



TRAFFIC IMPACT ANALYSIS GUIDELINES

City of Oakley

All proposed projects both commercial and residential in the City of Oakley (City) must be analyzed for traffic impacts and reviewed by the City Traffic Engineer. The City has a Citywide Traffic Model and updates the Model regularly to include approved projects and constructed projects. Each project is required, at a minimum, to submit a Project Traffic Analysis Memorandum to explore potential traffic impacts of the proposed project. The City may require the project applicant to provide a focused traffic analysis if the project produces fewer than 100 peak hour trips in the a.m. or p.m. peak hour under special circumstances or for projects that will potentially impact a signalized intersection to an unacceptable level of service. The amount of traffic generated by projects shall be calculated using the methodology and guidelines of the latest edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*.

PROJECT TRAFFIC ANALYSIS MEMORANDUM

To determine if a formal Traffic Impact Study Report is required, the applicant at a minimum shall submit a Project Traffic Analysis Memorandum. This document includes project information such as: a site plan, discussion of onsite and offsite vehicle/pedestrian circulation, description of the net number of peak hour trips, vehicular trip distribution, traffic signal impact, and sight distance analysis.

If an active existing land use is being expanded or removed and credits for existing traffic are to be used, the existing peak hour traffic shall be based on peak hour driveway counts. If the previous use is inactive, but was active within the previous 24 months, the peak hour counts of the previous use will be calculated using the most recent edition of the ITE *Trip Generation Manual*.

TRAFFIC IMPACT STUDY

The preparation of a Traffic Impact Study is necessary when a project generates 100 or more net new vehicle trips either during the weekday AM peak hour, the weekday PM peak hour or the weekend mid-day peak hour. A Traffic Impact Study shall be submitted for the proposed project containing the following elements:

Project Description

1. A description of the project including the location, lot size, type of land use, number of units or gross floor area in square feet. If credit for trips for previous use is desired, indicate project description of previous use.
2. Include a site plan showing proposed building area, loading area, total parking stalls, and proposed access points. Show pedestrian access points to existing streets and sidewalks.
3. Indicate proposed study intersections.
4. Indicate study scenarios. These will normally be:
 - a. Existing Conditions
 - b. Existing plus Approved Conditions (Background)
 - c. Background plus Project
 - d. Background plus Pending plus Project

The Oakley Citywide Traffic Model

The City of Oakley utilizes a Vistro Citywide Traffic Model to evaluate traffic conditions at key intersections within the City. In 2016, the City prepared a Vistro Traffic Model analyzing 37 intersections. Most of the study intersections for new traffic studies will be drawn from the 37 intersections. The City can supply “Existing Conditions” counts, traffic distribution information, and “Existing plus Approved Conditions (Background)” for any the 37 intersections. Using the Vistro Traffic Model, the City can also furnish intersection traffic volumes for “Background plus Project”, and “Background plus project plus Pending Projects” conditions. The City will need to prepare such analyses when requested by a project applicant; allow two weeks for receipt of such information after submitting a request.

If a study intersection is not one of the 37 locations with data available from the Vistro Traffic Model, the applicant shall obtain and submit to the City new A.M. and P.M. peak hour counts, including bicycles, pedestrians and trucks, conducted between 7 and 9 and a.m. and 4 to 6 p.m. The intersection(s) will be added to the Vistro Model and traffic volume results of all scenarios will be supplied to the traffic study preparer.

Existing Conditions

1. The existing and planned transportation system should be described. The transportation system includes the roadway, transit and pedestrian & bicycle facilities. This description should include, but not limited to, number and type of lanes at intersections, planned roadway improvements, the location of transit lines and stops, sidewalks, trails and bike

lanes. This description should include identification of areas of congestion and any other deficiencies.

2. Verify existing field conditions in the project area, documenting intersection lane geometry, turn pocket lengths, and other information pertinent to the traffic analysis.
3. Conduct a level-of-service (LOS) traffic operations analysis using Synchro (traffic operations software) for the weekday a.m. and p.m. peak hours at the study intersections.
4. The analyses of LOS at study intersections and performance measures of regional roadways shall be calculated using guidelines provided in the latest version of Contra Costa Transportation Authority (CCTA) Technical Procedures Level of Service and Delay Index Analysis Methodologies. The latest information is described as follows:

Per the City of Oakley General Plan, LOS D or a volume-to-capacity (V/C) ratio of 0.90 are the thresholds of acceptability for signalized intersections. Any signalized intersection operating worse than LOS D would be considered inconsistent with this standard. Average control delay is reported in seconds per vehicle for signalized and all-way-stop-control intersections and critical delay for minor approaches is reported for two-way-stop-control intersections per the Highway Capacity Manual. Signalized intersections or unsignalized intersection operating worse than LOS D are considered inconsistent with the City's standard.

Project Conditions and Traffic Impact Study Report

1. The ITE *Trip Generation Manual* (Latest Edition) should be used to determine the number of trips generated by the project. Any proposed trip reduction (i.e. existing land uses, pass-by trips) shall be submitted to the City and approved prior to beginning the LOS analysis.
2. The trip distribution contained in the Vistro Model shall be used for the analysis. This information will be provided by the City.
3. The City will supply all count information as described above.
4. Figures and Tables should be provided that illustrate the study scenarios.
5. The data collection and level of service worksheets are to be provided in the Appendix.
6. Signal Warrants – All unsignalized intersections shall be evaluated to determine if signal warrants are met under all scenarios. Utilize the Peak Hour Traffic Volume Signal Warrant from the California Manual on Uniform Traffic Control Devices (CA MUTCD), most recent edition. Include signal warrant sheets in the Appendix.
7. Queuing impacts should be evaluated at raised or painted turn pockets where trips are added. This queuing analysis should include a table that indicates the existing turn pocket length, the existing 95th percentile queue, the projected queue and the recommended pocket length.
8. The Study should describe and summarize the project impacts to transit and pedestrian & bicycle facilities as well as impacts to the roadway.
9. The Study should evaluate all of the access points to the project based on the site plan. The Study should determine if driveway throat lengths are adequate. The Study should also

determine the turn pocket lengths required to access the project. The Study should determine if there is adequate sight distance. The study should make recommendations for site access needed to maintain safe traffic flow and operations.

10. The study should identify parking needs and compare the amount of proposed parking with the estimated required parking and the required minimum per the City's Zoning Ordinance.
11. The study should recommend mitigation measures or needed improvements. These improvements include but are not limited to roadway widening, traffic signals or other traffic control devices and pedestrian/bicycle and transit facilities. The study should state how the proposed mitigation relates to planned improvements.
12. Normally, payment of required development traffic impact fees will suffice for project mitigation requirements. Frontage improvement requirements are not included in the traffic fees. In some cases, the mitigation of nearby impacts will be required of the development if it will otherwise not function satisfactorily in the near-term. Where appropriate, the applicant may be given fee credits for such improvements, provided such improvements are included in the list of projects funded by the fee program.

Two copies of the Draft Traffic Impact Study shall be submitted to the City for review. The Final Report shall incorporate comments on the Draft Report. Two copies of the Final Report shall be submitted to the City.

For any questions regarding these guidelines please call (925)625-7154 or email saengchalern@ci.oakley.ca.us.