

City of Menifee

Public Works Department



Traffic Impact Analysis Guidelines

Revised:
August 2015



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INTRODUCTION

The City of Menifee requires that the traffic and circulation impacts of proposed development projects, General Plan Amendments (GPA), Specific Plans (SP), and Specific Plan Amendments (SPA) be analyzed. This requirement shall be satisfied through the preparation of a Traffic Impact Analysis (TIA) document prepared in conformance with the requirements outlined in these Traffic Impact Analysis Guidelines.

The Traffic Impact Analysis must be prepared by a Traffic Engineer or a Civil Engineer (Engineer) registered in the State of California, qualified to practice traffic engineering. These Traffic Impact Study Guidelines identify the suggested format and methodology that is generally required to be utilized in the study preparation, subject to amendment without any notification. The purpose of this guide is to establish procedures to ensure consistency of analysis and the adequacy of information presented regarding the proposed development project (Project).

PURPOSE

A TIA report may be required to identify project related impact to the overall transportation system as a part of various types of environmental documentation or as a separate document required by the City in order to assess the transportation related impacts of a proposed project. Unless exempted by the Community Development Department, a TIA report will be required in the following cases:

- **Proposed Development Projects:** Any development which could have a significant impact on the City's transportation network. Examples of possible impacts are increased traffic volumes on arterials, collector or local residential streets, traffic operational issues (i.e. access, visibility etc.), adequate driveway design, etc.
- **General Plan Amendments and Specific Plans:** Will the ultimate circulation system planned for the area be able to provide the required Level of Service (LOS), even with the additional traffic impact of the proposed land use changes? If not, what improvements will be required in order to provide the required LOS?

The scope of the TIA report will be determined through a scoping analysis described in Scoping Section listed on the following page.

EXEMPTIONS

Certain types of projects, because of their size, nature, or location, may be exempt from the requirement of preparing a TIA report. However, the Planning Division and Traffic Engineering Division may require that a focused TIA report be prepared for any project, regardless of size, nature or location, if there are concerns over safety, operational issues, or if located in an area significantly impacted by traffic.



SCOPING

In order to facilitate the TIA preparation and review process, the Applicant/Engineer shall solicit input and approval from the Planning Division and Traffic Engineering Division prior to the preparation and submittal of a draft document. A Scoping Agreement (provided in Attachment A) shall be submitted to the Engineering Department for consideration and approval prior to the preparation of a draft TIA.

The Scoping Agreement shall provide sufficient information for agreement on the following key points before initiating the TIA:

- Project description and location
- Project trip generation, trip distribution, and trip assignment
- Project opening year and buildout year
- Determination of study area
- Determination of study intersections and/or roadway links to be analyzed
- Assumption of background traffic growth
- Use of the regional traffic model for build-out year analysis if required
- Solicit input from other agencies if located within a mile radius, and the County of Riverside if within a half-mile radius
- Solicit input from Caltrans if located within a mile radius of a state system

The Community Development and Engineering departments will process the Scoping Agreement and may request a meeting to resolve issues if the approach outlined does not comply with the minimum requirements outlined in the agreement.



METHODOLOGY

Intersection Analysis

The Traffic Engineering Division requires the use of the Transportation Research Board (TRB) Highway Capacity Manual (HCM), 2010, or most recent release for all Traffic Analyses.

- **Signalized intersection Level of Service** shall be analyzed using the Operational Method as described in Chapter 16, Section II.
- **Unsignalized intersections** are to be analyzed using Chapter 17 of the HCM.

It shall be the responsibility of the Applicant/Engineer preparing the study to determine and document what factors, if any, exist, or will exist, as a result of the development, which will decrease performance of the intersection or roadway links (such as existing and proposed signal timing/phasing, etc.).

Roadway Link Analysis

When required, the roadway link analysis shall be performed by comparing the Average Daily Traffic (ADT) on a segment with the Roadway Capacity and Level of Service table provided in Attachment B.

Caltrans

Operations of state owned facilities including ramp junctions and freeway mainline analysis shall be evaluated in accordance with the Caltrans "Guidelines for the Preparation of Traffic Impact Studies", December 2002, or most recent release. Determination of the need for the Caltrans analysis is based on the Trip Generation Thresholds identified in the guidelines documents. Analysis methodologies for state-owned facilities are outlined in the Traffic Impact Analysis Methodologies section of the guidelines document. The Applicant shall coordinate with the Community Development Department, Engineering Department, and/or Caltrans in determining the degree to which the state-owned facilities should be analyzed in the TIA report.

Multimodal Analysis

Existing pedestrian, bicycle and transit service should be clearly documented in the TIA report. Gaps in the existing sidewalk and bicycle network within the study area as well as current access to transit and current transit service should also be clearly identified in the existing conditions analysis.

Analysis of future year conditions shall identify connectivity from the project site to the existing bicycle and pedestrian network and distance to current transit stops. Improvements that will increase connectivity to sidewalks, trails, bicycle facilities and transit facilities shall be considered in the TIA report.

Acceptable Operating Conditions

City of Menifee has identified LOS D as the threshold for acceptable operating conditions for intersections. The Traffic Impact Analysis shall address whether or not the required LOS will be achieved after the proposed project is constructed. LOS calculations shall be included with the TIA for all intersections studied. For intersections or roadway links not meeting the required LOS, the intersection or roadway link's LOS must be recalculated using the proposed mitigation measures to verify that the required LOS will be achieved.



STUDY AREA

At a minimum, the area to be studied shall generally include streets on which the proposed project will add 50 or more peak hour trips up to a 5 mile radius of the project location. The study area may be extended if the project has a regional impact on the regional transportation system. Additional intersections of concern which include but not limited to project driveways may require analysis. For the projects located in the vicinity of schools, counts may be required during the school season as determined by the Community Development or Engineering Department.

A Roadway Link analysis shall be required for roadway segments where 200 or more daily trips are added along the City's Circulation Element roadway network. Additional roadway segments may be requested at the discretion of the Traffic Engineer.



STUDY SCENARIOS

The TIA report shall include the following analysis scenarios:

- 1) **Existing Conditions** - Existing traffic will be counted to determine current conditions. This constitutes the environmental setting for a CEQA analysis at the time that the hearing body reviews the project.
- 2) **Project Opening Year** - Traffic conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by an appropriate growth rate, to be determined by the City, projected to the year that the project is estimated to be completed. Traffic generated by the proposed project will then be added, and the impacts on the circulation system will be analyzed. This scenario is generally referred to as “Existing Plus Project” conditions. This may be the basis for determining project-specific impacts, mitigations, and conditions of approval.
- 3) **Cumulative Conditions** - Traffic generated by other approved and/or pending projects in the study area shall be identified and added to the Existing plus Project Traffic. These cumulative projects should be reviewed by the Planning Division prior to the model being run. This scenario is known as “Cumulative Plus Project” conditions.
- 4) **Phased Projects.** Traffic conditions at each project phase completion (if applicable) will be analyzed using the same approach as above for Existing Plus Project and Cumulative Plus Project conditions.
- 5) **Horizon Year Conditions** - Development proposals that include a GPA, SP or SPA, or projects that may exceed the densities identified in the most recent version of the City’s General Plan Land Use Element will also be required in addition to the above, to perform a Build-out level Analysis to assess long-term impacts. This analysis will determine if the Circulation Element of the General Plan is adequate to accommodate traffic growth at the target LOS, or if additional mitigation is necessary.



TRAFFIC VOLUMES

Traffic volumes for each study scenario shall be clearly illustrated in the TIA report. The source and findings of collected data shall also be clearly annotated in the TIA report. Model runs, cumulative project lists and ambient growth calculations shall be provided in the appendix of the TIA. Descriptions of traffic volumes for each study scenario are provided below:

Existing Conditions Traffic Volumes

The TIA report shall use traffic volumes taken from new/recent counts, as approved by the Traffic Engineering Division. The traffic volume counts should not be older than one year. Counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions. Counts taken near a school must be done while the school is in session. The traffic volume counts are to be included in the study appendices.

Ambient Growth Rate for Opening Year Studies

An appropriate growth rate will be determined by the City for existing plus project analysis.

Cumulative Project Traffic

All projects within the study area which either are pending or have received approvals for development shall be identified and added to the proposed development trip generation. These projects should be reported as Cumulative projects in a table format with reference number, name of projects, location, description, ADT, and AM/PM peak hour rates and trips. The Cumulative project information should be obtained from the Planning Division.

Background Traffic for Build-out Studies

Model projection from the regional traffic model shall be used as the basis for determining daily roadway segment and peak hour turning-movement volumes to be used in Horizon Year Analysis. A post-processing methodology in National Cooperative Highway Research Program (NCHRP) may be used to calculate AM and PM peak hour turning movement volumes from the calculated average daily traffic (ADT) volumes. This results in Build-out traffic without the project.

A manual assignment of the project traffic added to the Build-out traffic may typically be used to determine total Build-out traffic with Project. It should be noted that certain large-scale proposals have the potential to create traffic impacts which are significantly greater than the traffic projections used in the regional traffic model. For these projects, the Traffic Engineering Division may request that the Build-out analysis utilize more detailed focused model runs in order to determine the realistic Build-out traffic. The following are guidelines of projects considered to be significant and subject to the revised modeling requirements:

- 300 dwelling units or greater
- 10 acres of commercial or greater
- 50 acres of industrial or greater
- any project producing 3,000 daily trips or greater



CEQA THRESHOLDS OF SIGNIFICANCE AND COMPLIANCE

The City of Menifee has identified LOS D as the threshold for acceptable operating conditions for intersections in the General Plan. The Traffic Impact Analysis report shall address whether or not the required LOS will be achieved after the proposed project is constructed. Intersections or roadway links not meeting the required LOS may result in a significant impact. The following type of traffic impacts may be considered to be “significant” under CEQA:

- 1) If the pre-Project condition is at or better than the minimum acceptable LOS (LOS D) and the addition of project trips results in unacceptable LOS (LOS E or LOS F), a significant impact is forecast to occur.
- 2) If the pre-Project condition is LOS E or F and the Project adds 50 or more peak hour trips to the intersection, then a significant impact is forecast to occur.

Projects identified to result in a significant traffic impact are required to identify feasible mitigation measures to offset and fully mitigate the project impact.

In some cases, a project may require a finding of overriding benefits, which will likely require an Environmental Impact Report (EIR) to be prepared. The need to prepare an EIR shall be determined through consultation with the City Community Development Department.

The City Council at its discretion can approve development projects even in instances where the target LOS is exceeded, if the project has overriding benefits. Examples include projects that provide jobs in a local area, projects that provide needed Traffic improvements that otherwise would not be constructed, projects that provide habitat conservations, projects that implement non-motorized Traffic systems, or projects that provide some unique benefits to the City which outweigh the traffic impacts. These projects are required to mitigate traffic impacts to the extent that it is economically feasible as determined by the Council, based on a value engineering analysis.

It should be noted that in 2014, the State of California passed SB743, which will eliminate level of service (LOS) as a CEQA criteria. At which time the State Office of Planning and Research (OPR) finalize the guidelines for the new Transportation Evaluation metrics and the new CEQA guidelines are approved and accepted, the City will revise these TIA guidelines to describe the appropriate methodology for addressing Transportation related CEQA impacts. However, as a growing City, level of service will continue to play a significant role in assessing the transportation performance and compliance with the General Plan and may be required in TIA’s in addition to analysis required by SB743.



PROPOSED MITIGATION MEASURES

Project related impacts shall be clearly identified as direct or cumulative in the TIA report. Only feasible mitigation measures shall be recommended in the TIA report. Consideration should be made for existing right-of-way, availability of receiving lanes for additional thru or turn lanes, environmental constraints, utility conflicts, and economically feasible improvement costs. Analysis of mitigation measures shall be provided to demonstrate the proposed improvement will reduce the project impact to less than significant.

All studies that propose increasing the number of travel lanes on a roadway or intersections as mitigation measures, either beyond existing conditions or for General Plan conditions beyond what is planned for that segment shall clearly identify the impacts associated with such a change. Exhibits and preliminary cost estimates must be provided to show the feasibility of the improvement.

The TIA shall identify whether or not the recommended improvements to achieve LOS standards are within the scope of a funding mechanism. The funding mechanism identified shall also include the availability of the funds and anticipated construction dates (if available). A fair share contribution toward the identified funding mechanism shall be calculated in order to mitigate identified cumulative project impacts.

Mitigation measures may also include connectivity improvements for bicycles and pedestrians. Improvements along the project frontage shall include pedestrian and bicycle facilities in compliance with the goals and policies established in the City's General Plan and mandated through the Complete Streets Act of 2008. The project should clearly identify pedestrian and bicycle facilities within the community that connect the development to existing sidewalk and bicycle facilities.

Mitigation measures that are determined to be infeasible should be discussed in the TIA and the factors resulting in the mitigation being infeasible should be identified.



ADDITIONAL ANALYSIS

Additional analysis may be required based on the size, scope, location and access conditions of the project. Additional analysis requirements shall be determined based on the conditions listed below and shall be included in the TIA report:

Traffic Signal Warrant Analysis

The Engineer shall review unsignalized intersections within the study area including the project access points, to determine if signal warrants are met for any of the study year scenarios (existing, existing plus project, cumulative with and without project, etc.) The signal warrant analysis shall utilize the Peak-hour warrants from the most recent edition of California Manual on Uniform Traffic Control Devices (CA-MUTCD). The warrant analysis shall be included in the study appendices.

For traffic signals that are found to be warranted within or bordering a SP, the TIA shall identify signals which are the responsibility of development, and also those covered under the Development Impact Fee Program (DIF Program).

On-site Circulation

Include a brief discussion on internal circulation and proposed on-site parking. Show and discuss how vehicles would enter and exit via the main access driveways and identify any potential on-site or off-site circulation problems. This shall include Truck Turning paths for any proposed truck movements.

Safety and Operational Improvements

The TIA shall examine existing roadway conditions to determine if safety and operational improvements are necessary due to an increase in traffic from the project or cumulative projects. The types of improvements to be identified may include, but are not limited to:

- Traffic Signal Improvements
- Additional thru and/or turning (right/left) lanes
- Signing and Striping
- Bus Turnouts
- Stopping/Corner sight distance studies
- Parking restrictions
- Measures to reduce cut-through project traffic in adjacent residential areas
- Potential impacts to adjacent schools
- Right turn overlaps
- Signal Coordination
- Protected/Permissive Phasing Improvements
- Queue lengths/turn pocket length and impacts to adjacent intersections



GENERAL PLAN CONFORMANCES (GPA/SP/SPA)

The TIA report shall identify if the roadway system proposed in the Circulation Element of the current General Plan is adequate to accommodate traffic from the project, or if changes to the General Plan are proposed as part of the project approval. If a project is proposing a change in the General Plan Circulation Element, the General Plan Amendment must be approved before the project approval.

SPECIAL USES

For projects involving special uses, additional analysis may be required as discussed in this section. Additional special conditions or uses may be identified during the project scoping process that may also require additional analysis, not described below, but may be requested at the discretion of the Planning or Traffic Engineering Division.

Truck Intensive Uses

In addition to the standard TIA requirements, projects which are “truck intensive” (distribution centers, warehousing, etc.) may be required to submit a study addressing the truck access routes, adequacy of the existing streets to be used (in terms of geometry and structural section), safety issues relating to the truck traffic, and the impacts of the truck traffic on existing residences or businesses.

All trips generated by the project shall be based on ITE’s *Trip Generation Manual, 9th Edition* (or latest edition) any other method of calculating trip generation or vehicle mix shall have prior approval from the Traffic Engineering Division. The vehicle mix shall be determined based upon vehicle mix percentages provided in the August 2003 City of Fontana *Truck Trip Generation Study* (or latest version). The PCE factors will be provided by the Traffic Engineering Division and all methodologies shall be approved during the scoping process prior to starting the study. A separate exhibit containing Truck Trip Distribution shall also be prepared.

Special Event Uses

Special event land uses which do not exhibit typical trip generation characteristics may require unique analysis, including midday, weekend and other off-peak scenarios. Examples of such uses would be sports stadiums, racetracks or uses which exhibit substantial traffic peaking associated with special events that are scheduled on a periodic basis.

The traffic analysis for such uses shall include a traffic management plan to control traffic impacts associated with the special events. Adequate circulation shall be provided to the site and all impacts shall be alleviated to the maximum extent possible.



FORMAT

The TIA will generally include the following major components:

- Level of Service analysis
- Proposed mitigation measures
- Traffic signal warrant analysis
- On-site circulation analysis
- Funding mechanism identification

In addition to the above, General Plan Amendments, Specific Plans and Specific Plan Amendments, shall include the following:

- Specific Plan signalization analysis
- General Plan conformance review

Projects that involve special uses, such as truck-intensive projects or special events, may also be required to perform additional analysis to determine project impacts.

SUBMITTAL REQUIREMENTS AND PROCEDURE

Scoping Agreement

Submit one (1) scoping agreement with associated attachments including site plan, trip generation tables, trip distribution and assignment exhibits and suggested study area map.

Initial Submittal

Submit two (2) copies and one (1) electronic data (PDF format) on a CD of the Traffic Impact Study to the Community Development Department.

Resubmittal(s)

If revisions to the Traffic Impact Study are necessary, re-submit two (2) copies and one (1) electronic version (PDF format), plus the red lined original study and City comment letter containing the Department's comments.

Final Approval

Upon approval submit two (2) Final copies and one (1) electronic data copy (PDF) format on a CD of the approved Traffic Impact Study to the Planning Division.

All submittals, including the initial, revised and final TIA report shall be signed by a Traffic Engineer or Civil Engineer registered in the State of California and qualified to prepared traffic impact analysis reports. Submittals that do not adhere to the above listed requirements may be rejected and returned to the applicant for resubmittal.



CITY OF MENIFEE ENGINEERING DEPARTMENT

<i>FOR USE BY STAFF</i>
Permit#: _____
Received Date: _____

TRAFFIC SCOPING/STUDY

APPLICATION

SUBMITTAL REQUIREMENTS

THIS FORM MUST BE SUBMITTED WITH FIRST PLAN CHECK:

Project No: _____ Schedule: _____ (if applicable)

Project Description: _____

Name of Owner: _____

Signature: _____ Phone #: _____

Mailing Address: _____ FAX number: _____

_____ Email Address: _____

Name of Applicant: _____ Contact: _____

Authorized Signature: _____ Phone #: _____

Mailing Address: _____ FAX number: _____

_____ Email Address: _____

Submittal Requirements

- | | | | |
|----|-------|--------|-----------------------|
| 1. | _____ | 2 Sets | Site Plan |
| 2. | _____ | 2 Sets | Traffic/Scoping Study |
| 3. | _____ | 1 | \$1,000.00 – Deposit |

FIRST SUBMITTAL REQUIREMENTS

- A. The City reserves the right to reject the submitted plan package without performing any plan checks if any of the required plans or information items are missing.

I, the undersigned engineer, do verify that all the items necessary for this project and checked above are attached.

Signature

Date

Civil Engineer's Stamp

Printed Name

Firm Name

Address

Phone Number

Fax

Email Address

1/21/2014

ATTACHMENT A

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of T^} a^A^Ö} * a^A^!a * Ö^] æd ^} requirements for @Á traffic impact analysis of the following project. The analysis must follow the [æ^•ó City Traffic Impact Q} æ^•ã Guide]a^• dated CE^*•óGFI.

Case No. _____
 Related Cases - _____
 SP No. _____
 EIR No. _____
 GPA No. _____
 CZ No. _____
 Project Name: _____
 Project Location: _____
 Project Description: _____

	<u>Consultant</u>	<u>Developer</u>
Name:	_____	_____
Address:	_____	_____
Telephone:	_____	_____

A. Trip Generation Source: ITE Trip Generation Manual, most recent edition

Existing Land Use _____	Proposed Land Use _____
Existing Zoning _____	Proposed Zoning _____
Total Daily Trips _____	

	In	Out	Total
AM Trips	_____	_____	_____
PM Trips	_____	_____	_____

Internal Trip Yes No (_____ % Trip Discount)

Allowance Pass-By Trip Allowance Yes No (_____ % Trip Discount)

(Attach additional sheet if this is a multi-use site with a breakdown of trips generated)

B. Trip Geographic Distribution: N % S % E % W %
 (See attached exhibit for detailed assignment)

C. Background Traffic

Project Completion Year: _____ Annual Ambient Growth Rate: _____ %
 Other area projects to be included: _____

Please contact the Engineering Department or use the most recently provided data

Model/Forecast methodology if required _____

D. Build-out Studies: Does this project require a Build-out Study ?

Yes No

E. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

F. Study Roadway Segments (For Build-out Studies):

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

G. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or one-mile radius of boundaries? Yes No

If so, name of Jurisdiction: _____

H. Site Plan (please attach a legible 11'X17' copy)

I. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department)

Recommended by:

Consultant's Representative

Date

Scoping Agreement Submitted on

Date

Scoping Agreement Resubmitted on

Date

Approved Scoping Agreement:

City of T^} ã^^
Engineering Department

Date

**ATTACHMENT B:
ROADWAY SEGMENT CAPACITY THRESHOLDS**

Roadway Classification	Number of Lanes	Maximum Two-Way Average Daily Traffic (ADT) Volume		
		LOS C	LOS D	LOS E
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	4	29,600	33,400	37,000
Mountain Arterial	2	12,900	14,500	16,100
Mountain Arterial	4	25,500	28,700	31,900
Urban Arterial	6	45,000	50,600	56,300
Urban Arterial	8	69,000	78,000	87,000
Expressway	4	53,000	58,000	64,000
Expressway	6	79,000	87,000	95,000
Expressway	8	106,000	119,000	132,000
Freeway	4	80,000	91,000	100,000
Freeway	6	102,000	123,000	132,000
Freeway	8	136,000	164,000	176,000
Freeway	10	169,000	205,000	220,000
Ramp ⁽¹⁾	1	16,000	18,000	20,000

Footnotes:

1. Ramp Capacity is given as a one-way traffic volume.

Source: Riverside County Transportation Department