholds, and a 75% conversion for the annual thresholds per USEPA guidance.

Reference:
[4] USEPA, Memorandum on Additional Clarification Regarding Application of Appendix W Modeling Guidance for the I-hour NO_2, National Ambient Air Quality Standard, March 2011. Available at: http://www.epa.gov/region07/air/nsr/nsrmemos/appwno2_2.pdf. Accessed: September 2015.
[5] USEPA, 40 CFR Part 51 Appendix W, 2011. Available at: http://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol2/pdf/CFR-2011-title40-vol2-part51-appW.pdf. Accessed: September 2015.
[6] California Air Resources Board, Ambient Air Quality Standards, 2013. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed: September 2015.

Abbreviations:
CO - carbon monoxide
NO_2 - nitrogen dioxide
µg - microgram
m^3 - cubic meter
CFR - Code of Federal Regulations
NAAQS - National Ambient Air Quality Standard
PM_{10} - coarse particulate matter
$PM_{2.5}$ - fine particulate matter
USEPA - US Environmental Protection Agency
CalEEMod - California Emissions Estimator Model
CAAQS - California Ambient Air Quality Standard

Table 2a. Estimating Change in Mobile Emissions Factors from a BAU Scenario
Stadium Reconstruction Project
San Diego, California

Vehicle Class	CO_2 Emission Factors[1]													
	LDA	**LDT1**	**LDT2**	**MDV**	**LHD1**	**LHD2**	**MHD**	**HHD**	**OBUS**	**UBUS**	**MCY**	**SBUS**	**MH**	**Weighted Average**
Fleet Mix	0.5133	0.07355	0.19109	0.13083	0.03609	0.00514	0.01255	0.02292	0.00187	0.00206	0.00656	0.000586	0.00345	
Project (with Pavley, LCFS)[2]														
Running Exhaust Emission Rate (gram/mile)	244.3	297.8	364.7	489.6	734.0	623.4	995.1	1547.8	1037.9	1981.6	156.5	1024.5	681.1	368.7
Starting Exhaust Emission Rate (gram/trip)	52.3	63.5	77.5	103.3	36.6	22.3	49.8	50.4	32.8	22.8	38.5	116.7	28.3	63.6
BAU (without Pavley, LCFS)[3]														
Running Exhaust Emission Rate (gram/mile)	355.4	411.2	483.8	617.1	734.0	623.4	995.1	1547.8	1037.9	1981.6	156.5	1024.5	681.1	473.5
Starting Exhaust Emission Rate (gram/trip)	73.6	84.7	100.5	127.3	36.6	22.3	49.8	50.4	32.8	22.8	38.5	116.7	28.3	83.6
Percentage of Emission Reduction														
Vehicle Running Exhaust CO_2	31.3%	27.6%	24.6%	20.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.1%
Vehicle Starting Exhaust CO_2	28.9%	25.0%	22.9%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.9%

Notes:
[1] Emission factors are obtained from CalEEMod version 2013.2.
[2] Project scenario consists of CalEEMod v.2013.2 default CO_2 emission factors for mobile, obtained from CalEEMod model, for San Diego County APCD (operational year - 2020).
[3] BAU scenario consists of modified CO_2 emission factors, obtained from CalEEMod v. 2013.2 User's Guide, Appendix D, Table 4.4, for San Diego County APCD (operational year - 2020). Available at: http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixd.pdf?sfvrsn=2. Accessed: September 2015.

Abbreviations:
BAU - Business As Usual Scenario
CO_2 - Carbon dioxide
GHG - Greenhouse Gas
LDA - Passenger Cars
LDT1 - Light-Duty Trucks
LDT2 - Light-Duty Trucks
LCFS - Low Carbon Fuel Standard
MDV - Medium-Duty Trucks
LHD1 - Light-Heavy-Duty Trucks
APCD - Air Pollution Control District
LHD2 - Light-Heavy-Duty Trucks
MHD - Medium-Duty Trucks
HHD - Heavy-Heavy Duty Truck
OBUS - Other Buses
UBUS - Urban Buses
MCY - Motorcycles
SBUS - School Buses
MH - Motor Homes
CalEEMod - California Emissions Estimator Model

Table 2b. Updated BAU Analysis
Stadium Reconstruction Project
San Diego, California

Table 4.5-4 (from Section 4.5)[1]				
Category	**BAU Emissions**	**New Stadium Emissions**	**Net Change in Emissions**	**Percentage Reduction from BAU**
	MT CO_2e/yr			
Area	0.14	0.14	(0.01)	3.7%
Energy	2,602	1,779	(823)	31.6%
Mobile (On-Road)	48,890	33,636	(15,254)	31.2%
Waste	701	535	(166)	23.7%
Water	520	493	(27)	15.7%
Total	**52,713**	**36,444**	(16,270)	**30.9%**
Threshold for Comparison				**28.3%**
Meets Threshold?				**Yes**

Ramboll-Environ Analysis				
Category	**BAU Emissions**	**New Stadium Emissions**	**Net Change in Emissions**	**Percentage Reduction from BAU**
	MT CO_2e/yr			
Area	0.14	0.14	0	0.0%
Energy	2,602	1,779	(823)	31.6%
Mobile (On-Road)[2]	44,200	33,636	(10,564)	23.9%
Waste	701	535	(166)	23.7%
Water	520	493	(27)	5.2%
Total	**48,023**	**36,443**	(11,580)	**24.1%**
Threshold for Comparison				**28.3%**
Meets Threshold?				**No**

Notes:
[1] Based on Table 4.5-4, available in Section 4.5, Page 4.5-22.

[2] The mobile emissions from BAU scenario is based on BAU reduction of 23.9%, which is calculated from the change in mobile emissions factors from the BAU scenario when Pavley and LCFS are applied to the project.

Reference:
California Emissions Estimator Model version 2013.2. Available at: http://www.caleemod.com/.

Abbreviations:
BAU - Business-As-Usual
CO_2e - carbon dioxide equivalent
MT - metric tonne
yr - year

ATTACHMENT A
SCREEN3 OUTPUT

09/16/15
10:36:56

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 13043 ***

Chargers Stadium

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =       VOLUME
   EMISSION RATE (G/S)      =     1.000000
   SOURCE HEIGHT (M)        =       5.0000
   INIT. LATERAL DIMEN (M)  =      60.4100
   INIT. VERTICAL DIMEN (M) =      79.5700
   RECEPTOR HEIGHT (M)      =       0.0000
   URBAN/RURAL OPTION       =        URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	0	0.0	0.0	0.0	0.00	0.00	0.00	
100.	0.000	0	0.0	0.0	0.0	0.00	0.00	0.00	
200.	48.43	5	1.0	1.0	10000.0	5.00	77.67	84.47	NO
300.	42.59	5	1.0	1.0	10000.0	5.00	85.94	86.83	NO
400.	37.94	5	1.0	1.0	10000.0	5.00	93.99	89.13	NO
500.	34.16	5	1.0	1.0	10000.0	5.00	101.83	91.38	NO
600.	31.02	5	1.0	1.0	10000.0	5.00	109.47	93.59	NO
700.	28.39	5	1.0	1.0	10000.0	5.00	116.93	95.75	NO
800.	26.15	5	1.0	1.0	10000.0	5.00	124.22	97.87	NO
900.	24.22	5	1.0	1.0	10000.0	5.00	131.35	99.95	NO
1000.	22.54	5	1.0	1.0	10000.0	5.00	138.32	101.99	NO
1100.	21.06	5	1.0	1.0	10000.0	5.00	145.14	103.99	NO
1200.	19.76	5	1.0	1.0	10000.0	5.00	151.82	105.96	NO
1300.	18.61	5	1.0	1.0	10000.0	5.00	158.37	107.90	NO
1400.	17.57	5	1.0	1.0	10000.0	5.00	164.79	109.81	NO
1500.	16.64	5	1.0	1.0	10000.0	5.00	171.10	111.68	NO
1600.	15.80	5	1.0	1.0	10000.0	5.00	177.28	113.53	NO
1700.	15.04	5	1.0	1.0	10000.0	5.00	183.36	115.35	NO
1800.	14.34	5	1.0	1.0	10000.0	5.00	189.33	117.14	NO
1900.	13.70	5	1.0	1.0	10000.0	5.00	195.20	118.91	NO
2000.	13.12	5	1.0	1.0	10000.0	5.00	200.97	120.65	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

131.	53.42	5	1.0	1.0	10000.0	5.00	71.91	82.83	NO

```
 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
```

```
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*********************************************
*  SUMMARY OF TERRAIN HEIGHTS ENTERED FOR   *
*    SIMPLE ELEVATED TERRAIN PROCEDURE      *
*********************************************

     TERRAIN        DISTANCE RANGE (M)
      HT (M)       MINIMUM     MAXIMUM
     -------      --------    --------
          0.            1.       2000.

    ****************************************
    *** SUMMARY OF SCREEN MODEL RESULTS ***
    ****************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   ---------   -------
SIMPLE TERRAIN       53.42          131.        0.

***************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
***************************************************
```

REVIEW OF TRAFFIC IMPACT STUDY FOR THE QUALCOMM STADIUM REPLACEMENT

SAN DIEGO, CALIFORNIA

SEPTEMBER 2015

PREPARED BY

Gibson
transportation consulting, inc.

REVIEW OF TRAFFIC IMPACT STUDY
FOR THE
QUALCOMM STADIUM REPLACEMENT

SAN DIEGO, CALIFORNIA

September 2015

Prepared by:

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Table of Contents

1. Introduction 1
   - Proposed Project 1
   - Scope of Traffic Study Analysis 2

2. Parking 4
   - Parking Supply Inconsistency 4
   - Off-Site Parking Impacts 7

3. Transportation Demand Management Program 8
   - TDM Effectiveness 8
   - Other Modes Not Considered 11
   - TDM Enforcement 11

4. Project Trip Generation 13
   - High Mode Split Assumptions 13
   - Off-Site Trips Not Accounted For 13
   - Revised Mode Split Assumptions 14

5. Gameday Traffic Operating Conditions 19
   - Gameday Trip Generation 19
   - Actual Operating Conditions 20

6. Analysis Methodology 23
   - Choice of Baseline Conditions 23
   - TDM Effectiveness 30
   - Non-Game Events 30

7. Conclusions 49

List of Tables

NO.

1 Comprehensive Mode Split Estimates 17
2 Daily Vehicle Trip Generation on Gamedays (Inbound and Outbound) 18
3 Intersection Level of Service Comparison 22
4 Intersection Project Impact – 2019 Construction Phase (Weekday) 31
5 Intersection Project Impact – 2019 Construction Phase (Saturday) 32
6 Intersection Project Impact – 2019 Construction Phase (Sunday) 33
7 Roadway Segment Project Impact – 2019 Construction Phase 34
8 Freeway Segment Project Impact – 2019 Construction Phase (Weekday) 35
9 Ramp Metering Project Impact – 2019 Construction Phase (Weekday) 36
10 Intersection Project Impact – 2019 Demolition Phase (Weekday) 37
11 Intersection Project Impact – 2019 Demolition Phase (Saturday) 38
12 Intersection Project Impact – 2019 Demolition Phase (Sunday) 39
13 Roadway Segment Project Impact – 2019 Demolition Phase 40
14 Intersection Project Impact – 2019 Demolition Phase (Weekday) 41
15 Ramp Metering Project Impact – 2019 Demolition Phase (Weekday) 42
16 Intersection Project Impact – 2035 Project Buildout (Weekday) 43
17 Intersection Project Impact – 2035 Project Buildout (Saturday) 44
18 Intersection Project Impact – 2035 Project Buildout (Sunday) 45
19 Roadway Segment Project Impact – 2035 Project Buildout 46
20 Freeway Segment Project Impact – 2035 Project Buildout (Weekday) 47
21 Ramp Metering Project Impact – 2035 Project Buildout (Weekday) 48

Chapter 1
Introduction

Gibson Transportation Consulting, Inc. was retained to review *Traffic Impact Analysis Report: Stadium Replacement EIR* (AECOM, August 2015) (the Traffic Study), which presents an analysis of potential traffic impacts of the proposed replacement of Qualcomm Stadium in San Diego, California (collectively, the Project).

PROPOSED PROJECT

The proposed Project includes the construction of a 72,000-seat multi-use stadium adjacent to the existing Qualcomm Stadium. The new stadium would be constructed over existing surface parking while Qualcomm Stadium continues to operate (Construction). Subsequently, the new stadium would be opened and Qualcomm Stadium would be demolished (Demolition). Finally, the area where Qualcomm Stadium stood would become new surface parking, and all of the parking lots, with the exception of those within the River Park Master Plan area, would be resurfaced and restriped to reorient them toward the new stadium (Buildout).

The 166-acre Project site is located at 9449 Friars Road in the Mission Valley community of the City of San Diego (the City). The proposed stadium would be located in the northeast corner of the Project site, whereas Qualcomm Stadium is approximately centered within the site. The Project site is bounded by Friars Road to the north, Interstate 15 (I-15) to the east, commercial buildings (office and retail) to the west, and the San Diego River to the south. Other nearby freeways include Interstate 8 (I-8) to the south and Interstate 5 (I-5), Interstate 805 (I-805) and State Route 163 (SR 163) to the west. The San Diego Metropolitan Transit System (MTS) Green Line Trolley (Trolley) runs through the southern portion of the Project site and provides an elevated platform station within the parking lot south of Qualcomm Stadium.

The Project is anticipated to be leased to a variety of end-users, including the San Diego Chargers (Chargers) football team of the National Football League (NFL), the San Diego State

University Aztecs (SDSU) for National Collegiate Athletic Association (NCAA) football games, and other major athletic, entertainment, and cultural events. The number of on-site events and activities is expected to increase substantially with the Project. Event parking is currently managed by ACE Parking under contract with the City.

Project site access would remain unchanged. Primary entrance to the site is located at the south end of Mission Village Drive, immediately south of Friars Road. During major events, a high-capacity access is opened where Qualcomm Way meets Friars Road. Another high-capacity access is opened to San Diego Mission Road to the east, and a minor access is opened to Rancho Mission Road to the east leading out to Ward Road.

SCOPE OF TRAFFIC STUDY ANALYSIS

The Traffic Study included significant impact analysis of the following facilities within the vicinity of the Project site:

- 27 signalized and unsignalized intersections
- 30 street segments
- 10 freeway segments on I-15, I-8, and SR 163
- Four freeway on-ramps to I-15 and I-8

Traffic data for the Traffic Study was collected on a weekday, a Saturday, and a Sunday for intersections (during the morning and afternoon peak periods) and street segments (24-hour counts). Data was collected on days without football games at Qualcomm Stadium, so game day traffic volumes during the analyzed peak hours were estimated and added to the traffic counts to simulate game day conditions as a baseline condition against which to measure significant impacts. The Project traffic analysis was conducted for years 2019 and 2035. For year 2019, separate analyses were conducted of the potential impacts during Construction and Demolition, even though the analysis assumes that construction and demolition activities would not occur on gamedays. For year 2035, analysis was conducted of Buildout traffic.

In all analysis scenarios in the Traffic Study, game day traffic for the Project is projected to arrive using a different mixture of travel modes as compared to arrival types at Qualcomm

Stadium today. In particular, due to the reduction of on-site parking and the implementation of an undefined and yet-to-be prepared transportation demand management (TDM) program, the Traffic Study concludes that the Project will attract fewer cars and generate higher levels of Trolley and shuttle or charter bus ridership as compared to Qualcomm Stadium traffic today. This “modal shift” is a key factor in the Traffic Study’s finding of only one significant traffic impact on any analyzed facility.

Chapter 2
Parking

The significant difference between the Project and the existing Qualcomm Stadium, from a traffic perspective, is the significantly reduced parking supply that the Project would provide. The Traffic Study contains inconsistencies in the discussion and evaluation of existing and future parking supply, unsupported assumptions about the future parking needs, and insufficient analysis of potential parking impacts.

PARKING SUPPLY INCONSISTENCY

Effective Gameday Parking Supply

Page 5-1 of the Traffic Study states that there are currently 18,870 parking spaces on the Project site, but that "1,000 to 3,000 spaces are rendered unusable during major stadium events" (i.e., NFL games) due to event tents, tailgating, media, and high levels of bus and shuttle parking. This parking loss was confirmed by the observations conducted on September 13, 2015 during the Chargers' season-opening game against the Detroit Lions; in fact, the observations suggested that 1,000 to 3,000 "lost" spaces is a very conservative estimate. There appear to be substantially more spaces lost. However, the parking analysis in the Traffic Study proceeded with the assumption that all 18,870 spaces were available for use on event days when comparing parking supply with estimated demand.

Further, there was no mention of or accounting for this same loss in gameday parking occurring at the proposed stadium. While page 3-5 of the Traffic Study notes that "larger individual stalls would be provided to accommodate tailgaters with their shade tent structures" in the Project parking lot, it is unclear whether the anticipated future parking supply accounted for provision of these large parking spaces. Given that no attempt was made to quantify the number of large stalls that would be provided, it seems unlikely. Additionally, while the existing parking lot has limited designated tailgate parking areas, in-person observations showed that all areas of the lot

are used for unrestricted tailgating on game days, with tents, grills and tables and chairs taking up multiple parking spaces for every tailgate party. It is clear that the effective parking supply on game days, under existing and Project conditions, is substantially lower than the numbers provided (and used for analysis) in the Traffic Study.

Stadium Parking Reaches Capacity Hours Before Kickoff

The Traffic Study is clear to note on page 5-4 that "it is not uncommon for the parking lot to be full approximately two hours before kickoff." This confirms that the existing parking supply is insufficient to accommodate the current parking demand at Chargers games, which was verified by field observations. Further, it invalidates the parking supply and demand relationships (and parking deficit conclusions) shown in Table 8-1. That table indicates that the existing weekday parking demand is 17,620 spaces and weekend demand is 14,620 spaces for a Chargers game, compared with a supply of 18,870 spaces. No parking deficiency is identified for either day. However, since most games are weekend (Sunday) games, and the parking lots commonly fill up well before kickoff and the trip generation projections indicate thousands of vehicles approaching the stadium in the house before kickoff, then clearly the existing parking supply is not sufficient to meet the demand.

Reported Arrival Patterns Raise Questions

The Traffic Study also provides estimates of the arrival and departure curves for patrons on weekday and weekend games. Table 5-7 shows how many automobiles would typically arrive each hour before kickoff for a weekend game. However, when compared with the statement referenced above that the parking lots often fill up two hours prior to kickoff, there is a clear inconsistency. According to Table 5-7, 6,600 fan vehicles (out of 14,330 total) would arrive more than two hours prior to kickoff and 9,230 would arrive at least one hour prior to kickoff (less than half of the existing parking supply of 18,870 spaces).

It is unknown whether Table 5-7 is inaccurate or the parking supply is so severely restricted by tailgating and other gameday activities that the parking lots fill up with so few vehicles, but either way it calls into question the assumptions used to estimate both Qualcomm Stadium traffic and

Project traffic. Stadium trip generation estimates were prepared based on the assumptions in Table 5-7, among others, so to the extent that those assumptions cannot be trusted, neither can the trip generation estimates presented in the Traffic Study. Detailed analysis of stadium trip generation is presented in Chapter 4.

Loss of Additional Parking

In addition, the River Park Master Plan would convert to recreational space a large area on the south side of the Project site adjacent to the San Diego River. This would result in the loss of approximately 2,640 parking spaces in addition to the 2,370 spaces lost with completion of the Project. This was acknowledged in a footnote at the bottom of Table 3-4 on page 3-8 of the Traffic Study, but was not detailed in the discussion of parking capacity and the mode shift goals of the TDM program. The mode splits for future conditions shown in Table 5-2, which reflect the full anticipated effect of the TDM program, would reduce auto trips by 2,200 for a weekday game and 1,700 for a weekend game.

With approximately 5,010 spaces being removed, and 2,200 of these spaces expected to shift to other travel modes, the number of spaces lost would still exceed the amount of demand reduction from the TDM program by 2,810.

There is a brief acknowledgement in Section 8.1.3 on page 8-3 that a significant parking impact would occur for weekday games during the Demolition phase of the Project with the implementation of the River Park Master Plan, which is said to be mitigated to insignificance by the mode shift resulting from the TDM program. However, the significant impact was identified *after* accounting for the mode-shifting effects of the TDM program and there is still a deficit of nearly 1,800 spaces identified in Table 8-1. The TDM program would have to be more than twice as effective at reducing auto parking as it is estimated to be, and this is entirely overlooked in the Traffic Study.

Therefore, contrary to the statement in the Traffic Study, the identified significant parking impact would not be mitigated by the TDM program. Also, based on the other inconsistencies in the parking supply and demand noted above, there would be significant parking impacts under all Project scenarios, not just the Demolition and Buildout phases.

OFF-SITE PARKING IMPACTS

No Analysis of Off-Site Parking Lots

The Traffic Study identifies a variety of potential overflow parking locations, including schools and government buildings, shopping centers, and office buildings within a few miles of the Project Site and regional park-and-ride lots where carpools could meet to drive to the game together. However, the availability and capacity of these facilities to host gameday parking was not researched, and no analysis was conducted of the potential traffic impacts of gameday traffic traveling to and from these off-site parking locations. This should have been included in the Traffic Study, as the anticipated use of these off-site lots is a key component of the Parking Management Plan (PMP), a part of the TDM program which is expected to significantly increase traffic to satellite areas.

No Analysis of Neighborhood Parking Impacts

Additionally, the Traffic Study states on page 8-3 that “the Project would not significantly impact the existing parking in adjacent residential areas near the Project site.” There is no support for that statement, and no analysis was done of actual gameday parking that occurs in nearby residential neighborhoods. On September 13, 2015, hundreds of pedestrians were seen before and after the game walking up and down Mission Village Drive north of the Project site. Mission Village Drive does not allow on-street parking, but leads directly through purely residential neighborhoods. It is highly likely that most of those pedestrians parked on residential streets in front of homes. Hundreds more pedestrians were seen walking west along Friars Road and east on San Diego Mission Road, both of which lead to additional residential neighborhoods as well as commercial centers.

Since the Project would significantly reduce on-site parking supply and increase parking fees (per the recommendation in the PMP), it seems illogical to expect that neighborhood parking, which already occurs in large numbers with the current parking supply and price, would not be impacted when the parking supply is reduced by up to 5,020 spaces (per Table 3-1) and parking pricing would substantially increase. The Traffic Study should provide analyses of these potential neighborhood parking impacts.

Chapter 3

Transportation Demand Management Program

The Traffic Study assumes that the Project's TDM program would trigger a major shift in travel modes to and from the stadium. The effectiveness of this TDM program is the key to avoiding significant and substantial parking and traffic impacts with development of the Project. However, the assumptions regarding the mode shifts that would occur are highly optimistic and insufficient to mitigate significant parking impacts associated with implementation of the River Park Master Plan.

TDM EFFECTIVENESS

Tables 5-1 and 5-2 of the Traffic Study identify the existing conditions and ultimate Project mode splits for gameday traffic for both weekday and weekend games, including both fans and stadium personnel. The existing mode splits are said to be based on a combination of attendance data, data from ACE Parking and MTS, typical vehicle occupancy rates for major sporting events in California, and ambient travel demand on the Trolley.

Transit Ridership Estimates

The existing transit ridership estimates 15,000 weekday riders and 19,000 weekend riders to NFL games is far higher than transit ridership at any other major sporting event center in California. Levi's Stadium in Santa Clara (home of the San Francisco 49ers NFL team, with a capacity of 68,500 fans) is immediately adjacent to a high-capacity light rail station similar to the Trolley station at Qualcomm Stadium, and approximately 9,000 to 10,000 fans ride the train to and from games. The Traffic Study suggests that Qualcomm Stadium currently has double that number of riders for weekend games. The TDM program is intended to increase transit ridership to 20,000 riders for weekday games and 23,000 riders for weekend games.

Transit Capacity

According to the Traffic Study, on gamedays, the Trolley has the capacity to carry 11,000 passengers per hour in both directions combined due to the longer trains and high-frequency schedules in effect on gameday. With the Project's transit ridership projections and that capacity, many game patrons would wait more than two hours for a train, even assuming that every train could fill to capacity with event passengers (that is, that no non-event passengers were also using the trains). A key component of a successful TDM program is to make alternative modes of transportation more desirable or more convenient than driving a car. A wait time of two hours to board the Trolley after the game would make the levels of transit ridership projected in the Traffic Study very difficult, if not impossible, to achieve.

The method of determining TDM effectiveness used in the Traffic Study has the potential to result in unrealistic assumptions. For example, transit usage was projected to increase by 32% on weekdays (from 22% of fans to 29% of fans) and by 21% on weekends (from 28% of fans to 34% of fans). This increase of 5,000 transit riders for weekday games and 4,000 riders for weekend games in turn was based on the assumption that 100% of the available capacity of the Trolley was used by fans (disregarding non-event passengers). The Traffic Study states that available weekday gameday capacity on the Trolley is 20,000 riders and weekend gameday capacity is 23,000, after accounting for ambient ridership (including commuters on weekdays) and the increased frequency of service and size of trains on gamedays. The Traffic Study notes that MTS provided the capacity information based on the highest recorded past ridership levels for gameday traffic, but no further explanation was given as to how the capacity was determined.

Capacity on the Trolley, like any transit line, varies depending on where on the line you are. Stadium-bound transit riders must board the train at a stop upstream of the Project station. If stadium-bound riders fill a train to capacity multiple stops away from the Project, then that train will not be able to let on any other passengers – stadium-bound or otherwise – until some passengers get off. This is already a known problem as noted on the MTS website, which states:

> "Allow extra time as Trolleys may be crowded. At some of the more popular locations closer to the stadium, trains may arrive that are already full."

MTS has confirmed that park-and-ride lots on the west side of Qualcomm Stadium (Old Town, Linda Vista, Hazard Center) reach capacity on gamedays, while reserve capacity is available at eastern oriented locations.

At a capacity of between 450 and 600 people per Trolley on gamedays (the capacity identified on page 4-29 of the Traffic Study), the additional 5,000 passengers riding the Trolley would completely fill between 8.3 and 11.1 Trolleys, and 20,000 passengers would completely fill between 25 and 44 Trolleys. At a total hourly capacity of 11,000 riders on gamedays, stadium-bound Trolley riders could entirely fill nearly two solid hours of high-capacity, high-frequency Trolleys. On a weeknight this would cause major problems for non-event commuters. However, the Traffic Study did not include an analysis of the capacity of the transit system or potential impacts to non-event riders.

Transit Station Capacity

The Traffic Study does not include an analysis of whether the existing Qualcomm Stadium Trolley station, or satellite stations along the line, have the capacity to accommodate the anticipated increase in transit ridership to and from games. Though designed to handle higher volumes of riders than a typical Trolley station, the Qualcomm Stadium Trolley station may not be sufficiently large enough to handle 20,000-23,000 riders per game as projected in the Traffic Study. At the least, the wait for a train after the end of a game will be increased in proportion to the increase in event riders. Observations conducted on September 13, 2015 showed that lines for the Trolley after the game lasted well over one hour. As stated above, if the Trolley can accommodate 11,000 riders per hour, then the last of the 23,000 weekend game riders would be waiting to board a train more than two hours following the end of the game.

No analysis of off-site Trolley station capacity, including parking demand or ridership queuing areas, is included in the report.

OTHER MODES NOT CONSIDERED

The Traffic Study assumes that, under both existing and future conditions, 1% of gameday fans arrive by taxi or ridesharing. However, this assumption ignores a rapidly-growing trend across California in which event venues are experiencing high rates of arrivals and departures via services such as Uber and Lyft. Many facilities, including Dodger Stadium in Los Angeles, have designated areas and procedures for accommodating Uber and Lyft drivers. The Los Angeles Memorial Coliseum had 1,500 Uber drivers waiting in neighborhoods around the stadium at the end of the September 5, 2015 NCAA football game between the University of Southern California and Arkansas State University, according to Los Angeles Department of Transportation staff. At the September 13, 2015 game at Qualcomm Stadium, there appeared to be ridesharing services utilizing San Diego Mission Road as a pick-up/drop-off location, illegally queued in the bike lane, obstructing traffic, pedestrians, and bicycles.

These services have become readily accepted and regularly used by a large segment of the population. When parking at the Project site becomes more difficult and more expensive, as it would with completion of the Project, it is highly likely that more fans will turn to Uber or Lyft to access the stadium. While these services don't result in an increase in on-site parking demand, they do result in two trips for each fan trip to or from the stadium (which increases Project trip generation). They also present logistical challenges both before and after the game. Before the game, drivers want to take fans as close as possible to the stadium, but then must turn around and drive away. After the game, drivers would wait somewhere prior to picking up fans, encouraged by the higher pay from the "surge pricing" that is typically in effect in the vicinity of major events. Therefore, the likely use of these services would result in an increase in gameday trip generation, a loss of on-site parking as a result of designating an Uber/Lyft pick-up/drop-off area, and/or additional spillover parking, none of which was considered in the analysis in the Traffic Study.

TDM ENFORCEMENT

The TDM program, which wouldn't be fully defined until the Project was constructed, lacks an enforcement mechanism or penalty for failure to perform as anticipated. All of the conclusions in the Traffic Study regarding the insignificance (or mitigation to a level of insignificance) of traffic

and parking impacts depend on the performance of the TDM program. Therefore, it is imperative that the program be closely monitored and that there are strict penalties should it fail to perform as projected.

Chapter 4
Project Trip Generation

The Project's trip generation estimates – the number of daily and peak hour trips that are anticipated to be generated by the proposed stadium – were developed directly from the mode split and time-of-day distribution factors identified in the Traffic Study. The Traffic Study assumes that the TDM program, which was assumed to be facilitated by the large reduction in available on-site parking, will cause a modal shift away from cars and toward transit (the Trolley) and charter or shuttle buses and would result in fewer automobile trips for an NFL event than the existing stadium. There are various issues with the gameday trip generation estimates in the Traffic Study.

HIGH MODE SPLIT ASSUMPTIONS

As has been discussed in previous chapters, the expectation that fan transportation modes will make a large shift away from cars is overly optimistic. There will likely be some change in mode split – with or without the TDM program – but there will be an increase in the number of fans parking in off-site lots or in nearby neighborhoods and commercial centers and an increase in the number of fans using ridesharing services such as Uber and Lyft, which generate even more vehicle trips than fans driving their own cars.

The Traffic Study fails to provide examples of other California venues that achieve the projected 29% (weekday) and 34% (weekend) transit mode split levels. There are simply no venues in California that approach these transit mode split levels, and yet these high mode split assumptions form the basis for the vehicular trip generation for the Project.

OFF-SITE TRIPS NOT ACCOUNTED FOR

The stadium trip generation assumptions in the Traffic Study do not account for trips generated by fans parking in off-site lots. The estimates account only for fans' "last mile" mode of transportation directly to and from the stadium, despite the fact that it is assumed that many fans and employees would drive to nearby lots and then ride a short-range parking shuttle to the stadium.

The Traffic Study identifies park-and-ride lots at other Trolley stations and encourages fans to park there and ride the Trolley to the Project. While the traffic impact of these trips is not felt within the immediate vicinity of the Project site, these trips still affect localized traffic patterns around those lots, as well as contribute to the overall vehicle miles travelled (VMT) for stadium events.

REVISED MODE SPLIT ASSUMPTIONS

As discussed above and in Chapter 3, both the existing and Project mode split assumptions identified in the Traffic Study are aggressive. The existing mode splits indicate that Trolley usage at Qualcomm Stadium is significantly higher than at any other major sports venue in California. The Project mode split assumptions include even higher levels of transit usage (32% higher on weekdays and 21% higher on weekends) and don't assume any increase in ridesharing services such as Uber or Lyft, despite the fact that these services are rapidly growing in popularity at other event venues in California. Additionally, the mode split assumptions did not account for people who drove to the stadium but parked off-site, or drove to a park-and-ride lot and rode the Trolley the rest of the way. Nor does it account for vehicles that arrive to park at the event, but discover the parking lot is full and then are redirected to an off-site location, thereby extending their trip and increasing VMT.

A more conservative and complete set of mode split assumptions was prepared for this report. It includes assumptions regarding multi-modal trips such as driving to a park-and-ride and riding the Trolley the rest of the way.

The following types of trips were assumed to occur:

- Auto trips – These are trips by car directly to the stadium parking lot.
- Shuttle Bus Trips – These trips begin as auto trips to nearby off-site parking lots, with fans taking a parking shuttle from those lots to the stadium. For trip generation purposes, they are considered car trips.
- Charter Bus Trips – These are longer-distance bus trips, and only the bus trip is accounted for in trip generation estimates.
- Taxi / Drop-off Trips – These trips involve both an arrival and departure trip for each drop-off or pick-up.
- Walk / Bike – These trips generate no automobile traffic.
- Trolley Park-and-Ride – These trips begin as auto trips to a park-and-ride along the Trolley route.
- Trolley Point-to-Point – These trips are made exclusively by Trolley and generate no auto trips.

Further, for stadium employees, those parking off-site and riding the parking shuttle would contribute to automobile trip generation (as well as shuttle trip generation), as those trips are made to the Study Area via automobile.

Table 1 shows mode splits for existing and future conditions based on Traffic Study Tables 5-1 and 5-2 but including breakdowns of the mode splits using the expanded categories defined above. The mode splits identified in Tables 5-1 and 5-2 were maintained, for example, in that the Trolley Park-and-Ride percentage added to the Trolley Point-to-Point percentage is equal to the “Trolley” percentage in the Traffic Study.

Table 1 also identifies an alternative set of mode split assumptions that are based on Table 5-2 but are somewhat more conservative in light of the mode split discussion presented in this chapter. The alternative assumptions include 4% fewer event patrons on transit, with 2% driving by car to off-site parking lots and using the shuttle bus and the other 2% using Uber or Lyft. It is important to note that these alternative mode split assumptions are still very aggressive with regard to anticipated transit usage and do not reflect a true estimation of the number of patrons expected to travel to games using modes other than transit.

Based on the detailed mode splits summarized in Table 1, Table 2 presents the resulting daily trip generation totals for existing, future, and alternative mode splits. As shown in Table 2, using these assumptions, Qualcomm Stadium generates 45,240 passenger-car-equivalent (PCE) trips on a weekday gameday and 40,580 PCE trips on a weekend gameday. The proposed Project, based on assumptions found in the Traffic Study regarding transit usage, would generate 45,600 trips on a weekday gameday and 40,740 trips on a weekend gameday, slightly more than Qualcomm Stadium. The alternative mode splits from Table 1 would result in 46,680 trips on a weekday gameday and 42,140 trips on a weekend gameday.

For both weekday and weekend games, the alternative mode split would result in more gameday trips than Qualcomm Stadium. By comparison, Table 5-3 in the Traffic Study claims that the Project would generate significantly fewer gameday trips than Qualcomm Stadium.

Table 1
Comprehensive Mode Split Estimates

Mode Split for Existing Conditions *(compare to Table 5-1)*

Day of Week	Event Attendee							Stadium Personnel			Total Auto Trips	Total Bus Trips
	Auto	Shuttle Bus	Charter Bus	Taxi / Drop-Off	Walk / Bike	Trolley Park-and-Ride	Trolley Point-to-Point	Auto	Off-site Shuttle	Transit		
Mode Split												
Weekday	63%	3%	10%	1%	1%	12%	10%	57%	29%	14%		
Weekend	56%	4%	10%	1%	1%	16%	12%	60%	29%	11%		
Person Trips												
Weekday	42,600	2,200	6,800	700	700	8,200	6,800	2,000	1,000	500		
Weekend	38,100	2,700	6,800	700	700	10,800	8,200	2,100	1,000	400		
Vehicle Trips		*Car* *Bus*							*Car* *Bus*			
Weekday	15,800	800 50	150	520	0	3,000	0	1,300	700 50	0	22,120	250
Weekend	12,700	900 60	150	470	0	3,600	0	1,400	700 50	0	19,770	260

Mode Split for Future Conditions *(compare to Table 5-2)*

Day of Week	Event Attendee							Stadium Personnel			Total Auto Trips	Total Bus Trips
	Auto	Shuttle Bus	Charter Bus	Taxi / Drop-Off	Walk / Bike	Trolley Park-and-Ride	Trolley Point-to-Point	Auto	Off-site Shuttle	Transit		
Mode Split												
Weekday	54%	5%	10%	1%	1%	19%	10%	50%	36%	15%		
Weekend	49%	5%	10%	1%	1%	22%	12%	53%	36%	12%		
Person Trips												
Weekday	36,600	3,200	6,800	700	700	13,000	7,000	1,800	1,300	400		
Weekend	33,100	3,700	6,800	700	700	15,000	8,000	1,800	1,300	400		
Vehicle Trips		*Car* *Bus*							*Car* *Bus*			
Weekday	13,600	1,200 70	150	520	0	4,800	0	1,200	900 70	0	22,220	290
Weekend	11,000	1,200 80	150	470	0	5,000	0	1,200	900 70	0	19,770	300

Alternative Mode Split for Future Conditions Using More Conservative Assumptions

Day of Week	Event Attendee							Stadium Personnel			Total Auto Trips	Total Bus Trips
	Auto	Shuttle Bus	Charter Bus	Taxi / Drop-Off	Walk / Bike	Trolley Park-and-Ride	Trolley Point-to-Point	Auto	Off-site Shuttle	Transit		
Mode Split												
Weekday	54%	7%	10%	3%	1%	15%	10%	20%	65%	15%		
Weekend	49%	7%	10%	3%	1%	18%	12%	25%	63%	12%		
Person Trips												
Weekday	36,700	4,800	6,800	2,000	700	10,000	7,000	700	2,300	500		
Weekend	33,500	4,800	6,800	2,000	700	12,200	8,000	900	2,200	400		
Vehicle Trips		*Car* *Bus*							*Car* *Bus*			
Weekday	13,600	1,800 110	150	1,480	0	3,700	0	500	1,500 120	0	22,580	380
Weekend	11,200	1,600 110	150	1,330	0	4,100	0	600	1,500 110	0	20,330	370

Table 2 (Based on Table 5-3)
Daily Vehicle Trip Generation on Gamedays (Inbound and Outbound)

Day of Week	Auto (veh) [a]	Shuttle / Charter Bus (veh) {a]	Total Trips (PCE) [c]
Existing Mode Splits			
Weekday	44,240	500	45,240
Weekend	39,540	520	40,580
Future (Project) Mode Splits			
Weekday	44,440	580	45,600
Weekend	39,540	600	40,740
Alternative Mode Splits			
Weekday	45,160	760	46,680
Weekend	40,660	740	42,140

Note: Vehicel totals based on data in Table 1.
[a] One arrival trip and one departure trip for each auto identified in Table 1.
[b] PCE = Passenger Car Equivalent, and is equal to 1 for autos and 2 for buses.

Chapter 5
Gameday Traffic Operating Conditions

The Traffic Study did not conduct traffic counts on a day with an NFL event, but rather projected gameday traffic volumes at study locations and added them to traffic volumes collected in July 2015 and October 2013. These were then used to analyze baseline ("No Project") traffic conditions in the Traffic Study. However, there are a few concerns with this analysis.

GAMEDAY TRIP GENERATION

Incorrect Weekend Peak Hour

The weekend traffic counts used in the Traffic Study were collected on a Saturday and a Sunday from 7 AM to 9 AM and from 4 PM to 6 PM. These times of day are appropriate when collecting traffic counts on weekdays, as they correspond to the commuter peak periods when ambient traffic levels are highest. However, for weekend days, and especially weekend days that are intended to simulate NFL gameday conditions, the morning period from 7 AM to 9 AM is inappropriate. In addition to the period from 4 PM to 6 PM, the weekend counts should have been conducted during the middle of the day (such as from 11 AM to 2 PM) not only to capture the peak midday traffic volume (which, on a Saturday and Sunday, is higher than the morning "commuter" peak) but also because that period corresponds to the peak ingress period for a typical afternoon NFL or NCAA game beginning at 1 PM.

Data in the Traffic Study confirms that the weekend counts should have been collected during the midday peak. Table 5-7 summarizes the estimated weekend gameday trip generation by hour of the day, assuming a 6 PM game and a 1 PM game. The 1 PM game (assumed to occur on Sunday) is shown to generate only a small number of auto trips during the 8 AM to 9 AM hour (the analyzed morning peak hour). However, as Table 5-7 clearly shows, the hour prior to kickoff (12 PM to 1 PM) would have had significantly greater traffic (5,100 arrivals instead of 2,060) and would have produced a much more appropriate analysis.

Appropriate Game Time Assumptions

Table 5-7 assumed a 6 PM kickoff for the Saturday game, and as a result, it assumed that the Project would not generate any traffic during the Saturday morning peak hour. It assumed peak arrival traffic occurring during the Saturday afternoon peak hour, but departure peak hour traffic is far higher than arrival traffic (8,990 departures instead of 5,100 arrivals). There is no explanation as to why a 6 PM kickoff was chosen for analysis. Based on typical NFL weekend schedules, it would have been far more appropriate to assume a 1 PM kickoff, as was assumed for the Sunday analysis.

The choices made in the Traffic Study to analyze weekend morning peak hours (rather than midday peaks) and to assume a 6 PM game on Saturday both result in analyses that miss peak gameday conditions. There is no analysis in the Traffic Study of the peak departure hour on a Saturday and no analysis of the peak arrival hour on a Sunday.

ACTUAL OPERATING CONDITIONS

Key Intersection Operations

Intersection turning movement counts were conducted before and after the September 13, 2015 game for use in this report. The game began at 1 PM and, therefore, the counts were conducted from 11 AM to 1 PM to capture the peak arrival hour and from 4 PM to 6 PM to capture the peak departure hour. The volumes were collected at a total of 14 intersections from among the 27 locations analyzed in the Traffic Study.

Table 3 shows a comparison of operating conditions for the Existing Conditions with Games reported in the Traffic Study (from Table 4-6) and the volumes collected on September 13. As shown, 12 of the analyzed peak periods that could be compared operated at a worse level of service (LOS) on September 13, while only four operated at a better LOS than the Existing Conditions with Games estimates reported in the Traffic Study. The remaining 12 analyzed peak periods showed the same LOS in both sets of data. Actual gameday conditions were different (and generally worse) than the Traffic Study projected conditions at a majority of the locations,

suggesting that the projections of operating conditions with gameday traffic throughout the Traffic Study are flawed.

Stadium Egress

In planning parking lot operations at NFL stadia, a target of 45 minutes to essentially empty a stadium parking lot after a game is used as the design criteria. This does not mean that every car has left the lot within that time, but rather that the vehicles that are attempting to exit the lot may move freely out of the exits by that time.

After the September 13 game at Qualcomm Stadium, all of the exits from the parking lots were still congested 70 minutes after the game. Two of the three major exits were still backed up 90 minutes after the game, twice as long as the target time frame. The backups were caused by congestion on the surface streets and freeway ramps serving the Project site.

The Traffic Study did not acknowledge that the current stadium does not meet acceptable design criteria for emptying the lot post-game nor did it identify any measures that would improve the operation of the parking lots for the new stadium. Today's fans are not being offered an acceptable post-game experience and the Traffic Study fails to offer any solutions or improvements to this condition. This not only negatively affects the fans who attended the game, but it also impacts the people living in the vicinity of the Project who have their roads congested for more than twice the time they should be after a game.

Table 3
Intersection Level of Service Comparison

ID	Intersection	Peak Hour	2019 No Project With Games (Sunday)	September 13, 2015	Change in LOS
4	Mission Gorge Rd & Fairmount Ave	AM / Pre-game PM / Post-game	C F	C B	no change better
5	Fairmount Ave & Alvarado Canyon Rd	AM / Pre-game PM / Post-game	C F	F F	worse no change
6	Fairmount Ave & I-8 EB Ramps	AM / Pre-game PM / Post-game	C C	B C	better no change
7	Rancho Mission Rd & Friars Rd	AM / Pre-game PM / Post-game	B B	B C	no change worse
8	Rancho Mission Rd & San Diego Mission Rd	AM / Pre-game PM / Post-game	C D	E E	worse worse
9	Rancho Mission Rd & Ward Rd	AM / Pre-game PM / Post-game	B B	B E	no change worse
11	I-15 NB Ramps & Friars Rd	AM / Pre-game PM / Post-game	B F	A F	better no change
12	I-15 SB Ramps & Friars Rd	AM / Pre-game PM / Post-game	C F	C F	no change no change
13	Mission Village Dr & Friars Rd WB	AM / Pre-game PM / Post-game	B C	C F	worse worse
14	Mission Village Dr & Friars Rd EB	AM / Pre-game PM / Post-game	D F	n/a [a]	n/a
17	Fenton Pkwy & Friars Rd	AM / Pre-game PM / Post-game	C F	D D	worse better
20	Qualcomm Way & Camino De La Reina	AM / Pre-game PM / Post-game	A B	C C	worse worse
21	Qualcomm Way & I-8 WB Ramps	AM / Pre-game PM / Post-game	A F	E F	worse no change
23	SR-163 NB Ramps & Friars Rd	AM / Pre-game PM / Post-game	A E	A E	no change no change
25	Ulric St & Friars Rd	AM / Pre-game PM / Post-game	B D	F D	worse no change

[a] Count data did not include San Diego Mission Road volumes (Intersection #15) and therefore direct comparison was not possible.

Chapter 6
Analysis Methodology

The Traffic Study concluded that only a single location would be significantly impacted by Project traffic – the intersection of Rancho Mission Road & Ward Road during the weekday afternoon peak hour. Had the Traffic Study made more conservative/realistic decisions regarding analysis methodology and TDM effectiveness, many more facilities would have been identified as significantly impacted. Further, the Traffic Study contains no analysis of events smaller than NFL games, even though smaller events are projected to vastly increase in number compared to what is currently held at Qualcomm Stadium. These assumptions result in an underestimation of Project mitigation requirements.

CHOICE OF BASELINE CONDITIONS

Traffic impacts were measured based on the difference between future conditions with the Project and future "No Project" conditions that assume the Chargers continue to play at Qualcomm Stadium. However, there is ample evidence that, should the Project not be constructed, the Chargers would move elsewhere, leaving Qualcomm Stadium without its most notable tenant and largest events. In that likely "No Project" alternative, the worst-case events held at Qualcomm Stadium according to Table 3-6 would be monster truck and supercross events hosting approximately 50,000 people. Each of these events happen once a year, however, and are therefore inadequate to compare to an NFL season of 10 games (or more, with playoff games and a Super Bowl).

Therefore, the approach to the impact analysis should be to compare future conditions with the Project to a baseline of future conditions without NFL events at Qualcomm Stadium. This analysis was not included in the Traffic Study.

Using data from the Traffic Study, an alternative analysis of potential Project traffic impacts comparing future conditions with the Project to a baseline of future conditions with no NFL

games was conducted. Tables 4 through 21 replicate Tables 9-1 through 9-18 of the Traffic Study, using the “No Project with No Games” condition as the baseline for each analysis rather than the “No Project with Games” condition:

Year 2019 Construction Phase with Games vs. Year 2019 No Project with No Games

- Table 4 – Intersection Project Impact (Weekday)
- Table 5 – Intersection Project Impact (Saturday)
- Table 6 – Intersection Project Impact (Sunday)
- Table 7 – Roadway Segment Project Impact
- Table 8 – Freeway Segment Project Impact
- Table 9 – Ramp Metering Project Impact

Year 2019 Demolition Phase with Games vs. Year 2019 No Project with No Games

- Table 10 – Intersection Project Impact (Weekday)
- Table 11 – Intersection Project Impact (Saturday)
- Table 12 – Intersection Project Impact (Sunday)
- Table 13 – Roadway Segment Project Impact
- Table 14 – Freeway Segment Project Impact
- Table 15 – Ramp Metering Project Impact

Year 2035 Project Buildout with Games vs. Year 2035 No Project with No Games

- Table 16 – Intersection Project Impact (Weekday)
- Table 17 – Intersection Project Impact (Saturday)
- Table 18 – Intersection Project Impact (Sunday)
- Table 19 – Roadway Segment Project Impact
- Table 20 – Freeway Segment Project Impact
- Table 21 – Ramp Metering Project Impact

As shown in Tables 4 through 21, the alternative impact analysis identifies significant impacts to many facilities that the Traffic Study concluded would not be impacted.

Year 2019 Construction Phase

As shown in Tables 4 through 6, the Project would result in significant impacts at 14 of the 27 analyzed intersections during at least one analyzed period (all of which were afternoon peak hours) under Year 2019 Construction Phase conditions. The impacted locations include:

3. Fairmount Avenue & Twain Avenue (weekday)
4. Mission Gorge Road & Fairmount Avenue (Sunday)
5. Fairmount Avenue & Alvarado Canyon Road (Sunday)
9. Rancho Mission Road & Ward Road (weekday)
11. I-15 Northbound Ramps & Friars Road (Sunday)
12. I-15 Southbound Ramps & Friars Road (weekday, Saturday, and Sunday)
13. Mission Village Drive & Friars Road Westbound (weekday)
14. Mission Village Drive & Friars Road Eastbound (weekday, Saturday, and Sunday)
15. Mission Village Drive & San Diego Mission Road (weekday, Saturday, and Sunday)
16. Northside Drive & Friars Road (weekday and Saturday)
17. Fenton Parkway & Friars Road (weekday, Saturday, and Sunday)
19. Qualcomm Way & Friars Road Eastbound (weekday)
21. Qualcomm Way & I-8 Westbound Ramps (Sunday)
22. Frazee Road & Friars Road (weekday)

As shown in Table 7, the Project would result in significant impacts at nine of the 30 analyzed roadway segments (all on weekdays). These include:

3. Mission Gorge Road between Twain Avenue and Mission Gorge Place
4. Mission Gorge Road between Mission Gorge Place and Fairmount Avenue
6. Fairmount Avenue between Mission Gorge Road and Alvarado Canyon Road
7. Fairmount Avenue between Alvarado Canyon Road and I-8 Westbound Ramps
8. Fairmount Avenue between I-8 Westbound Ramps and I-8 Eastbound Ramps
9. San Diego Mission Road between Fairmount Avenue and Rancho Mission Road
18. Friars Road between I-15 Ramps and Mission Village Drive
20. Friars Road between Northside Drive and Fenton Parkway
21. Friars Road between Fenton Parkway and River Run Drive

As shown in Table 8, the Project would result in significant impacts at four of the 10 analyzed freeway segments in one direction during the afternoon peak hour. These include:

- I-15 Southbound from Aero Drive to Friars Road
- I-8 Eastbound from Fairmount Avenue to I-15
- I-8 Eastbound from I-15 to I-805
- I-8 Eastbound from Qualcomm Way to Mission Center Road

As shown in Table 9, the Project would result in significant impacts at two of the four freeway ramp meters, including the I-15 southbound on-ramp from eastbound Friars Road and the I-8 eastbound on-ramp from southbound Fairmount Avenue, both during the afternoon peak hour.

By comparison, the Traffic Study did not identify significant impacts at any facilities during the Year 2019 Construction Phase.

Year 2019 Demolition Phase

As shown in Tables 10 through 12, the Project would result in significant impacts at 14 of the 27 analyzed intersections during at least one analyzed period (all of which were afternoon peak hours) under Year 2019 Demolition Phase conditions. The impacted locations include:

3. Fairmount Avenue & Twain Avenue (weekday)
4. Mission Gorge Road & Fairmount Avenue (Sunday)
5. Fairmount Avenue & Alvarado Canyon Road (weekday and Sunday)
9. Rancho Mission Road & Ward Road (weekday)
11. I-15 Northbound Ramps & Friars Road (Sunday)
12. I-15 Southbound Ramps & Friars Road (weekday, Saturday, and Sunday)
14. Mission Village Drive & Friars Road Eastbound (weekday, Saturday, and Sunday)
15. Mission Village Drive & San Diego Mission Road (weekday, Saturday, and Sunday)
16. Northside Drive & Friars Road (weekday and Saturday)
17. Fenton Parkway & Friars Road (weekday, Saturday, and Sunday)
19. Qualcomm Way & Friars Road Eastbound (weekday)
21. Qualcomm Way & I-8 Westbound Ramps (Sunday)

22. Frazee Road & Friars Road (weekday)
25. Ulric Street & Friars Road (weekday)

As shown in Table 13, the Project would result in significant impacts at nine of the 30 analyzed roadway segments (all on weekdays). These include:

3. Mission Gorge Road between Twain Avenue and Mission Gorge Place
4. Mission Gorge Road between Mission Gorge Place and Fairmount Avenue
6. Fairmount Avenue between Mission Gorge Road and Alvarado Canyon Road
7. Fairmount Avenue between Alvarado Canyon Road and I-8 Westbound Ramps
8. Fairmount Avenue between I-8 Westbound Ramps and I-8 Eastbound Ramps
9. San Diego Mission Road between Fairmount Avenue and Rancho Mission Road
18. Friars Road between I-15 Ramps and Mission Village Drive
20. Friars Road between Northside Drive and Fenton Parkway
21. Friars Road between Fenton Parkway and River Run Drive

As shown in Table 14, the Project would result in significant impacts at three of the 10 analyzed freeway segments in one direction or another during the afternoon peak hour. These include:

- I-15 Southbound from Aero Drive to Friars Road
- I-8 Eastbound from I-15 to I-805
- I-8 Eastbound from Qualcomm Way to Mission Center Road

As shown in Table 15, the Project would result in significant impacts at two of the four freeway ramp meters, including the I-15 southbound on-ramp from eastbound Friars Road and the I-8 eastbound on-ramp from southbound Fairmount Avenue, both during the afternoon peak hour.

By comparison, the Traffic Study identified a significant impact at the intersection of Rancho Mission Road & Ward Road during the Year 2019 Demolition Phase.

Year 2035 Project Buildout Phase

As shown in Tables 16 through 18, the Project would result in significant impacts at eighteen of the 27 analyzed intersections during at least one analyzed period (all of which were afternoon peak hours) under Year 2035 Project Buildout Phase conditions. The impacted locations include:

3. Fairmount Avenue & Twain Avenue (weekday and Saturday)
4. Mission Gorge Road & Fairmount Avenue (weekday, Saturday, and Sunday)
5. Fairmount Avenue & Alvarado Canyon Road (Saturday and Sunday)
6. Fairmount Avenue & I-8 Eastbound Ramps (Saturday)
9. Rancho Mission Road & Ward Road (weekday and Saturday)
11. I-15 Northbound Ramps & Friars Road (Sunday)
12. I-15 Southbound Ramps & Friars Road (weekday, Saturday, and Sunday)
13. Mission Village Drive & Friars Road Westbound (weekday and Saturday)
14. Mission Village Drive & Friars Road Eastbound (weekday, Saturday, and Sunday)
15. Mission Village Drive & San Diego Mission Road (weekday, Saturday, and Sunday)
16. Northside Drive & Friars Road (weekday, Saturday, and Sunday)
17. Fenton Parkway & Friars Road (weekday, Saturday, and Sunday)
18. Qualcomm Way & Friars Road Westbound (weekday and Sunday)
19. Qualcomm Way & Friars Road Eastbound (weekday and Saturday)
21. Qualcomm Way & I-8 Westbound Ramps (Saturday and Sunday)
22. Frazee Road & Friars Road (weekday and Saturday)
23. SR 163 Northbound Ramps & Friars Road (Sunday)
25. Ulric Street & Friars Road (weekday and Saturday)

As shown in Table 19, the Project would result in significant impacts at 17 of the 30 analyzed roadway segments (all on weekdays). These include:

3. Mission Gorge Road between Twain Avenue and Mission Gorge Place
4. Mission Gorge Road between Mission Gorge Place and Fairmount Avenue
6. Fairmount Avenue between Mission Gorge Road and Alvarado Canyon Road
7. Fairmount Avenue between Alvarado Canyon Road and I-8 Westbound Ramps
8. Fairmount Avenue between I-8 Westbound Ramps and I-8 Eastbound Ramps

9. San Diego Mission Road between Fairmount Avenue and Rancho Mission Road
15. Friars Road between Mission Gorge Road and Santo Road
17. Friars Road between Rancho Mission Road and I-15 Ramps
18. Friars Road between I-15 Ramps and Mission Village Drive
19. Friars Road between Mission Village Drive and Northside Drive
20. Friars Road between Northside Drive and Fenton Parkway
21. Friars Road between Fenton Parkway and River Run Drive
22. Friars Road between River Run Drive and Rio Bonito Way
23. Friars Road between Rio Bonito Way and Qualcomm Way
27. Friars Road between Frazee Road and SR 163 Northbound Ramps
28. Friars Road between SR 163 Northbound Ramps and SR 163 Southbound Ramps
29. Qualcomm Way between Friars Road and Rio San Diego Road

As shown in Table 20, the Project would result in significant impacts at six of the 10 analyzed freeway segments in one direction or another during the afternoon peak hour. These include:

- I-15 Southbound from Aero Drive to Friars Road
- I-8 Eastbound from Waring Road to Fairmount Avenue
- I-8 Eastbound from Fairmount Avenue to I-15
- I-8 Eastbound from I-15 to I-805
- I-8 Eastbound from Qualcomm Way to Mission Center Road
- SR 163 Southbound from Friars Road to I-8

As shown in Table 21, the Project would result in significant impacts at two of the four freeway ramp meters, including the I-15 southbound on-ramp from eastbound Friars Road and the I-8 eastbound on-ramp from southbound Fairmount Avenue, both during the afternoon peak hour.

By comparison, the Traffic Study identified one significant impact, at the intersection of Rancho Mission Road & Ward Road during the Year 2035 Project Buildout Phase.

TDM EFFECTIVENESS

The conclusion of virtually no significant impacts resulted from the high TDM assumptions used in the Traffic Study, because the Project represents a reduction in traffic on gamedays as compared to existing Qualcomm Stadium games. It should be noted that the one identified impact, at the intersection of Rancho Mission Road & Ward Road, would occur because the TDM program is expected to result in more shuttle and charter bus trips, and those buses use the Rancho Mission Road exit exclusively.

This is a critical point because the high TDM and transit mode split assumptions dictate the outcome of the traffic analysis, i.e., fewer auto trips means no significant traffic impacts. If the decision-makers allow these assumptions to stand, there must be strict monitoring and penalties for failure to meet these target TDM/transit travel levels.

NON-GAME EVENTS

Table 3-6 contains a detailed summary of the number and types of events that are currently held at Qualcomm Stadium compared to what is anticipated at the Project. The numbers of most types of events are anticipated to increase. Most notably, the number of “medium events,” defined as events with between 5,000 and 15,000 attendees, is expected to increase from four to 52 per year, an average of one every week. Even an event of 5,000 people can cause serious congestion and disruption of local traffic patterns during ingress and egress. The Traffic Study acknowledges, on page 7-43, that “any weekday event with attendance over 5,000 could potentially result in significant impact on the transportation network during the AM and PM peak hour.” However, Traffic Study provides no analysis of such events nor makes any attempt to identify the significant impacts that would occur. Nor does it require the implementation of a traffic and parking management plan for these event levels. This should have been included in the Traffic Study.

Table 4 (Based on Table 9-1)
Intersection Project Impact - 2019 Construction Phase (Weekday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Construction Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.6	A	18.5	B	8.6	A	27.1	C	0.0	NO	8.6	NO
2	Mission Gorge Rd	Twain Ave	22	C	27.5	C	22	C	30.1	C	0.0	NO	2.6	NO
3	Fairmount Ave	Twain Ave	13.4	B	16.5	B	13.4	B	133.6	**F**	0.0	NO	117.1	**YES**
4	Mission Gorge Rd	Fairmount Ave	24.9	C	26.5	C	24.9	C	44.1	D	0.0	NO	17.6	NO
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	116.3	**F**	63.3	**E**	116.5	**F**	0.0	NO	0.2	NO
6	Fairmount Ave	I-8 EB Ramps	13.8	B	57.5	**E**	13.8	B	56.6	**E**	0.0	NO	-0.9	NO
7	Rancho Mission Rd	Friars Rd	12.4	B	16	B	12.4	B	14.8	B	0.0	NO	-1.2	NO
8	Rancho Mission Rd	San Diego Mission Rd	26	C	27.5	C	26	C	42.4	D	0.0	NO	14.9	NO
9	Rancho Mission Rd	Ward Rd	11.1	B	15.3	C	11.1	B	61.4	**F**	0.0	NO	46.1	**YES**
10	Ward Rd	Camino Del Rio N	12.7	B	17.7	B	12.7	B	25.1	C	0.0	NO	7.4	NO
11	I-15 NB Ramps	Friars Rd	3.7	A	3.8	A	3.7	A	5.5	A	0.0	NO	1.7	NO
12	I-15 SB Ramps	Friars Rd	34.1	C	48.6	D	34.1	C	152.1	**F**	0.0	NO	103.5	**YES**
13	Mission Village Dr	Friars Rd WB	11.6	B	15.4	B	11.6	B	59.2	**E**	0.0	NO	43.8	**YES**
14	Mission Village Dr	Friars Rd EB	38.7	D	38.1	D	38.7	D	261	**F**	0.0	NO	222.9	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	59.3	**E**	22.3	C	174.3	**F**	0.0	NO	115	**YES**
17	Fenton Pkwy	Friars Rd	17.6	B	38	D	17.6	B	124.1	**F**	0.0	NO	86.1	**YES**
18	Qualcomm Way	Friars Rd WB	20	B	34.6	C	20	B	36.9	D	0.0	NO	2.3	NO
19	Qualcomm Way	Friars Rd EB	12.4	B	22.3	C	12.4	B	88.6	**F**	0.0	NO	66.3	**YES**
20	Qualcomm Way	Camino De La Reina	27.5	C	25.9	C	27.5	C	36.8	D	0.0	NO	10.9	NO
21	Qualcomm Way	I-8 WB Ramps	24.4	C	37.2	D	24.4	C	28.4	C	0.0	NO	-8.8	NO
22	Frazee Rd	Friars Rd	40.4	D	72.7	**E**	40.4	D	75.8	**E**	0.0	NO	3.1	**YES**
23	SR-163 NB Ramps	Friars Rd	13.2	B	43.8	D	13.2	B	36.9	D	0.0	NO	-6.9	NO
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	11.4	B	16.7	C	0.0	NO	0	NO
25	Ulric St	Friars Rd	20.4	C	42.8	D	20.4	C	54.3	D	0.0	NO	11.5	NO
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	9.1	A	13.8	B	0.0	NO	0	NO
27	Mission Center Rd	Friars Rd EB	10.7	B	13.2	B	10.7	B	35.2	D	0.0	NO	22	NO

Table 5 (Based on Table 9-2)
Intersection Project Impact - 2019 Construction Phase (Saturday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Construction Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	7.4	A	9.6	A	7.4	A	12.3	B	0.0	NO	2.7	NO
2	Mission Gorge Rd	Twain Ave	20.9	C	14.4	B	20.9	C	14.9	B	0.0	NO	0.5	NO
3	Fairmount Ave	Twain Ave	12.2	B	14	B	12.2	B	41.2	D	0.0	NO	27.2	NO
4	Mission Gorge Rd	Fairmount Ave	20	B	26.2	C	20	B	43.4	D	0.0	NO	17.2	NO
5	Fairmount Ave	Alvarado Canyon Rd	22.4	C	33.3	C	22.4	C	49.3	D	0.0	NO	16	NO
6	Fairmount Ave	I-8 EB Ramps	10.4	B	24.7	C	10.4	B	26.7	C	0.0	NO	2	NO
7	Rancho Mission Rd	Friars Rd	11.8	B	16.6	B	11.8	B	18	B	0.0	NO	1.4	NO
8	Rancho Mission Rd	San Diego Mission Rd	16.8	B	18.3	B	16.8	B	27.6	C	0.0	NO	9.3	NO
9	Rancho Mission Rd	Ward Rd	9.6	A	10.7	B	9.6	A	14.9	B	0.0	NO	4.2	NO
10	Ward Rd	Camino Del Rio N	11.2	B	13.9	B	11.2	B	15.3	B	0.0	NO	1.4	NO
11	I-15 NB Ramps	Friars Rd	6.5	A	10.4	B	6.5	A	10.8	B	0.0	NO	0.4	NO
12	I-15 SB Ramps	Friars Rd	18.1	B	29.7	C	18.1	B	133.9	**F**	0.0	NO	104.2	**YES**
13	Mission Village Dr	Friars Rd WB	12.1	B	16.6	B	12.1	B	22.8	C	0.0	NO	6.2	NO
14	Mission Village Dr	Friars Rd EB	37.4	D	30.2	C	37.4	D	284.4	**F**	0.0	NO	254.2	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	17.2	B	36.5	D	17.2	B	96	**F**	0.0	NO	59.5	**YES**
17	Fenton Pkwy	Friars Rd	17.3	B	27	C	17.3	B	55.5	**E**	0.0	NO	28.5	**YES**
18	Qualcomm Way	Friars Rd WB	15.1	B	26.9	C	15.1	B	30.2	C	0.0	NO	3.3	NO
19	Qualcomm Way	Friars Rd EB	12.7	B	10.6	B	12.7	B	54	D	0.0	NO	43.4	NO
20	Qualcomm Way	Camino De La Reina	11.6	B	22.9	C	11.6	B	22.8	C	0.0	NO	-0.1	NO
21	Qualcomm Way	I-8 WB Ramps	13.1	B	22.4	C	13.1	B	20.1	C	0.0	NO	-2.3	NO
22	Frazee Rd	Friars Rd	19.6	B	22.3	C	19.6	B	25.5	C	0.0	NO	3.2	NO
23	SR-163 NB Ramps	Friars Rd	10.7	B	44.8	D	10.7	B	37.1	D	0.0	NO	-7.7	NO
24	Ulric St	SR-163 SB On-ramp	9.5	A	13.1	B	9.5	A	13.1	B	0.0	NO	0	NO
25	Ulric St	Friars Rd	13.2	B	38	D	13.2	B	31.6	C	0.0	NO	-6.4	NO
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 6 (Based on Table 9-3)
Intersection Project Impact - 2019 Construction Phase (Sunday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Construction Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	6.2	A	8.3	A	6.6	A	8.3	A	0.4	NO	0	NO
2	Mission Gorge Rd	Twain Ave	14.4	B	13.5	B	13.3	B	36.6	D	-1.1	NO	23.1	NO
3	Fairmount Ave	Twain Ave	13.9	B	14.2	B	17.1	B	35.1	D	3.2	NO	20.9	NO
4	Mission Gorge Rd	Fairmount Ave	15.1	B	23.2	C	19.5	B	84.5	**F**	4.4	NO	61.3	**YES**
5	Fairmount Ave	Alvarado Canyon Rd	18.9	B	23.8	C	20.9	C	159.3	**F**	2.0	NO	135.5	**YES**
6	Fairmount Ave	I-8 EB Ramps	10.7	B	24.7	C	13.7	B	18.3	B	3.0	NO	-6.4	NO
7	Rancho Mission Rd	Friars Rd	9.5	A	16.6	B	12.8	B	12.5	B	3.3	NO	-4.1	NO
8	Rancho Mission Rd	San Diego Mission Rd	18.5	B	18.3	B	18.8	B	41.5	D	0.3	NO	23.2	NO
9	Rancho Mission Rd	Ward Rd	9.5	A	10.7	B	10.1	B	12.1	B	0.6	NO	1.4	NO
10	Ward Rd	Camino Del Rio N	11.3	B	13.9	B	12.1	B	13.1	B	0.8	NO	-0.8	NO
11	I-15 NB Ramps	Friars Rd	3.1	A	11.5	B	12.8	B	264.3	**F**	9.7	NO	252.8	**YES**
12	I-15 SB Ramps	Friars Rd	15.5	B	27.8	C	20.9	C	84.3	**F**	5.4	NO	56.5	**YES**
13	Mission Village Dr	Friars Rd WB	11.9	B	14	B	14.6	B	25.6	C	2.7	NO	11.6	NO
14	Mission Village Dr	Friars Rd EB	25.5	C	32.6	C	41	D	306.9	**F**	15.5	NO	274.3	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	15.6	B	35.2	D	22.3	C	41.1	D	6.7	NO	5.9	NO
17	Fenton Pkwy	Friars Rd	17	B	27.3	C	22.1	C	99.4	**F**	5.1	NO	72.1	**YES**
18	Qualcomm Way	Friars Rd WB	17	B	26.7	C	9.3	A	47.3	D	-7.7	NO	20.6	NO
19	Qualcomm Way	Friars Rd EB	14.7	B	12.1	B	8.8	A	8.5	A	-5.9	NO	-3.6	NO
20	Qualcomm Way	Camino De La Reina	15.5	B	21.5	C	9.6	A	18.4	B	-5.9	NO	-3.1	NO
21	Qualcomm Way	I-8 WB Ramps	11.2	B	54	D	9.2	A	157.6	**F**	-2.0	NO	103.6	**YES**
22	Frazee Rd	Friars Rd	19.1	B	30.3	C	16.5	B	23.4	C	-2.6	NO	-6.9	NO
23	SR-163 NB Ramps	Friars Rd	11.9	B	32.7	C	12	B	53.7	D	0.1	NO	21	NO
24	Ulric St	SR-163 SB On-ramp	2.9	A	12.4	B	2.9	A	2.9	A	0.0	NO	-9.5	NO
25	Ulric St	Friars Rd	23.9	C	51.5	D	14.4	B	36.4	D	-9.5	NO	-15.1	NO
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 7 (Based on Table 9-4)
Roadway Segment Project Impact - 2019 Construction Phase

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ae	4	Collector	0.62	C	0.68	D	0.06	0.49	C	0.54	C	0.05	0.41	B	0.46	B	0.05	0.06	Weekday	NO
2	Vandever Ave to Twain Ave	4	Collector	0.68	D	0.74	D	0.06	0.55	C	0.60	C	0.05	0.44	B	0.49	C	0.05	0.06	Weekday	NO
3	Twain Ave to Mission Gorge Pl	4	Collector	0.79	D	0.91	E	0.12	0.61	C	0.72	D	0.11	0.48	C	0.58	C	0.10	0.12	Weekday	**YES**
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.73	D	0.85	E	0.12	0.63	C	0.73	D	0.10	0.50	C	0.60	C	0.10	0.12	Weekday	**YES**
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector	0.49	C	0.78	D	0.29	0.35	B	0.59	C	0.24	0.25	A	0.49	C	0.24	0.29	Weekday	NO
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	0.87	D	1.25	F	0.38	0.72	C	1.03	F	0.31	0.58	C	0.89	E	0.31	0.38	Weekday	**YES**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.08	F	1.35	F	0.27	0.82	D	1.05	F	0.23	0.66	C	0.89	D	0.23	0.27	Weekday	**YES**
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	0.84	D	0.99	E	0.15	0.68	C	0.81	D	0.13	0.54	B	0.67	C	0.13	0.15	Weekday	**YES**
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector	0.51	C	1.37	F	0.86	0.35	B	1.07	F	0.72	0.34	B	1.05	F	0.71	0.86	Weekday	**YES**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.28	A	0.66	C	0.38	0.19	A	0.52	C	0.33	0.16	A	0.50	C	0.34	0.38	Weekday	NO
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.42	B	0.48	C	0.06	0.27	A	0.33	A	0.06	0.23	A	0.28	A	0.05	0.06	multi	NO
12	Ward Rd to Mission City Pkwy	2	Collector	0.66	C	0.67	D	0.01	0.36	B	0.36	B	0.00	0.29	A	0.29	A	0.00	0.01	Weekday	NO
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector	0.66	C	0.75	D	0.09	0.46	B	0.53	C	0.07	0.39	B	0.46	B	0.07	0.09	Weekday	NO
Mission Village Dr																					NO
14	North of Friars Rd	4	Major Arterial	0.38	B	0.40	B	0.02	0.31	A	0.32	A	0.01	0.27	A	0.28	A	0.01	0.02	Weekday	NO
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.79	C	0.84	D	0.05	0.51	B	0.55	B	0.04	0.42	B	0.46	B	0.04	0.05	Weekday	NO
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.69	C	0.73	C	0.04	0.50	B	0.54	B	0.04	0.41	A	0.45	B	0.04	0.04	multi	NO
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.81	C	0.88	D	0.07	0.60	C	0.66	C	0.06	0.51	B	0.57	B	0.06	0.07	Weekday	NO
18	I-15 Ramps to Mission Village Dr	6	Expressway	0.66	C	0.97	E	0.31	0.56	C	0.83	D	0.27	0.48	B	0.75	C	0.27	0.31	Weekday	**YES**
19	Mission Village Dr to Northside Dr	6	Expressway	0.55	C	0.81	D	0.26	0.45	B	0.68	C	0.23	0.40	B	0.63	C	0.23	0.26	Weekday	NO
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	0.71	C	1.05	F	0.34	0.53	B	0.83	C	0.30	0.46	B	0.76	C	0.30	0.34	Weekday	**YES**
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	0.72	C	1.06	F	0.34	0.54	B	0.85	D	0.31	0.47	B	0.78	C	0.31	0.34	Weekday	**YES**
22	River Run Dr to Rio Bonito Way	6	Expressway	0.55	C	0.81	D	0.26	0.41	B	0.64	C	0.23	0.36	A	0.59	C	0.23	0.26	Weekday	NO
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.50	B	0.72	C	0.22	0.35	A	0.55	C	0.20	0.31	A	0.51	B	0.20	0.22	Weekday	NO
24	Qualcomm Way to Gill Village Way	8	Expressway	0.42	B	0.53	C	0.11	0.30	A	0.38	B	0.08	0.26	A	0.35	A	0.09	0.11	Weekday	NO
25	Gill Village Way to Mission Center Dr	8	Expressway	0.46	B	0.57	C	0.11	0.32	A	0.41	B	0.09	0.28	A	0.37	A	0.09	0.11	Weekday	NO
26	Mission Center Dr to Frazee Rd	7	Expressway	0.53	C	0.65	C	0.12	0.39	B	0.49	B	0.10	0.34	A	0.44	B	0.10	0.12	Weekday	NO
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.65	C	0.77	C	0.12	0.51	B	0.60	C	0.09	0.44	B	0.53	B	0.09	0.12	Weekday	NO
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.82	C	0.85	D	0.03	0.67	C	0.70	C	0.03	0.60	C	0.62	C	0.02	0.03	Weekday	NO
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.42	B	0.62	C	0.20	0.27	A	0.44	B	0.17	0.22	A	0.40	B	0.18	0.20	Weekday	NO
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.52	B	0.73	C	0.21	0.36	A	0.53	B	0.17	0.31	A	0.49	B	0.18	0.21	Weekday	NO

Table 8 (Based on Table 9-5)
Freeway Segment Project Impact - 2019 Construction Phase (Weekday)

AM Peak Hour												
Location	2019 No Project No Games				2019 Construction Phase With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.81	C	0.65	C	0.81	C	0.65	C	0.00	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.58	B	0.89	D	0.58	B	0.89	D	0.00	NO	0.00	NO
Fairmount Ave to I-15	0.51	B	0.84	D	0.51	B	0.84	D	0.00	NO	0.00	NO
I-15 to I-805	0.54	B	1.05	F	0.54	B	1.05	F	0.00	NO	0.00	NO
I-805 to Qualcomm Way	0.49	B	0.93	E	0.49	B	0.93	E	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	0.51	B	1.06	F	0.51	B	1.06	F	0.00	NO	0.00	NO
Mission Center Rd to SR-163	0.38	A	0.99	E	0.38	A	0.99	E	0.00	NO	0.00	NO
SR-163												
Genesee Ave to Friars Rd	0.89	D	0.67	C	0.89	D	0.67	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.73	C	0.85	D	0.73	C	0.85	D	0.00	NO	0.00	NO

PM Peak Hour												
Location	2019 No Project No Games				2019 Construction Phase With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	0.98	E	0.61	B	1.14	F	0.01	NO	0.16	**YES**
Friars Rd to I-8	0.66	C	0.98	E	0.73	C	0.98	E	0.07	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.90	D	0.64	C	0.90	D	0.70	C	0.00	NO	0.06	NO
Fairmount Ave to I-15	0.88	D	0.58	B	0.93	E	0.59	B	0.05	**YES**	0.01	NO
I-15 to I-805	0.91	D	0.79	C	0.95	E	0.79	C	0.04	**YES**	0.00	NO
I-805 to Qualcomm Way	0.88	D	0.68	C	0.88	D	0.68	C	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	0.96	E	0.91	D	1.04	F	0.91	D	0.08	**YES**	0.00	NO
Mission Center Rd to SR-163	0.73	C	0.87	D	0.84	D	0.88	D	0.11	NO	0.01	NO
SR-163												
Genesee Ave to Friars Rd	0.78	C	0.75	C	0.79	C	0.88	D	0.01	NO	0.13	NO
Friars Rd to I-8	0.59	B	0.82	D	0.65	C	0.91	D	0.06	NO	0.09	NO

Table 9 (Based on Table 9-6)
Ramp Metering Project Impact - 2019 Construction Phase (Weekday)

AM Peak Hour												
Ramp Location	Meter Rate Range (vphpl)		2019 No Project No Games				2019 Construction Phase With Games				Project Impact	
			Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Δ Delay (min)	Significant?
I-15 NB: Friars Rd On-ramp	Min:	516	1,290	70	8	1,750	1,290	70	8	1,750	0.0	NO
	Max:	600		0	0	0		0	0	0	0.0	NO
I-15 SB: WB Friars Rd On-ramp	Min:	660	700	40	4	1,000	700	40	4	1,000	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO
I-15 SB: EB Friars Rd On-ramp	Max:	996	610	0	0	0	610	0	0	0	0.0	NO
I-8 EB: SB Fairmount Ave On-ramp	Min:	493	810	317	39	7,925	810	317	39	7,925	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO

Table 10 (Based on Table 10-7)
Intersection Project Impact - 2019 Demolition Phase (Weekday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Demolition Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.6	A	18.5	B	8.6	A	26.1	C	0.0	NO	7.6	NO
2	Mission Gorge Rd	Twain Ave	22	C	27.5	C	22	C	29.7	C	0.0	NO	2.2	NO
3	Fairmount Ave	Twain Ave	13.4	B	16.5	B	13.4	B	119.9	**F**	0.0	NO	103.4	**YES**
4	Mission Gorge Rd	Fairmount Ave	24.9	C	26.5	C	24.9	C	41.5	D	0.0	NO	15	NO
5	Fairmount Ave	Alvarado Canyon Rd	63.3	**E**	116.3	**F**	63.3	**E**	122.7	**F**	0.0	NO	6.4	**YES**
6	Fairmount Ave	I-8 EB Ramps	13.8	B	57.5	**E**	13.8	B	56.7	**E**	0.0	NO	-0.8	NO
7	Rancho Mission Rd	Friars Rd	12.4	B	16	B	12.4	B	15	B	0.0	NO	-1	NO
8	Rancho Mission Rd	San Diego Mission Rd	26	C	27.5	C	26	C	39.7	D	0.0	NO	12.2	NO
9	Rancho Mission Rd	Ward Rd	11.1	B	15.3	C	11.1	B	180.7	**F**	0.0	NO	165.4	**YES**
10	Ward Rd	Camino Del Rio N	12.7	B	17.7	B	12.7	B	25.2	C	0.0	NO	7.5	NO
11	I-15 NB Ramps	Friars Rd	3.7	A	3.8	A	3.7	A	5.5	A	0.0	NO	1.7	NO
12	I-15 SB Ramps	Friars Rd	34.1	C	48.6	D	34.1	C	140.8	**F**	0.0	NO	92.2	**YES**
13	Mission Village Dr	Friars Rd WB	11.6	B	15.4	B	11.6	B	55	D	0.0	NO	39.6	NO
14	Mission Village Dr	Friars Rd EB	38.7	D	38.1	D	38.7	D	235.2	**F**	0.0	NO	197.1	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	22.3	C	59.3	**E**	22.3	C	161.8	**F**	0.0	NO	102.5	**YES**
17	Fenton Pkwy	Friars Rd	17.6	B	38	D	17.6	B	111.1	**F**	0.0	NO	73.1	**YES**
18	Qualcomm Way	Friars Rd WB	20	B	34.6	C	20	B	36.9	D	0.0	NO	2.3	NO
19	Qualcomm Way	Friars Rd EB	12.4	B	22.3	C	12.4	B	79.3	**E**	0.0	NO	57	**YES**
20	Qualcomm Way	Camino De La Reina	27.5	C	25.9	C	27.5	C	37.3	D	0.0	NO	11.4	NO
21	Qualcomm Way	I-8 WB Ramps	24.4	C	37.2	D	24.4	C	28.6	C	0.0	NO	-8.6	NO
22	Frazee Rd	Friars Rd	40.4	D	72.7	**E**	40.4	D	77.6	**E**	0.0	NO	4.9	**YES**
23	SR-163 NB Ramps	Friars Rd	13.2	B	43.8	D	13.2	B	37.5	D	0.0	NO	-6.3	NO
24	Ulric St	SR-163 SB On-ramp	11.4	B	16.7	C	11.4	B	3.3	A	0.0	NO	-13.4	NO
25	Ulric St	Friars Rd	20.4	C	42.8	D	20.4	C	56.8	**E**	0.0	NO	14	**YES**
26	Mission Center Rd	Friars Rd WB	9.1	A	13.8	B	9.1	A	13.8	B	0.0	NO	0	NO
27	Mission Center Rd	Friars Rd EB	10.7	B	13.2	B	10.7	B	33	C	0.0	NO	19.8	NO

Table 11 (Based on Table 9-8)
Intersection Project Impact - 2019 Demolition Phase (Saturday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Demolition Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	7.4	A	9.6	A	7.4	A	12.3	B	0.0	NO	2.7	NO
2	Mission Gorge Rd	Twain Ave	20.9	C	14.4	B	20.9	C	14.9	B	0.0	NO	0.5	NO
3	Fairmount Ave	Twain Ave	12.2	B	14	B	12.2	B	41.2	D	0.0	NO	27.2	NO
4	Mission Gorge Rd	Fairmount Ave	20	B	26.2	C	20	B	43.4	D	0.0	NO	17.2	NO
5	Fairmount Ave	Alvarado Canyon Rd	22.4	C	33.3	C	22.4	C	49.3	D	0.0	NO	16	NO
6	Fairmount Ave	I-8 EB Ramps	10.4	B	24.7	C	10.4	B	26.7	C	0.0	NO	2	NO
7	Rancho Mission Rd	Friars Rd	11.8	B	16.6	B	11.8	B	18	B	0.0	NO	1.4	NO
8	Rancho Mission Rd	San Diego Mission Rd	16.8	B	18.3	B	16.8	B	27.6	C	0.0	NO	9.3	NO
9	Rancho Mission Rd	Ward Rd	9.6	A	10.7	B	9.6	A	14.9	B	0.0	NO	4.2	NO
10	Ward Rd	Camino Del Rio N	11.2	B	13.9	B	11.2	B	15.3	B	0.0	NO	1.4	NO
11	I-15 NB Ramps	Friars Rd	6.5	A	10.4	B	6.5	A	10.8	B	0.0	NO	0.4	NO
12	I-15 SB Ramps	Friars Rd	18.1	B	29.7	C	18.1	B	133.9	**F**	0.0	NO	104.2	**YES**
13	Mission Village Dr	Friars Rd WB	12.1	B	16.6	B	12.1	B	22.8	C	0.0	NO	6.2	NO
14	Mission Village Dr	Friars Rd EB	37.4	D	30.2	C	37.4	D	284.4	**F**	0.0	NO	254.2	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	17.2	B	36.5	D	17.2	B	96	**F**	0.0	NO	59.5	**YES**
17	Fenton Pkwy	Friars Rd	17.3	B	27	C	17.3	B	55.5	**E**	0.0	NO	28.5	**YES**
18	Qualcomm Way	Friars Rd WB	15.1	B	26.9	C	15.1	B	30.2	C	0.0	NO	3.3	NO
19	Qualcomm Way	Friars Rd EB	12.7	B	10.6	B	12.7	B	54	D	0.0	NO	43.4	NO
20	Qualcomm Way	Camino De La Reina	11.6	B	22.9	C	11.6	B	22.8	C	0.0	NO	-0.1	NO
21	Qualcomm Way	I-8 WB Ramps	13.1	B	22.4	C	13.1	B	20.1	C	0.0	NO	-2.3	NO
22	Frazee Rd	Friars Rd	19.6	B	22.3	C	19.6	B	25.5	C	0.0	NO	3.2	NO
23	SR-163 NB Ramps	Friars Rd	10.7	B	44.8	D	10.7	B	37.1	D	0.0	NO	-7.7	NO
24	Ulric St	SR-163 SB On-ramp	9.5	A	13.1	B	9.5	A	13.1	B	0.0	NO	0	NO
25	Ulric St	Friars Rd	13.2	B	38	D	13.2	B	31.6	C	0.0	NO	-6.4	NO
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 12 (Based on Table 9-9)
Intersection Project Impact - 2019 Demolition Phase (Sunday)

ID	North-South Arterial	East-West Arterial	2019 No Project No Games				2019 Demolition Phase With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	6.2	A	8.3	A	6.2	A	8.3	A	0.0	NO	0	NO
2	Mission Gorge Rd	Twain Ave	14.4	B	13.5	B	14.4	B	36.6	D	0.0	NO	23.1	NO
3	Fairmount Ave	Twain Ave	13.9	B	14.2	B	13.9	B	35.1	D	0.0	NO	20.9	NO
4	Mission Gorge Rd	Fairmount Ave	15.1	B	23.2	C	15.1	B	84.5	**F**	0.0	NO	61.3	**YES**
5	Fairmount Ave	Alvarado Canyon Rd	18.9	B	23.8	C	18.9	B	159.3	**F**	0.0	NO	135.5	**YES**
6	Fairmount Ave	I-8 EB Ramps	10.7	B	24.7	C	10.7	B	18.3	B	0.0	NO	-6.4	NO
7	Rancho Mission Rd	Friars Rd	9.5	A	16.6	B	9.5	A	12.5	B	0.0	NO	-4.1	NO
8	Rancho Mission Rd	San Diego Mission Rd	18.5	B	18.3	B	18.5	B	41.5	D	0.0	NO	23.2	NO
9	Rancho Mission Rd	Ward Rd	9.5	A	10.7	B	9.5	A	12.1	B	0.0	NO	1.4	NO
10	Ward Rd	Camino Del Rio N	11.3	B	13.9	B	11.3	B	13.1	B	0.0	NO	-0.8	NO
11	I-15 NB Ramps	Friars Rd	3.1	A	11.5	B	3.1	A	264.3	**F**	0.0	NO	252.8	**YES**
12	I-15 SB Ramps	Friars Rd	15.5	B	27.8	C	15.5	B	84.3	**F**	0.0	NO	56.5	**YES**
13	Mission Village Dr	Friars Rd WB	11.9	B	14	B	11.9	B	25.6	C	0.0	NO	11.6	NO
14	Mission Village Dr	Friars Rd EB	25.5	C	32.6	C	25.5	C	306.9	**F**	0.0	NO	274.3	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	15.6	B	35.2	D	15.6	B	41.1	D	0.0	NO	5.9	NO
17	Fenton Pkwy	Friars Rd	17	B	27.3	C	17	B	99.4	**F**	0.0	NO	72.1	**YES**
18	Qualcomm Way	Friars Rd WB	17	B	26.7	C	17	B	47.3	D	0.0	NO	20.6	NO
19	Qualcomm Way	Friars Rd EB	14.7	B	12.1	B	14.7	B	8.5	A	0.0	NO	-3.6	NO
20	Qualcomm Way	Camino De La Reina	15.5	B	21.5	C	15.5	B	18.4	B	0.0	NO	-3.1	NO
21	Qualcomm Way	I-8 WB Ramps	11.2	B	54	D	11.2	B	157.6	**F**	0.0	NO	103.6	**YES**
22	Frazee Rd	Friars Rd	19.1	B	30.3	C	19.1	B	23.4	C	0.0	NO	-6.9	NO
23	SR-163 NB Ramps	Friars Rd	11.9	B	32.7	C	11.9	B	53.7	D	0.0	NO	21	NO
24	Ulric St	SR-163 SB On-ramp	2.9	A	12.4	B	2.9	A	2.9	A	0.0	NO	-9.5	NO
25	Ulric St	Friars Rd	23.9	C	51.5	D	23.9	C	36.4	D	0.0	NO	-15.1	NO
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 13 (Based on Table 9-10)
Roadway Segment Project Impact - 2019 Demolition Phase

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ae	4	Collector	0.62	C	0.67	D	0.05	0.49	C	0.54	C	0.05	0.41	B	0.46	B	0.05	0.05	multi	NO
2	Vandever Ave to Twain Ave	4	Collector	0.68	D	0.74	D	0.06	0.55	C	0.60	C	0.05	0.44	B	0.49	C	0.05	0.06	Weekday	NO
3	Twain Ave to Mission Gorge Pl	4	Collector	0.79	D	0.90	E	0.11	0.61	C	0.72	D	0.11	0.48	C	0.58	C	0.10	0.11	multi	**YES**
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.73	D	0.84	E	0.11	0.63	C	0.73	D	0.10	0.50	C	0.60	C	0.10	0.11	Weekday	**YES**
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector	0.49	C	0.71	D	0.22	0.35	B	0.55	C	0.20	0.25	A	0.45	B	0.20	0.22	Weekday	NO
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	0.87	D	1.16	F	0.29	0.72	C	1.00	E	0.28	0.58	C	0.85	D	0.27	0.29	Weekday	**YES**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.08	F	1.29	F	0.21	0.82	D	1.02	F	0.20	0.66	C	0.86	D	0.20	0.21	Weekday	**YES**
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	0.84	D	0.96	E	0.12	0.68	C	0.79	D	0.11	0.54	B	0.66	C	0.12	0.12	multi	**YES**
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector	0.51	C	1.17	F	0.66	0.35	B	0.98	E	0.63	0.34	B	0.97	E	0.63	0.66	Weekday	**YES**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.28	A	0.64	C	0.36	0.19	A	0.52	C	0.33	0.16	A	0.50	C	0.34	0.36	Weekday	NO
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.42	B	0.48	C	0.06	0.27	A	0.33	A	0.06	0.23	A	0.28	A	0.05	0.06	multi	NO
12	Ward Rd to Mission City Pkwy	2	Collector	0.66	C	0.69	D	0.03	0.36	B	0.36	B	0.00	0.29	A	0.29	A	0.00	0.03	Weekday	NO
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector	0.66	C	0.76	D	0.10	0.46	B	0.53	C	0.07	0.39	B	0.46	B	0.07	0.10	Weekday	NO
Mission Village Dr																					NO
14	North of Friars Rd	4	Major Arterial	0.38	B	0.40	B	0.02	0.31	A	0.32	A	0.01	0.27	A	0.28	A	0.01	0.02	Weekday	NO
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.79	C	0.83	C	0.04	0.51	B	0.55	B	0.04	0.42	B	0.46	B	0.04	0.04	multi	NO
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.69	C	0.73	C	0.04	0.50	B	0.54	B	0.04	0.41	A	0.45	B	0.04	0.04	multi	NO
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.81	C	0.88	D	0.07	0.60	C	0.66	C	0.06	0.51	B	0.57	B	0.06	0.07	Weekday	NO
18	I-15 Ramps to Mission Village Dr	6	Expressway	0.66	C	0.95	E	0.29	0.56	C	0.83	D	0.27	0.48	B	0.75	C	0.27	0.29	Weekday	**YES**
19	Mission Village Dr to Northside Dr	6	Expressway	0.55	C	0.79	D	0.24	0.45	B	0.68	C	0.23	0.40	B	0.63	C	0.23	0.24	Weekday	NO
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	0.71	C	1.03	F	0.32	0.53	B	0.83	C	0.30	0.46	B	0.76	C	0.30	0.32	Weekday	**YES**
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	0.72	C	1.04	F	0.32	0.54	B	0.85	D	0.31	0.47	B	0.78	C	0.31	0.32	Weekday	**YES**
22	River Run Dr to Rio Bonito Way	6	Expressway	0.55	C	0.79	D	0.24	0.41	B	0.64	C	0.23	0.36	A	0.59	C	0.23	0.24	Weekday	NO
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.50	B	0.70	C	0.20	0.35	A	0.55	C	0.20	0.31	A	0.51	B	0.20	0.20	multi	NO
24	Qualcomm Way to Gill Village Way	8	Expressway	0.42	B	0.54	C	0.12	0.30	A	0.38	B	0.08	0.26	A	0.35	A	0.09	0.12	Weekday	NO
25	Gill Village Way to Mission Center Dr	8	Expressway	0.46	B	0.58	C	0.12	0.32	A	0.41	B	0.09	0.28	A	0.37	A	0.09	0.12	Weekday	NO
26	Mission Center Dr to Frazee Rd	7	Expressway	0.53	C	0.66	C	0.13	0.39	B	0.49	B	0.10	0.34	A	0.44	B	0.10	0.13	Weekday	NO
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.65	C	0.78	C	0.13	0.51	B	0.60	C	0.09	0.44	B	0.53	B	0.09	0.13	Weekday	NO
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.82	C	0.85	D	0.03	0.67	C	0.70	C	0.03	0.60	C	0.62	C	0.02	0.03	Weekday	NO
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.42	B	0.60	C	0.18	0.27	A	0.44	B	0.17	0.22	A	0.40	B	0.18	0.18	multi	NO
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.52	B	0.71	C	0.19	0.36	A	0.53	B	0.17	0.31	A	0.49	B	0.18	0.19	Weekday	NO

Table 14 (Based on Table 9-11)
Freeway Segment Project Impact - 2019 Demolition Phase (Weekday)

AM Peak Hour												
Location	2019 No Project No Games				2019 Demolition Phase With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.81	C	0.65	C	0.81	C	0.65	C	0.00	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.58	B	0.89	D	0.58	B	0.89	D	0.00	NO	0.00	NO
Fairmount Ave to I-15	0.51	B	0.84	D	0.51	B	0.84	D	0.00	NO	0.00	NO
I-15 to I-805	0.54	B	1.05	F	0.54	B	1.05	F	0.00	NO	0.00	NO
I-805 to Qualcomm Way	0.49	B	0.93	E	0.49	B	0.93	E	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	0.51	B	1.06	F	0.51	B	1.06	F	0.00	NO	0.00	NO
Mission Center Rd to SR-163	0.38	A	0.99	E	0.38	A	0.99	E	0.00	NO	0.00	NO
SR-163												
Genesee Ave to Friars Rd	0.89	D	0.67	C	0.89	D	0.67	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.73	C	0.85	D	0.73	C	0.85	D	0.00	NO	0.00	NO

PM Peak Hour												
Location	2019 No Project No Games				2019 Demolition Phase With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	0.98	E	0.61	B	1.13	F	0.01	NO	0.15	**YES**
Friars Rd to I-8	0.66	C	0.98	E	0.72	C	0.98	E	0.06	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.90	D	0.64	C	0.90	D	0.70	C	0.00	NO	0.06	NO
Fairmount Ave to I-15	0.88	D	0.58	B	0.93	D	0.59	B	0.05	NO	0.01	NO
I-15 to I-805	0.91	D	0.79	C	0.95	E	0.79	C	0.04	**YES**	0.00	NO
I-805 to Qualcomm Way	0.88	D	0.68	C	0.88	D	0.68	C	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	0.96	E	0.91	D	1.04	F	0.91	D	0.08	**YES**	0.00	NO
Mission Center Rd to SR-163	0.73	C	0.87	D	0.83	D	0.88	D	0.10	NO	0.01	NO
SR-163												
Genesee Ave to Friars Rd	0.78	C	0.75	C	0.79	C	0.91	D	0.01	NO	0.16	NO
Friars Rd to I-8	0.59	B	0.82	D	0.65	C	0.90	D	0.06	NO	0.08	NO

Table 15 (Based on Table 9-12)
Ramp Metering Project Impact - 2019 Demolition Phase (Weekday)

AM Peak Hour												
Ramp Location	Meter Rate Range (vphpl)		2019 No Project No Games				2019 Demolition Phase With Games				Project Impact	
			Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Δ Delay (min)	Significant?
I-15 NB: Friars Rd On-ramp	Min:	516	1,290	70	8	1,750	1,290	70	8	1,750	0.0	NO
	Max:	600		0	0	0		0	0	0	0.0	NO
I-15 SB: WB Friars Rd On-ramp	Min:	660	700	40	4	1,000	700	40	4	1,000	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO
I-15 SB: EB Friars Rd On-ramp	Max:	996	610	0	0	0	610	0	0	0	0.0	NO
I-8 EB: SB Fairmount Ave On-ramp	Min:	493	810	317	39	7,925	810	317	39	7,925	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO

Table 16 (Based on Table 9-13)
Intersection Project Impact - 2035 Project Buildout (Weekday)

ID	North-South Arterial	East-West Arterial	2035 No Project No Games				2035 Project Buildout With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	10.6	B	21.7	C	10.6	B	33.1	C	0.0	NO	11.4	NO
2	Mission Gorge Rd	Twain Ave	23.7	C	33.1	C	23.7	C	36.8	D	0.0	NO	3.7	NO
3	Fairmount Ave	Twain Ave	16.5	B	20.3	C	16.5	B	191	**F**	0.0	NO	170.7	**YES**
4	Mission Gorge Rd	Fairmount Ave	90.5	**F**	44.3	D	90.5	**F**	121.2	**F**	0.0	NO	76.9	**YES**
5	Fairmount Ave	Alvarado Canyon Rd	12.2	B	209.4	**F**	12.2	B	206.3	**F**	0.0	NO	-3.1	NO
6	Fairmount Ave	I-8 EB Ramps	15.9	B	92.7	**F**	15.9	B	88	**F**	0.0	NO	-4.7	NO
7	Rancho Mission Rd	Friars Rd	13	B	21.5	C	13	B	21.3	C	0.0	NO	-0.2	NO
8	Rancho Mission Rd	San Diego Mission Rd	27.7	C	37.1	D	27.7	C	49.5	D	0.0	NO	12.4	NO
9	Rancho Mission Rd	Ward Rd	11.9	B	18	C	11.9	B	56.4	**F**	0.0	NO	38.4	**YES**
10	Ward Rd	Camino Del Rio N	14.3	B	27.9	C	14.3	B	35	C	0.0	NO	7.1	NO
11	I-15 NB Ramps	Friars Rd	5.5	A	8.4	A	5.5	A	10.7	B	0.0	NO	2.3	NO
12	I-15 SB Ramps	Friars Rd	35.4	D	66.3	**E**	35.4	D	184.8	**F**	0.0	NO	118.5	**YES**
13	Mission Village Dr	Friars Rd WB	13.4	B	21.7	C	13.4	B	67.8	**E**	0.0	NO	46.1	**YES**
14	Mission Village Dr	Friars Rd EB	46.6	D	45.4	D	46.6	D	293.5	**F**	0.0	NO	248.1	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	28.5	C	66.5	**E**	28.5	C	211.9	**F**	0.0	NO	145.4	**YES**
17	Fenton Pkwy	Friars Rd	17.8	B	45	D	17.8	B	166.8	**F**	0.0	NO	121.8	**YES**
18	Qualcomm Way	Friars Rd WB	45.6	D	93.9	**F**	45.6	D	97	**F**	0.0	NO	3.1	**YES**
19	Qualcomm Way	Friars Rd EB	17.5	B	67.5	**E**	17.5	B	216.4	**F**	0.0	NO	148.9	**YES**
20	Qualcomm Way	Camino De La Reina	23.9	C	39.7	D	23.9	C	47.7	D	0.0	NO	8	NO
21	Qualcomm Way	I-8 WB Ramps	40.6	D	71.6	**E**	40.6	D	64.5	**E**	0.0	NO	-7.1	NO
22	Frazee Rd	Friars Rd	29	C	53.4	D	29	C	79.7	**E**	0.0	NO	26.3	**YES**
23	SR-163 NB Ramps	Friars Rd	15.1	B	61.6	**E**	15.1	B	49.7	D	0.0	NO	-11.9	NO
24	Ulric St	SR-163 SB On-ramp	5.1	A	20.4	C	5.1	A	19.1	C	0.0	NO	-1.3	NO
25	Ulric St	Friars Rd	22.5	C	52.3	D	22.5	C	58.9	**E**	0.0	NO	6.6	**YES**
26	Mission Center Rd	Friars Rd WB	10.6	B	23.2	C	10.6	B	23.2	C	0.0	NO	0	NO
27	Mission Center Rd	Friars Rd EB	11.9	B	18.9	B	11.9	B	18.9	B	0.0	NO	0	NO

Table 17 (Based on Table 9-14)
Intersection Project Impact - 2035 Project Buildout (Saturday)

ID	North-South Arterial	East-West Arterial	2035 No Project No Games				2035 Project Buildout With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	8.2	A	10.3	B	8.2	A	33.1	C	0.0	NO	22.8	NO
2	Mission Gorge Rd	Twain Ave	15.5	B	16.3	B	15.5	B	36.8	D	0.0	NO	20.5	NO
3	Fairmount Ave	Twain Ave	12.6	B	15.6	B	12.6	B	191	**F**	0.0	NO	175.4	**YES**
4	Mission Gorge Rd	Fairmount Ave	50.5	D	31.5	C	50.5	D	117.8	**F**	0.0	NO	86.3	**YES**
5	Fairmount Ave	Alvarado Canyon Rd	29.6	C	70.5	**E**	29.6	C	234.1	**F**	0.0	NO	163.6	**YES**
6	Fairmount Ave	I-8 EB Ramps	10.3	B	28.9	C	10.3	B	88	**F**	0.0	NO	59.1	**YES**
7	Rancho Mission Rd	Friars Rd	19	B	16.2	B	19	B	21.3	C	0.0	NO	5.1	NO
8	Rancho Mission Rd	San Diego Mission Rd	18.8	B	19.4	B	18.8	B	49.5	D	0.0	NO	30.1	NO
9	Rancho Mission Rd	Ward Rd	10	A	11.4	B	10	A	56.4	**F**	0.0	NO	45	**YES**
10	Ward Rd	Camino Del Rio N	11.3	B	14.6	B	11.3	B	35	C	0.0	NO	20.4	NO
11	I-15 NB Ramps	Friars Rd	12.8	B	9.9	A	12.8	B	10.7	B	0.0	NO	0.8	NO
12	I-15 SB Ramps	Friars Rd	16.7	B	32.3	C	16.7	B	184.8	**F**	0.0	NO	152.5	**YES**
13	Mission Village Dr	Friars Rd WB	15.2	B	15.4	B	15.2	B	67.8	**E**	0.0	NO	52.4	**YES**
14	Mission Village Dr	Friars Rd EB	45.4	D	32.1	C	45.4	D	293.5	**F**	0.0	NO	261.4	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	19.2	B	36.6	D	19.2	B	216.6	**F**	0.0	NO	180	**YES**
17	Fenton Pkwy	Friars Rd	17.1	B	29.7	C	17.1	B	166.4	**F**	0.0	NO	136.7	**YES**
18	Qualcomm Way	Friars Rd WB	23.2	C	116.2	**F**	23.2	C	95.3	**F**	0.0	NO	-20.9	NO
19	Qualcomm Way	Friars Rd EB	12.6	B	24	C	12.6	B	210.6	**F**	0.0	NO	186.6	**YES**
20	Qualcomm Way	Camino De La Reina	25.6	C	23.2	C	25.6	C	47.7	D	0.0	NO	24.5	NO
21	Qualcomm Way	I-8 WB Ramps	23.7	C	53.2	D	23.7	C	64.6	**E**	0.0	NO	11.4	**YES**
22	Frazee Rd	Friars Rd	22.9	C	33.9	C	22.9	C	79.7	**E**	0.0	NO	45.8	**YES**
23	SR-163 NB Ramps	Friars Rd	18.6	B	57.1	**E**	18.6	B	49.7	D	0.0	NO	-7.4	NO
24	Ulric St	SR-163 SB On-ramp	10.5	B	5.4	A	10.5	B	19.1	C	0.0	NO	13.7	NO
25	Ulric St	Friars Rd	13.9	B	51.4	D	13.9	B	58.9	**E**	0.0	NO	7.5	**YES**
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 18 (Based on Table 9-15)
Intersection Project Impact - 2035 Project Buildout (Sunday)

ID	North-South Arterial	East-West Arterial	2035 No Project No Games				2035 Project Buildout With Games				Significance of Project Impact			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Sig?	Δ Delay	Sig?
1	Mission Gorge Rd	Friars Rd	6.6	A	8.9	A	7.3	A	9.8	A	0.7	NO	0.9	NO
2	Mission Gorge Rd	Twain Ave	16	B	17.4	B	17.5	B	50.5	D	1.5	NO	33.1	NO
3	Fairmount Ave	Twain Ave	13.7	B	15.8	B	26.3	C	29.6	C	12.6	NO	13.8	NO
4	Mission Gorge Rd	Fairmount Ave	33.4	C	25.9	C	23.7	C	130.1	**F**	-9.7	NO	104.2	**YES**
5	Fairmount Ave	Alvarado Canyon Rd	25	C	39.5	D	19.9	B	212	**F**	-5.1	NO	172.5	**YES**
6	Fairmount Ave	I-8 EB Ramps	13.7	B	19.1	B	23.6	C	33.1	C	9.9	NO	14	NO
7	Rancho Mission Rd	Friars Rd	14.7	B	14.1	B	15.1	B	15	B	0.4	NO	0.9	NO
8	Rancho Mission Rd	San Diego Mission Rd	19.9	B	19.1	B	25	C	44.6	D	5.1	NO	25.5	NO
9	Rancho Mission Rd	Ward Rd	9.8	A	10.7	B	10.5	B	13	B	0.7	NO	2.3	NO
10	Ward Rd	Camino Del Rio N	11.2	B	15.3	B	14.8	B	16.7	B	3.6	NO	1.4	NO
11	I-15 NB Ramps	Friars Rd	12.6	B	10.4	B	3	A	272.3	**F**	-9.6	NO	261.9	**YES**
12	I-15 SB Ramps	Friars Rd	22	C	27.7	C	30.5	C	92.9	**F**	8.5	NO	65.2	**YES**
13	Mission Village Dr	Friars Rd WB	12	B	12.7	B	18.9	B	38.3	D	6.9	NO	25.6	NO
14	Mission Village Dr	Friars Rd EB	25.9	C	45.7	D	46.9	D	379.5	**F**	21.0	NO	333.8	**YES**
15	Mission Village Dr	San Diego Mission Rd												
16	Northside Dr	Friars Rd	17.2	B	34.5	C	26.6	C	65.8	**E**	9.4	NO	31.3	**YES**
17	Fenton Pkwy	Friars Rd	17.1	B	29.5	C	25.3	C	109.3	**F**	8.2	NO	79.8	**YES**
18	Qualcomm Way	Friars Rd WB	18.9	B	20.8	C	17.7	B	93.2	**F**	-1.2	NO	72.4	**YES**
19	Qualcomm Way	Friars Rd EB	14.4	B	52.9	D	7.9	A	30.5	C	-6.5	NO	-22.4	NO
20	Qualcomm Way	Camino De La Reina	16.3	B	19.5	B	14.6	B	31.1	C	-1.7	NO	11.6	NO
21	Qualcomm Way	I-8 WB Ramps	13	B	38.6	D	14.1	B	222.1	**F**	1.1	NO	183.5	**YES**
22	Frazee Rd	Friars Rd	20.7	C	22.9	C	18.7	B	45.8	D	-2.0	NO	22.9	NO
23	SR-163 NB Ramps	Friars Rd	11	B	38.1	D	14.5	B	70.4	**E**	3.5	NO	32.3	**YES**
24	Ulric St	SR-163 SB On-ramp	9	A	4.4	A	4.7	A	18.3	C	-4.3	NO	13.9	NO
25	Ulric St	Friars Rd	22.9	C	61.7	**E**	21.9	C	44.1	D	-1.0	NO	-17.6	NO
26	Mission Center Rd	Friars Rd WB	--	--	--	--	--	--	--	--	--	--	--	--
27	Mission Center Rd	Friars Rd EB	--	--	--	--	--	--	--	--	--	--	--	--

Table 19 (Based on Table 9-16)
Roadway Segment Project Impact - 2035 Project Buildout

ID	Roadway Segment	Lanes	Classification*	Weekday					Saturday					Sunday					Project Impact		
				No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	No Project No Games		With Project With Games		Δ V/C	Max Δ V/C	Day of Week	Significant?
				V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS				
Mission Gorge Rd																					
1	Friars Rd to Vandever Ae	4	Collector	0.71	D	0.78	D	0.07	0.57	C	0.62	C	0.05	0.47	C	0.53	C	0.06	0.07	Weekday	NO
2	Vandever Ave to Twain Ave	4	Collector	0.75	D	0.81	D	0.06	0.61	C	0.66	C	0.05	0.48	C	0.54	C	0.06	0.06	multi	NO
3	Twain Ave to Mission Gorge Pl	4	Collector	0.89	E	1.01	F	0.12	0.69	D	0.79	D	0.10	0.54	C	0.64	C	0.10	0.12	Weekday	**YES**
4	Mission Gorge Pl to Fairmount Ave	4	Collector	0.84	E	0.97	E	0.13	0.73	D	0.83	D	0.10	0.57	C	0.68	D	0.11	0.13	Weekday	**YES**
Fairmount Ave																					
5	San Diego Mission Rd to Mission Gorge Rd	2	Collector	0.57	C	0.82	D	0.25	0.40	B	0.61	C	0.21	0.29	A	0.49	C	0.20	0.25	Weekday	NO
6	Mission Gorge Rd to Alvarado Canyon Rd	4	Major Arterial	1.11	F	1.44	F	0.33	0.92	E	1.19	F	0.27	0.74	C	1.01	F	0.27	0.33	Weekday	**YES**
7	Alvarado Canyon Rd to I-8 WB Ramps	5	Major Arterial	1.45	F	1.69	F	0.24	1.11	F	1.30	F	0.19	0.89	D	1.08	F	0.19	0.24	Weekday	**YES**
8	I-8 WB Ramps to I-8 EB Ramps	5	Major Arterial	1.10	F	1.24	F	0.14	0.89	E	1.01	F	0.12	0.72	C	0.83	D	0.11	0.14	Weekday	**YES**
San Diego Mission Rd																					
9	Fairmount Ave to Rancho Mission Rd	2	Collector	0.72	D	1.47	F	0.75	0.49	C	1.12	F	0.63	0.48	C	1.11	F	0.63	0.75	Weekday	**YES**
10	Rancho Mission Rd to Mission Village Dr	4	Collector	0.29	A	0.69	D	0.40	0.20	A	0.53	C	0.33	0.17	A	0.50	C	0.33	0.40	Weekday	NO
Camino Del Rio N																					
11	Fairmount Ave to Ward Rd	4	Collector	0.59	C	0.65	C	0.06	0.39	B	0.44	B	0.05	0.33	A	0.38	B	0.05	0.06	Weekday	NO
12	Ward Rd to Mission City Pkwy	2	Collector	1.19	F	1.19	F	0.00	0.65	C	0.65	C	0.00	0.53	C	0.53	C	0.00	0.00	multi	NO
Rancho Mission Rd																					
13	San Diego Mission Rd to Caminito Cascara	4	Collector	0.71	D	0.79	D	0.08	0.49	C	0.56	C	0.07	0.43	B	0.49	C	0.06	0.08	Weekday	NO
Mission Village Dr																					NO
14	North of Friars Rd	4	Major Arterial	0.43	B	0.44	B	0.01	0.35	A	0.36	A	0.01	0.30	A	0.32	A	0.02	0.02	Sunday	NO
Friars Rd																					
15	Mission Gorge Rd to Santo Rd	6	Primary Arterial	0.91	D	0.96	E	0.05	0.59	C	0.63	C	0.04	0.48	B	0.53	B	0.05	0.05	multi	**YES**
16	Santo Rd to Rancho Mission Rd	7	Primary Arterial	0.77	C	0.81	C	0.04	0.56	B	0.60	C	0.04	0.46	B	0.50	B	0.04	0.04	multi	NO
17	Rancho Mission Rd to I-15 Ramps	7	Primary Arterial	0.87	D	0.94	E	0.07	0.64	C	0.70	C	0.06	0.55	B	0.61	C	0.06	0.07	Weekday	**YES**
18	I-15 Ramps to Mission Village Dr	6	Expressway	0.73	C	1.06	F	0.33	0.62	C	0.89	E	0.27	0.53	C	0.80	D	0.27	0.33	Weekday	**YES**
19	Mission Village Dr to Northside Dr	6	Expressway	0.66	C	0.93	E	0.27	0.54	C	0.77	D	0.23	0.47	B	0.70	C	0.23	0.27	Weekday	**YES**
20	Northside Dr to Fenton Pkwy	6	Primary Arterial	0.85	D	1.21	F	0.36	0.63	C	0.94	E	0.31	0.55	B	0.85	D	0.30	0.36	Weekday	**YES**
21	Fenton Pkwy to River Run Dr	6	Primary Arterial	0.85	D	1.21	F	0.36	0.65	C	0.95	E	0.30	0.56	B	0.87	D	0.31	0.36	Weekday	**YES**
22	River Run Dr to Rio Bonito Way	6	Expressway	0.68	C	0.95	E	0.27	0.51	B	0.74	C	0.23	0.45	B	0.68	C	0.23	0.27	Weekday	**YES**
23	Rio Bonito Way to Qualcomm Way	7	Expressway	0.65	C	0.89	E	0.24	0.47	B	0.66	C	0.19	0.41	B	0.61	C	0.20	0.24	Weekday	**YES**
24	Qualcomm Way to Gill Village Way	8	Expressway	0.54	C	0.65	C	0.11	0.39	B	0.47	B	0.08	0.34	A	0.43	B	0.09	0.11	Weekday	NO
25	Gill Village Way to Mission Center Dr	8	Expressway	0.60	C	0.70	C	0.10	0.42	B	0.50	B	0.08	0.37	A	0.45	B	0.08	0.10	Weekday	NO
26	Mission Center Dr to Frazee Rd	7	Expressway	0.73	C	0.85	D	0.12	0.54	C	0.64	C	0.10	0.47	B	0.57	C	0.10	0.12	Weekday	NO
27	Frazee Rd to SR-163 NB Ramps	10	Primary Arterial	0.81	C	0.92	E	0.11	0.63	C	0.72	C	0.09	0.55	B	0.64	C	0.09	0.11	Weekday	**YES**
28	SR-163 NB Ramps to SR-163 SB Ramps	8	Primary Arterial	0.95	E	0.98	E	0.03	0.78	C	0.81	C	0.03	0.69	C	0.72	C	0.03	0.03	multi	**YES**
Qualcomm Way																					
29	Friars Rd to Rio San Diego Dr	6	Major Arterial	0.72	C	0.94	E	0.22	0.46	B	0.64	C	0.18	0.39	A	0.57	C	0.18	0.22	Weekday	**YES**
30	Rio San Diego Dr to Camino Del Rio N	6	Major Arterial	0.62	C	0.83	D	0.21	0.42	B	0.60	C	0.18	0.37	A	0.55	B	0.18	0.21	Weekday	NO

Table 20 (Based on Table 9-17)
Freeway Segment Project Impact - 2035 Project Buildout (Weekday)

AM Peak Hour												
Location	2035 No Project No Games				2035 Project Buildout With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.87	D	0.71	C	0.87	D	0.71	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.81	C	0.66	C	0.81	C	0.66	C	0.00	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.59	B	0.92	D	0.59	B	0.92	D	0.00	NO	0.00	NO
Fairmount Ave to I-15	0.55	B	0.89	D	0.55	B	0.89	D	0.00	NO	0.00	NO
I-15 to I-805	0.58	B	1.12	F	0.58	B	1.12	F	0.00	NO	0.00	NO
I-805 to Qualcomm Way	0.55	B	0.98	E	0.55	B	0.98	E	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	0.59	B	1.11	F	0.59	B	1.11	F	0.00	NO	0.00	NO
Mission Center Rd to SR-163	0.44	B	1.01	F	0.44	B	1.01	F	0.00	NO	0.00	NO
SR-163												
Genesee Ave to Friars Rd	0.93	E	0.68	C	0.93	E	0.68	C	0.00	NO	0.00	NO
Friars Rd to I-8	0.75	C	0.87	D	0.75	C	0.87	D	0.00	NO	0.00	NO

PM Peak Hour												
Location	2035 No Project No Games				2035 Project Buildout With Games				Project Impact			
	NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	Δ V/C	Significant?	Δ V/C	Significant?
I-15												
Aero Dr to Friars Rd	0.60	B	0.98	E	0.60	B	1.15	F	0.00	NO	0.17	**YES**
Friars Rd to I-8	0.66	C	1.03	F	0.73	C	1.03	F	0.07	NO	0.00	NO
I-8												
Waring Rd to Fairmount Ave	0.94	E	0.65	C	0.95	E	0.72	C	0.01	**YES**	0.07	NO
Fairmount Ave to I-15	0.93	E	0.62	B	0.99	E	0.62	B	0.06	**YES**	0.00	NO
I-15 to I-805	0.99	E	0.84	D	1.04	F	0.84	D	0.05	**YES**	0.00	NO
I-805 to Qualcomm Way	0.94	E	0.74	C	0.94	E	0.74	C	0.00	NO	0.00	NO
Qualcomm Way to Mission Center Rd	1.03	F	0.99	E	1.12	F	0.99	E	0.09	**YES**	0.00	NO
Mission Center Rd to SR-163	0.80	C	0.91	D	0.92	D	0.91	D	0.12	NO	0.00	NO
SR-163												
Genesee Ave to Friars Rd	0.83	D	0.78	C	0.83	D	0.89	D	0.00	NO	0.11	NO
Friars Rd to I-8	0.59	B	0.86	D	0.66	C	0.96	E	0.07	NO	0.10	**YES**

Table 21 (Based on Table 9-18)
Ramp Metering Project Impact - 2035 Project Buildout (Weekday)

AM Peak Hour												
Ramp Location	Meter Rate Range (vphpl)		2035 No Project No Games				2035 Project Buildout With Games				Project Impact	
			Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Demand (veh)	Excess Demand (vphpl)	Delay (min)	Queue (ft)	Δ Delay (min)	Significant?
I-15 NB: Friars Rd On-ramp	Min:	516	1,330	89	10	2,225	1,330	89	10	2,225	0.0	NO
	Max:	600		5	0	125		5	0	125	0.0	NO
I-15 SB: WB Friars Rd On-ramp	Min:	660	880	220	20	5,500	880	220	20	5,500	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO
I-15 SB: EB Friars Rd On-ramp	Max:	996	630	0	0	0	630	0	0	0	0.0	NO
I-8 EB: SB Fairmount Ave On-ramp	Min:	493	890	397	48	9,925	890	397	48	9,925	0.0	NO
	Max:	996		0	0	0		0	0	0	0.0	NO

Chapter 7
Conclusions

This report documents our review of the Traffic Study's assumptions, methodologies, and conclusions for accuracy, consistency, and reasonability. In addition, new traffic count data was collected and in-person observations were conducted on Sunday, September 13, 2015 during ingress and egress of the Chargers' season-opening game against the Detroit Lions. New traffic counts were conducted at 14 of the 27 intersections analyzed in the Traffic Study.

There are a number of concerns with the assumptions, methodologies, and conclusions of the Traffic Study, which individually and collectively result in an overall analysis that significantly understates the traffic and parking impacts associated with the proposed Project.

In summary:

- There are numerous inconsistencies in the Traffic Study that cast doubt on the veracity of the analysis.
- The Project would not provide enough parking on-site or off-site and no analysis was provided of the impact of spillover parking in nearby neighborhoods and commercial districts.
- The projected mode shift as a result of the TDM program is overly optimistic regarding transit usage and there is no method identified to enforce this mitigation measure. There is no mention of penalties for failure to meet these unrealistic TDM targets.
- The impact analysis compares a future gameday at Buildout with a future gameday assuming Qualcomm Stadium continues to host NFL games, but there is a strong likelihood the Chargers would move elsewhere if a new stadium is not built, and therefore the "no Project" condition should not assume the continuation of NFL games.
- The Traffic Study does not include analysis of events other than NFL games, despite the fact that the Project is anticipated to vastly increase the number of smaller events over what Qualcomm Stadium currently hosts. The Traffic Study states that the new facility could host up to 52 events per year that accommodate 5,000-15,000 attendees. Many of these smaller events will not employ the vast traffic management techniques that a football game utilizes and, thus, could end up creating a traffic problem in the area.

- The Traffic Study does not include analysis of the post-game exiting conditions that exist today and will surely remain in the future with the Project. It takes twice as long to empty the existing parking lots than accepted stadia design practice and the Traffic Study does not acknowledge this problem or offer any solutions.

Based on our analysis, the Traffic Study does not present an accurate picture of the overall effects that the Project will have on the transportation system serving the site. The traffic analysis should be re-done using supportable travel and mode split assumptions and realistic parking supply assumptions. Existing traffic and parking problems that will carry over into the post-Project conditions should be addressed and solutions offered. The tremendous increase in the number of events at the facility should be analyzed with the appropriate level of traffic and parking management strategies that would accompany each of these events.