



City of Montclair

Traffic Impact Analysis Guidelines

1.0 INTRODUCTION

A traffic impact analysis (TIA) assesses the impacts of traffic generated by a development project on the surrounding transportation network. It serves as a tool for the City to evaluate the effects a particular development will have on the City's transportation infrastructure, identify improvements required to maintain the City's Level of Service standards, and to address Section XV (Transportation/Traffic) of Appendix G of the California Environmental Quality Act (CEQA) Guidelines. TIAs also help the City identify timing of infrastructure improvements and assists the City in prioritizing infrastructure projects.

The City of Montclair is located in San Bernardino County and as such, the San Bernardino County Transportation Authority (SBCTA) Congestion Management Plan (CMP) applies to the City. These guidelines generally follow the SBCTA Traffic Impact Analysis (TIA) Guidelines, but also address new CEQA requirements and changes some of the requirements in the SBCTA TIA guidelines to address the changes in procedures due to the SBCTA Measure I Nexus Study. For example, with the approval of the Nexus Study, fair share calculations for programmed improvements are no longer required. This also eliminates the 5-mile limit stated in the SBCTA Nexus Study to address new CEQA rulings.

2.0 PURPOSE OF THE GUIDELINES

These TIA guidelines describe the key elements required for preparing TIA reports. The purpose of these guidelines is to formalize a process for the preparation of TIAs within the City, thereby reducing inconsistencies in analysis parameters as well as assist in the subsequent preparation of environmental documents.

3.0 WHEN A TRAFFIC IMPACT ANALYSIS IS REQUIRED

Based on the parameters from the SBCTA CMP TIA Guidelines, a TIA must be prepared when a proposed change in land use, development project, or at local discretion, a group of projects are forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips generated, based on trip generation rates published for the applicable use or uses in the Institute of Transportation Engineers' Trip Generation or other approved data source. Pass-by trips shall not be considered in the threshold determination. However, industrial, warehousing, and truck projects shall convert trucks to PCE's before applying the above threshold.

It should be noted that based on the parameters from the SBCTA CMP TIA Guidelines, jurisdictions that have implemented qualifying development mitigation fee programs that

achieve development contribution requirements established by the SBCTA Development Mitigation Nexus Study are not required to prepare TIA reports for SBCTA review. Montclair is a participant in the SBCTA Measure I Nexus Study fee program and therefore, SBCTA review is not applicable to projects in Montclair. However, Montclair doesn't have agreements with Caltrans regarding State highway facilities within the City, and therefore, based on the CMP, any project meeting the CMP threshold of 250 two-way peak hour trips that expects to add at least 50 two-way peak hour trips to a State highway facility is required to prepare a TIA report for City and Caltrans' review.

If a project is forecast to generate between 100 and 249 two-way peak hour trips, a traffic impact analysis will be required, but the extent of the analysis will be lesser. If a project generates between 50 and 100 two-way peak hour trips, a focused traffic analysis will be required. If a project generates less than 50 peak hour trips, a traffic analysis shall not be required and a trip generation memo will be considered sufficient unless the City has specific concerns related to project access and interaction with adjacent intersections.

4.0 ANALYSIS METHODOLOGY

This section discusses the methodologies to be used in a traffic impact analysis.

4.1 Intersection Analysis

The traffic impact analysis shall include all intersections with more than 50 peak hour project trips. The City may, at its discretion, require analysis of additional intersections that do not meet the 50 trip threshold. Intersection analysis will be conducted using Highway Capacity Manual (HCM) 2010 analysis procedures. In addition, HCM 2000 worksheets should also be provided if requested by the City. It is recommended that a software program that can output data in both methodologies be used for analysis.

4.2 Roadway Link Analysis

Urban segments (i.e., segments on roadways that are generally signalized with spacing less than 2 miles) do not require segment analysis. Segment requirements can normally be determined by the analysis of lane requirements at intersections. At locations where the ultimate street cross sections are not constructed, a segment analysis could be required. Roadway link analysis could be conducted either based on daily traffic volumes or based on peak hour volumes using vehicle-to-capacity ratios.

4.3 Freeway Analysis

Based on SBCTA guidelines, freeway segments with more than 100 two way peak hour project trips will require analysis and analysis of freeway merge-diverge operations will be required if there are more than 50 peak hour project trips entering (or exiting) the freeway. These thresholds will be based on total vehicles (i.e. passenger cars and trucks if applicable) not on passenger car equivalents because the PCE factors are different for freeway mainline operations and freeway ramps. Freeway analyses shall be conducted using Highway Capacity Manual (HCM) 2010 analysis procedures.

5.0 STUDY AREA

As stated earlier, based on recent CEQA guidance, the 5-mile limit on study intersections has been removed from the City of Montclair Traffic Impact Analysis Guidelines. Intersections with more than 50 peak hour project trips will require analysis. In addition, roadway segments with more than 50 peak hour project trips could require analysis at locations where the ultimate street cross sections are not constructed, a segment analysis could be required. Freeway segments with more than 100 two way project trips and merge diverge areas with more than 50 peak hour project trips will also be required.

6.0 ANALYSIS SCENARIOS

The TIA shall include the following analysis scenarios:

1. **Existing Conditions** – The existing conditions analysis determines the current baseline for the analysis. The existing conditions analysis also forms the basis for all future analysis scenarios. This will be based on traffic counts conducted for study intersections. Unless otherwise noted, a.m. and p.m. peak period counts will be conducted for all study intersections. Traffic counts older than one year at the time the scoping letter is submitted will not be acceptable, unless approved by City Engineering staff.
 2. **Existing Plus Project Conditions** – Project traffic will be added to existing traffic volumes to determine existing plus project conditions traffic volumes.
 3. **Opening Year Without Project Conditions** – Opening year without project conditions will be based on application of a growth rate and/or adding traffic from reasonably foreseeable cumulative projects in the area, or by interpolating traffic volumes based on a traffic model.
 4. **Opening Year With Project Conditions** – Project traffic will be added to opening year without project traffic volumes to determine opening year with project traffic volumes.
 5. **Future Year Without Project Conditions** – Future Year without project traffic volumes will be based on either a traffic model or based on application of growth rates and addition of cumulative traffic volumes to be determined based on consultation with City staff. Future year will be 20 years from the opening day of the project, rounded up to the nearest multiple of 5. For example, a project with an opening day of 2014 or 2015 is required to analyze Year 2035 conditions, but a project with an opening day of 2016 is required to analyze Year 2040 conditions.
 6. **Year 2035 With Project Conditions** – Project traffic will be added to year 2035 without project traffic volumes to determine year 2035 with project traffic volumes.
- If a project generates between 50 and 100 two-way peak hour trips, the analysis will only require Scenarios 1 through 4 identified above as part of a focused traffic analysis.
 - If a project is forecast to generate between 100 and 249 peak hour trips, year 2035 traffic volumes may be based on either an application of growth rate and addition of traffic from cumulative projects or based on a traffic model.

- If a project is forecast to generate more than 250 peak hour trips, year 2035 traffic volumes shall be based on a traffic model.
- For phased projects, the phases shall be identified and analyzed.

7.0 ANALYSIS PROCESS

This section discusses the traffic impact analysis process.

7.1 Scoping

Staff Consultation is an important part of preparation of a TIA. The consultant shall submit a scoping letter with the City describing the project and including, at minimum, the following information –

- Project Description
- Existing and proposed land uses
- Project Trip Generation
- Study Intersections and Roadway Segments (if required)
- Project Trip Distribution
- Project Trip Assignment
- Analysis Scenarios and Methodologies

The City will review the information provided and discuss the analysis requirements with the Consultant. The study area or other parameters could be changed by the City at this stage.

7.2 Trip Generation

The project trip generation shall be based on the latest edition of the ITE Trip Generation Manual. Approval must be obtained from the City prior to using other data sources. Pass by and diverted link trip calculations can be conducted based on the Trip Generation Manual. Pass by and diverted link trips shall be compared to traffic counts on project adjacent roadways to identify if existing traffic can support the pass by reductions. For mixed use projects, internal trip capture can be based on either the Trip Generation Manual or the traffic model.

For industrial uses, the ITE trip generation rates shall be converted to PCE trips based on vehicle splits from the Truck Trip Generation Study prepared by the City of Montclair. Passenger car and truck trips shall be identified separately, as well as the total PCE trips.

For unique trip generators, a trip generation survey might be required.

7.3 Trip Distribution

The project trip distribution shall be based on discussion with City staff. For projects generating more than 250 peak hour trips, the trip distribution shall be based on a traffic model.

Distribution of truck traffic shall not be based on the traffic model since other factors such as truck routes play an important role in truck routing.

7.4 Background Volume Development

7.4.1 Existing Traffic

Existing traffic counts shall be conducted on a Tuesday, Wednesday, or Thursday on non-holiday weeks. For the analysis, traffic counts shall be converted to Passenger Car Equivalents (PCEs) based on vehicle classification counts conducted on at least one intersection at each CMP facility. The following PCE conversion factors shall be used –

2-Axle Trucks – 2.0 PCE

3-Axle Trucks – 2.5 PCE

4 (or more)-Axle Trucks – 3.0 PCE

Intersections at which classification counts are not available shall be converted to PCEs using a factor of 2.5 PCE for all trucks. Traffic volumes at adjacent intersections with inconsistent traffic counts (more than 3% variance in approaches and departures) shall be balanced with the higher traffic volume approach to account for inconsistencies in traffic counts.

For freeway mainline volume development, traffic counts from the most recent Caltrans Counts database shall be used. Truck traffic shall be converted to PCEs based on a PCE factor of 1.5 for all trucks.

7.4.2 Forecast Traffic – All traffic forecasts will be based on PCEs. If a traffic model is used, forecast link volumes shall be identified in PCEs. Standard model post processing techniques shall be used consistent to SBCTA methodologies and then converted to turn volumes based on NCHRP-255 methodologies.

7.4.3 Level of Service Analysis

Level of service analysis shall be based on HCM methodologies. The input parameters shall be consistent to the Highway Capacity Manual. The main parameters are summarized below –

Input Parameter	Value
Base Saturation Flow Rate	1,900 pc/hr/ln
Heavy Vehicle Factor	Based on traffic volumes if PCE conversion not conducted. If PCE conversion conducted, then 0%.
Cycle Length	60-130 seconds
Minimum Green Time	10 seconds (for through movements only). In high pedestrian areas, the minimum green times shall be based on the MUTCD walk time calculations.
Lost Time	2 seconds per phase
Peak Hour Factor	Based on counts for existing and near term (less than 5 years) conditions. 0.95 for later scenarios (unless existing PHFs) are higher.

8.0 DETERMINATION OF IMPACTS

The City's General Plan recommends a LOS standard of LOS C. Intersections which are forecast to operate at unsatisfactory conditions (i.e. at LOS worse than LOS C for city intersections) shall be identified as cumulatively significant impacts.

Determination of Significant Impacts

Determination of significant impacts will be based on a comparison of without and with project levels of service for each analysis year. A Significant Impact occurs if project traffic increases the average delay at an intersection by more than the thresholds identified on Table XYZ.

Table XYZ - Thresholds of Significant Impact	
With Project LOS	Significant Impact Threshold
A/B	10 Seconds
C	8.0 Seconds
D	5.0 Seconds
E	2.0 Seconds
F	1.0 Second

The thresholds for LOS A, B and C do not apply to projects consistent with the General Plan.

9.0 CIRCULATION IMPROVEMENTS

9.1 Circulation Improvements

The City's General Plan recommends a LOS standard of LOS C. Circulation improvements shall be recommended for every analysis location where the LOS standard is not met.

Only feasible circulation improvements shall be recommended. Circulation improvements that are determined to be infeasible and factors causing the improvement to be infeasible shall be discussed in the TIA. Funding mechanisms for all circulation improvements identified.

9.2 Mitigation Measures

At intersections where a project is forecast to have a significant impact, mitigation measures shall be identified to offset the projects' impacts. It will be the project's responsibility to mitigate significant impacts to less than significant. If improvements are included in a fee program, the cost of implementing the improvements could be credited against fees payable by the project.

9.3 Traffic Signal Warrant Analysis

Intersections at which traffic signals are identified as mitigation measures shall be evaluated for traffic signal warrants based on the CA-MUTCD for peak hour signal warrants unless data shows that other warrants could be applicable.

10.0 ACCESS ANALYSIS

A site access analysis shall be conducted to verify driveway spacing, sight distances, and consistency with the City of Montclair Access Management Plan.

11.0 SPECIAL USES

Although the above guidelines are applicable for most land development projects, special uses such as churches, school, special events venues, etc. might require additional or different analysis parameters. Please consult with City staff to verify analyses needs for special uses.

For any questions regarding the City of Montclair's Traffic Impact Analysis Guidelines, please contact Public Works Director/City Engineer Noel Castillo at (909) 625-9441 or ncastillo@cityofmontclair.org.