

**TRAFFIC STUDY CRITERIA  
FOR THE REVIEW OF  
PROPOSED DEVELOPMENT PROJECTS  
WITHIN THE  
CITY OF CULVER CITY**

Public Works Department / Engineering Division  
And  
Community Development Department / Planning Division

July 2012

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## **SECTIONS**

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### **1. BACKGROUND AND PURPOSE**

The Public Works Department / Engineering Division, in coordination with the Community Development Department / Planning Division and Transportation Department, developed these guidelines for the preparation of traffic study reports. The purpose of these guidelines is to provide the public, developers, private consultants and City staff with a uniform set of criteria to prepare a traffic study that includes, but is not limited to, the following:

- A. Development projects' traffic generation;
- B. Directional distribution of development / project traffic;
- C. Impact of the project's traffic on the transportation network system in relationship to motor vehicles, bicycles, pedestrians and transit; and
- D. Multi-modal measures needed to mitigate a project's impact (if any).

These guidelines are consistent with the purpose of the City's Circulation Element of the General Plan [adopted May 24, 2004] and the Bicycle and Pedestrian Maser Plan [adopted by the City Council on November 8, 2010] that local and regional transportations systems serve Culver City's residents and businesses. By assessing the traffic impact of development projects and requiring developments to mitigate their impacts (if any), on the City's transportation system, the quality of life throughout the City can be protected.

### **2. TRAFFIC STUDY REQUIREMENTS**

A traffic study shall be required by the City if a project is estimated to add 500 or more new daily trips or 50 or more trips during the AM or PM peak periods. However, the Department of Public Works may also require a traffic study, even if the above thresholds are not met to address other traffic and/or parking related factors including, but not limited to, the following:

- A. A project that may generate a significant amount of traffic on residential streets;
- B. A project that may generate a significant amount of additional parking on residential streets;
- C. A project that generates traffic that could create operational problems that interfere with the flow of traffic on roadways or driveways;

- D. A project that includes a proposed driveway location that may have limited visibility due to the roadway's curving alignment;
- E. A project that could create a traffic and/or pedestrian conflict due to its proximity to an intersection; or
- F. A project that may create adverse conditions for bicycles and/or pedestrians.

If a project description changes at any time during the review process, City staff shall review the change(s) and determine if a supplemental or new traffic study shall be required.

### **3. SCOPING PROCESS**

Prior to filing an application for any project requiring a discretionary decision by the City and subject to approval of a Memorandum of Understanding (MOU) by the City for the preparation of a traffic study, the applicant, project architect and/or consulting traffic engineer shall submit a completed Memorandum of Understanding (MOU) (Attachment "A"). The MOU shall be signed by all parties including the City prior to commencing the traffic study. During the course of the traffic study or review process, the City may require additional intersections to be studied and other traffic issues addressed, and the information shall be provided in a timely manner. The traffic study shall be prepared by a professional civil or traffic engineer registered in the State of California.

The MOU shall include the following:

- A. A description of the project, including, but not limited to, the address of the site, legal description, assessor's data, property owner(s), applicant(s), architect(s), civil engineer(s) and traffic consultant(s), existing and proposed land uses, existing and proposed gross floor area (GFA) and/or number of units, new buildings, and buildings to be removed, build-out (horizon) years, trip generation rates, directional distribution, related projects, intersections to be studied and trip reductions / credits for various purposes. For purposes of the subject traffic study, the term "gross floor area (GFA)" shall include the definition in the Institute of Transportation Engineers (ITE)'s Trip Generation Handbook.
- B. A site plan showing property lines, project driveways, internal circulation, the parking layout and loading areas as well as the surrounding onsite and offsite improvements including public right-of-way widths, improvements and lane configurations within a five hundred foot (500'-0") radius of the project boundary. Driveways shall be planned to minimize potential conflicts. It is desirable to line up major driveways across the street from

existing driveways. Driveway locations shall maximize motorists' visibility and be compatible with existing driveways and traffic signals. It is undesirable to position driveways in close proximity to other driveways or at the inside of horizontal curves. It is also undesirable to have driveways within one hundred feet (100'-0") of an approach to a signalized intersection. Additionally, no driveway shall be located within twenty five feet (25'-0") of a stop sign. The traffic study shall demonstrate there is adequate visibility for driveways which access onto streets and alleys. The traffic consultant shall consult with the Engineering Division and the Planning Division to determine if vehicle access is limited on certain streets where the City is focusing efforts to enhance the pedestrian oriented environment.

- C. A discussion of the project's compliance with the current Congestion Management Plan (CMP) standards and other applicable requirements.
- D. An up-to-date list of related projects. For purposes of the subject traffic study, the term "*related projects*" shall include development projects that have a build-out (horizon) year(s) up to two (2) years beyond the build-out (horizon) year(s) of the proposed project. The Planning Division shall provide the initial list of related projects. However, it is the responsibility of the consultant to verify the list is current and includes related projects in neighboring jurisdictions. The City may require additional related projects be included, if such projects are initially overlooked for any reason. The traffic study shall include related projects within a one-and-one-half (1-1/2) mile radius of the project regardless of City boundaries, and may, as required by the City, include projects at greater distances from the project that may have potential impacts on the study intersections.
- E. A list identifying all intersections to be studied and include the jurisdiction of each intersection. Indicate the study intersections on a map showing the City boundary lines. The City may request additional or different intersections be studied.
- F. Identify all transit routes operated by the City and all other transit service providers.
- G. Identify CMP intersections and other CMP requirements.
- H. Pay the applicable Traffic Impact Analysis Report Review fee based on the current City fee schedule. Other fees may also be applicable.

#### 4. TRAFFIC STUDY CONTENTS

At a minimum, the traffic study shall contain the following sections:

A. Executive Summary

The executive summary shall include, but not be limited to, the project description, scope of the impact analysis, intersections and roadways impacted and mitigation measures, if needed.

B. Project Description

A project description shall be provided that includes, but is not limited to, the following:

- 1) The name and address of the project.
- 2) A description of the project size, including, but not limited to, those factors which quantify traffic generators [e.g. dwelling units and GFA], uses and heights of proposed new buildings and other buildings to be remodeled and/or demolished.
- 3) For residential developments, the description shall include, but not be limited to, the type of residence [i.e., single family, duplex and/or multi-family (apartment or condominium)].
- 4) For non-residential developments, the description shall include, but not be limited to, the following:
  - A) The project's hours of operation and the number of employees [if available];
  - B) The number of parking spaces for motor vehicles and bicycles required by the City and provided by the applicant; and
  - C) Any sequence of phased development, the target date for each phase, and the final build-out (horizon) year(s).

C. Trip Generation Calculations

- 1) Trip Generation Rates:

Trip generation calculations for the proposed and related projects shall be based on the most recent editions of the Institute of Transportation Engineers (ITE) Trip Generation Handbook and the trip rates in the ITE publication Trip Generation. If ITE trip rates are not available, the San Diego Trip Generation manual may be used. Other trip generation rates, subject to City approval, may be used based on traffic generation studies of similar developments. As recommended in the ITE publication, site-specific trip generation rates are encouraged, especially for land uses not in the ITE publication. For site-specific trip generation rates, adequate backup material shall be included in the report and approved by the City prior to submission of the draft traffic study. The City may require a trip monitoring plan as a condition of approval (i.e., due to unique trip generation rates and/or the type(s) of land use(s) within the adjacent neighborhood). Developments may qualify for the trip credits described below if they reduce traffic generation. The allowance of trip credits is subject to the approval of the City.

2) Trip Credits:

All trip credits shall first be approved by the City as part of the MOU for the Traffic Study and those trips shall not be excluded in the existing base year traffic counts. In each case, it shall be the responsibility of the applicant to demonstrate, to the satisfaction of the City, that the requested trip credit(s) will result in the traffic study to more accurately estimate the ultimate traffic impact of the project.

Development projects outside of Culver City shall not exceed the trip credits allowed by Culver City for analysis of locations in Culver City. Trip credits may be permitted within Culver City as follows:

A) Existing Uses:

Trip credits may be approved for an existing land use if the use was in operation at the time the base year traffic counts were taken and the counts are less than one (1) year old. Any claim for trip credits for a previous land use shall be supported by appropriate documentation of the previous land use, including, but not limited to, the percentage of building occupancy at the time of the study.

B) Pass-By Trips:

Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Lowered project trip volumes for pass-by trips may be allowed for retail/commercial type developments. The ITE average pass-by trip percentages, up to a maximum of twenty five percent (25.0%), may be used for pass-by trips for convenience-type land uses as approved by the City. Lowered project trip volumes due to pass-by trips shall not be considered in determining the need for a traffic study, nor are they applicable to assess impacts at project driveways.

C) Internal Trip Capture:

A maximum of ten percent (10.0%) trip credit may be allowed for Internal Trip Capture for mixed-use developments as determined by the City taking into account various items including, but not limited to, the type and amount of non-residential land uses.

D) Transit Oriented Developments (TOD):

A maximum of twenty five percent (25.0%) trip credits for TOD projects may be allowed by the City for developments within a quarter (1/4) of a mile of a rail transit station or transit center.

E) Transportation Demand Management (TDM):

A maximum of ten percent (10.0%) trip credits for TDM programs that are recorded via covenant may be allowed by the City [i.e., the Public Works Department and the Transportation Department who are responsible to oversee TDM programs] if the TDM measures can be quantified and are based on TDM reductions found on other similar developments.

3) Future Transportation Improvements:

The traffic study may assume certain road, intersection and other transportation improvements are in place, if the improvements are funded and constructed by the build-out (horizon) year(s) of the project.

D. Plans, Maps And Figures

The following plans and maps shall be included in the traffic study, unless otherwise specified in the scoping process:

- 1) All maps, tables and/or graphics shall be in 8 1/2" x 11" format.
- 2) All maps shall include a date, north arrow, scale with scale bar and City boundary lines where applicable.
- 3) Any map, table and/or graphic using color, patterns and/or shading shall be readable and what they represent shall be understood when reproduced in black and white.
- 4) A site plan for the development showing all applicable onsite and offsite improvements including, but not limited to, driveway locations, driveway widths, the parking layout for motor vehicles and bicycles, and the internal circulation for vehicles and pedestrians. Prior to commencing the subject traffic study, the traffic engineer shall meet with the applicable City staff assigned to the project to review and gain "conceptual City staff approval" of all driveway locations, driveway widths, parking layout, loading areas and docks and all other motor vehicle, bicycles and pedestrian circulation elements of the plan that are both onsite and offsite as well as within any enclosed parking area.

The plan shall also indicate all existing bicycle and pedestrian facilities including, but not limited to, bike lane / route designations on adjacent streets, existing bicycle racks / parking on or adjacent to the proposed project, proposed onsite bicycle amenities and sidewalk widths adjacent to the proposed project.

Any proposed restricted or gated driveways, or other vehicle ingress/egress locations shall be shown on the plans and designed in a manner that does not impede vehicular [including bicycles] or pedestrian access on the adjacent streets. Site plans with vehicle turning paths may be required by the City to demonstrate there is sufficient room to accommodate the largest vehicles anticipated to travel on the site. There shall be sufficiently wide driveways and aisles to allow service vehicles to enter and exit the site without encroaching upon opposing lanes or curbed areas. There shall be sufficient separation between external and internal circulation roads so vehicles can be queued on entry or exit without blocking access to parking spaces or internal roadway circulation. A queuing

analysis may also be required by the City to demonstrate adequate ingress and egress capacity at proposed access driveways and the project's impact at nearby intersections.

- 5) A site vicinity plan showing the intersections to be analyzed in the study area. The intersections shall be listed by jurisdiction. Throughout the report, each intersection shall be identified with a consecutive numbering system that is consistently used in all figures, lists of intersections, traffic counts and levels of service analysis.
- 6) A map showing the following information:
  - A) All existing and proposed transportation circulation in the study area, the street system, the existing traffic controls (traffic signals and stop signs), freeways (including on-ramps and off-ramps) and bikeways. Indicate the roadway classification of the roads in the study area according to the City's Circulation Element of the General Plan as well as the number of travel lanes, bikeways, the parking restrictions and bus stop locations. This information may be obtained from the various City departments or from field observations; and
  - B) All local fixed-route bus operator(s) within one (1) mile of the proposed project site and express bus service (including limited stop and freeway commuter routes) and rail transit operators with stops within two (2) miles of the proposed project site.
- 7) A figure showing the lane configurations for each of the intersections to be analyzed for the existing conditions. Show any changes proposed in the lane configurations as part of proposed mitigation measures in the final build-out (horizon) year(s). Also show road improvements that are programmed and funded. The recommended changes shall be indicated by a different contrast, arrow, symbol or pattern.
- 8) A figure showing existing (specify base year) traffic volumes for the AM and PM peak hours at the study intersections and street segments. The existing traffic counts shall be taken within one year of the traffic study completion date, unless otherwise approved by the City.

Manual traffic counts shall be collected in 15-minute intervals between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM showing all movements by vehicular traffic, bicycles and pedestrians. Additional periods shall be counted if the project generates significant traffic volumes during other periods, such as weekends or evening traffic generated by a theater or playhouse. Additional traffic counts and warrant analyses may be required by the City to determine the need for traffic signals or additional traffic controls. All traffic count data shall be submitted both in written format and in an electronic format acceptable to the City.

Traffic counts shall be taken as follows:

- A) When school is in session, unless there is sufficient back-up data showing that out-of-session school counts are not significantly lower than in-session counts; and
  - B) Only on Tuesdays, Wednesdays and Thursdays, unless otherwise approved by the City. Additionally, counts shall not be taken on any week day prior to, on the day of, or the day after, any holiday. Traffic counts shall not be conducted during days of poor weather conditions or if traffic conditions are affected by construction activity.
- 9) An area map showing the location of related projects as approved by the City for the build-out (horizon) year(s). Each related project on the area map shall also be listed in a table indicating the project's name, location, size, land use and trip generation.
  - 10) A map showing AM and PM peak traffic volumes generated by the related projects for the build-out (horizon) year(s).
  - 11) A map showing the project's trip distribution percentages for each land use (inbound and outbound) at the study intersections and project driveways. This map shall be submitted to the City with the Traffic Study MOU request.
  - 12) A map showing the project's future AM and PM peak traffic volumes generated at the study intersections and project driveways. This map shall be submitted to the City with the Traffic Study MOU.
  - 13) A map showing the project's future AM and PM peak traffic volumes generated at study intersections and street segments with ambient growth and related projects without the project in the specified build-out (horizon) year(s) of the project. Specify the build-out

(horizon) year(s) for each phase if the project is to be developed in phases. The study shall use a one percent (1.0%) per year ambient growth rate unless a different rate is approved by the City.

- 14) A map showing the total future AM and PM peak traffic volumes generated with the project at study intersections, project driveways and street segments. Additionally, traffic volumes during the peak noon hour and/or weekend periods may be required.

E. Level Of Service Analysis

- 1) Signalized Intersections

The latest version of the intersection Capacity Utilization (iCU) method or the Transportation Research Board Critical Movement Analysis (CMA), Circular 212 Planning Method may be used to analyze existing and future Levels of Service (LOS) for signalized intersections. For the ICU method, the following shall be used:

- A) A maximum of 1,600 vehicles per hour per lane;
- B) A total of 2,880 vehicles per hour for dual left-turn lanes; and
- C) A ten percent (10.0%) calculation factor added for the loss time of the yellow traffic signal clearance periods.

Unmarked lanes, [i.e., a right-turn lane], may be allowed in the capacity calculations, subject to the approval of the City, if the lane is a minimum of twenty two feet (22'-0") wide, with minimum bus activity at bus stops, and the parallel pedestrian volume crossing the street is deemed not significant by the City.

Based on traffic conditions and the number of buses that stop at a study intersection during the peak hours, the City may require the capacity analysis to reflect the reduction in capacity caused by buses stopping at one or more approaches to the intersection.

The Level of Service Analysis determines the volume-to-capacity (V/C) ratios and LOS for a signalized intersection. The established V/C ratios are measured on a scale between 0 and 1.00 or more. LOS describes the quality of traffic flow in terms of the level of congestion, travel speed and delay. The LOS ranges between "A" to "F", with LOS "A" denoting free-flow conditions and LOS "F" denoting forced-flow or significant delays with long queue lengths.

Table 1 describes the typical characteristics of LOS and V/C ratios at signalized intersections as defined by the Transportation Research Board.

Table 1: Level Of Service (LOS) Characteristics And Volume To Capacity (V/C) Ratios For Signalized Intersections

LOS	V/C Ratio	Characteristics
A	0.600 or Less	EXCELLENT. No vehicles wait longer than one red light and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of rush hours, but enough lower volume periods occur to permit clearing of developing lines preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	1.001 or More	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

2) Volume To Capacity (V/C) Ratio Scenarios

For each intersection analyzed, the V/C ratios shall be calculated to three decimal places. The LOS and V/C ratios for the AM and PM peak hours for the project shall be shown in a table format outlining the following scenarios:

- A) Existing traffic conditions representing the year the traffic counts were taken;

- B) Existing conditions plus the proposed project;
- C) Project Impacts ["Yes" or "No"];
- D) Future build-out (horizon) year(s) without project, with ambient growth and related projects representing existing traffic conditions plus the increase in traffic related to ambient growth and related projects;
- E) Future build-out (horizon) year(s) with ambient growth and related projects plus proposed project representing the cumulative base scenario plus the project trips;
- F) Project impact ["Yes" or "No"];
- G) Future build-out (horizon) year(s) with ambient growth, related projects and proposed traffic mitigation;
- H) Net project impact; and
- I) Project results in Significant Impact ["Yes" or "No"].

The above scenarios shall be tabulated using, at a minimum, the format outlined in Table 2.

Table 2: Volume To Capacity (V/C) Ratio Scenarios

"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"
Year	Existing	New	Project	Buildout	New	Buildout	Net	Total
Of	Traffic	Project	Buildout	Year	Project	Project	Project	Project
Existing	Conditions	Traffic	Year	Project	Traffic	With	Traffic	Significant
Traffic	Plus	Impact	Cumulative	Traffic	Impact	Traffic	Conditions	Impact
Conditions	Project	Yes or No?	Base	Conditions	Yes or No?	Mitigation	Impact	Yes or No?
V/C LOS	V/C LOS	-----	V/C LOS	V/C LOS	-----	V/C LOS	V/C	-----

### 3) Non-Signalized Intersections

The methods in the latest version of the Highway Capacity Manual shall be used to analyze LOS at non-signalized intersections and non-signalized freeway ramps. Table 3 describes the typical characteristics of LOS at stop-controlled intersections as defined by the Transportation Research Board. The ICU or CMA methods may be used to calculate the difference in the V/C ratio with and without the project. Any other methods shall first be approved by the City in writing. If the City determines a project adds a significant amount of traffic or traffic impacts to a non-signalized intersection, a

traffic-signal or additional stop sign warrant study shall be conducted.

Table 3: Level Of Service (LOS) Characteristics For Stop-Controlled Intersections

LOS	Average Total Delay (Seconds/Vehicle)	Expected Delay to Minor Street Traffic
A	10.0 or Less	Little or no delay
B	10.1 and less than 15.0	Short traffic delays
C	15.1 and less than 25.0	Average traffic delays
D	25.1 and less than 35.0	Long traffic delays
E	35.1 and less than 50.0	Very long traffic delays
F	50.1 or More	Extreme delays

F. Thresholds Of Significance

1) Intersections

A) A project's transportation impact at an intersection is considered to be significant if the project increases the V/C ratios beyond the thresholds shown in Table 4; and

Table 4: Significant-Impact Thresholds At Signalized / Stop-Controlled Intersections

LOS	V/C Ratio	Project Related Increase In V/C Ratio
A	0.600 or less	No Significant Impact
B	0.601 – 0.700	No Significant Impact
C	0.701 – 0.800	Equal or greater than 0.05
D	0.801 – 0.900	Equal or greater than 0.04
E	0.901 – 1.000	Equal or greater than 0.02
F	1.001 or more	Equal or greater than 0.02

B) Development projects outside of Culver City shall use the thresholds for significant impact of the other jurisdiction(s) when analyzing intersections in Culver City.

2) Residential Streets

The thresholds shown in Table 5 shall be used to determine if a project creates a significant impact on a local residential street. Streets with a higher average daily traffic volume require a lower percentage increase in traffic to be considered significantly impacted.

**Table 5: Significant-Impact Thresholds At Residential Streets**

Projected Average Daily Traffic (ADT) With Project	Project-Related Increase In Average Daily Traffic (ADT) Volume
999 or Less	120 or More
1,000 to 1,999	12 percent or more of final ADT
2,000 to 2,999	10 percent or more of final ADT
3,000 or More	8 percent or more of final ADT

3) Certain projects, or the location of the projects, may require additional traffic impact analysis as determined by the City including, but not limited to, the following:

- A) Evening analysis for movie theaters, playhouses and other commercial / industrial uses that may generate traffic during off-peak commuter hours;
- B) University / school graduation and special events;
- C) Developments with special activities outside of normal business operations that attract a higher number of employees and visitors; and also those businesses with non-traditional hours and days of operation;
- D) Health clubs; and
- E) Mainline freeway and on-ramp and off-ramp capacity analyses.

**G. Analysis Of Potential Mitigation Measures To Mitigate Significant Impacts**

In this section, the traffic study shall assess the ability of the transportation circulation system to accommodate additional traffic generated by the related projects and the subject project. If the subject project creates significant impacts, the traffic study shall analyze potential mitigation measures to reduce the impacts to less than significant.

The traffic study shall identify and analyze any other potential traffic impacts of the project including, but not limited to, the following:

- 1) Potential vehicular conflicts and motorists' visibility at the project's driveways;

- 2) Potential conflicts with pedestrians and/or bicyclists.
- 3) Ability of left-turn lanes to accommodate additional project traffic;
- 4) Ability to conduct loading operations on site; and
- 5) Ability to maneuver into parking stalls.

In addition to the physical mitigation measures indicated above, the traffic study shall consider feasible traffic signal synchronization improvements, and Transportation Demand Management (TDM) measures. The TDM measures minimize the demand for trips by single occupant vehicles and encourage other alternative transportation measures such as bicycling, transit use and ridesharing.

The traffic study shall also include a discussion of any mitigation measures that were considered but found not to be feasible, and the reasons they were rejected, so the public is aware that other potential mitigation measures were considered. If no mitigation measures are deemed feasible by the City, then the traffic study shall be expanded to include the basis to support a Statement of Overriding Considerations pursuant to the California Environmental Quality Act (CEQA) as amended. The study shall also indicate if any mitigation measures result in secondary impacts.

#### H. Mitigation Measures For Significant Impacts

With limited opportunities for physical road improvements, the City is placing additional emphasis on the use of transit, transportation demand management, bicycle travel and multi-modal strategies which promote alternatives to automobile travel including, but not limited to, the following:

##### 1) Transit Improvements

The following are examples of transit mitigation measures that improve and/or expand transit:

- A) Increase the capacity of the Culver City Bus transit system and other transit providers;
- B) Establish and expand transit services;
- C) Contribute to the construction and/or enhancement of transit stations, stops and/or transit centers;

- D) Contribute to projects which expedite transit flow [i.e., transit priority traffic signal systems and bus lanes]; and
  - E) Contribute to projects which create additional incentives for transit usage [i.e., real-time bus arrival information system].
- 2) Establish a Transportation Demand Management (TDM) Program

Transportation Demand Management (TDM) measures are designed to reduce a project's trips and the reliance on single-occupant vehicle automobile trips. The TDM measures may include, but not be limited to, provision of information on alternative modes of transportation for employees and multi-family residential development projects which encourage non-automobile travel, carpooling, preferential parking for carpools, vanpooling, bicycle facilities, flexible work hours, telecommuting and incentives for employees to use transit such as transit vouchers. In addition, TDM measures include financial contributions for the capital and/or operating costs of improved transit, shuttle service, bicycle and pedestrian facilities and connections.

At the time of a project's approval, the City may impose conditions including, but not limited to, TDM measures which reduce the project's vehicle trips and the specific methods to be used by the City to monitor a project's trip generation. Conditions of approval may include, but not be limited to, the posting of a letter of credit and related penalty charges in amounts determined by the City. The monitoring program shall include measures to evaluate the effectiveness of the TDM program and/or the project specific conditions of approval including, but not limited to, the vehicle trips do not exceed the limits established in the approved traffic study. If the monitoring results indicate one or more of the condition(s) of approval are not being achieved, the City may draw monies from the letter of credit for a number of purposes including, but not limited to, penalty charges.

The TDM measures are more appropriate for larger developments, particularly non-residential developments measuring in excess of 25,000 gross square feet (GSF) as defined in the CCMC. The TDM measures are also required to satisfy the requirements of the South Coast Air Quality Management District (SCAQMD) Rule 2202 (as may be amended) to reduce vehicle trip emissions. This rule requires employers of 250 or more employees to implement measures to reduce vehicle trip emissions. In addition, the Los Angeles County Congestion Management Program (CMP) requires

implementation of TDM measures for new non-residential development projects measuring 100,000 GSF or more.

3) Street Widening and Other Physical Improvements

Any recommended street widening or reconfiguration must be feasible and meet City standards. Sidewalk widths shall be adequate for pedestrian needs, meet the American With Disabilities Act (ADA) requirements and be wide enough to accommodate all other applicable public improvements as deemed necessary by the City. If additional right of way is needed to mitigate an impact, it shall, at the discretion of the City, be available from the public-road right of way and/or the development's on-site private property prior to any project site plan approval. Any recommended street widening or reconfiguration shall analyze various components including, but not limited to, the needs of bicyclists, pedestrian movements and transit vehicles.

For recommendations to increase the number of lanes on a street or at an intersection by re-striping and/or reconstruction of the roadway, the traffic study shall clearly identify the associated impacts, such as whether the additional lanes would require additional right of way or if any on-street parking would be removed. If removal of on-street parking is recommended, the traffic study shall analyze the impacts of removing the on-street parking on the adjacent land uses. If any parking removal is approved by the City, the project applicant shall, if required by the City, relocate the parking to a City-approved location which shall, at the discretion of the City, either be within the proposed project or nearby, and the applicant shall pay all of the costs of any such parking relocation.

Projects proposing physical improvements or re-striping shall submit geometric design drawings at a scale of at least one inch (1") equal to forty feet (40'-0") for existing conditions and proposed mitigation measures and as more specifically required by the City. The drawings shall show all significant roadway details, including adjacent land uses, parking restrictions, sidewalk widths, driveway widths, lane dimensions, roadway striping, curb and right-of-way lines, existing and proposed property lines and building footprints. All mitigation measures shall be as approved by the City and thereafter funded / constructed by the developer or as otherwise approved by the City.

4) Traffic Signal Installation and Traffic Signal Modifications

For project impacts at non-signalized intersections, the traffic study shall include a traffic signal warrant analysis to determine if the project alone or with related projects, causes the need for a traffic signal installation. The traffic signal warrant analysis shall be conducted using the latest version of the California Manual On Uniform Traffic Control Devices [California MUTCD] and as more specifically required by the City. If a traffic signal installation is warranted with the addition of the project's traffic, then the installation shall be the responsibility of the project. For significant impacts at a signalized intersection(s), the traffic study shall analyze the intersection to determine if traffic signal modifications or other measures would mitigate the impact.

5) Fair-Share Contributions for Mitigation Measures

A traffic study may result in the recommendation of various offsite traffic mitigation measures. If two or more projects cause a significant impact at the same intersection or street segment resulting in the requirement to implement the same traffic mitigation measure(s), the coordination and any sharing of costs to construct the traffic mitigation measure(s) between two or more applicants shall be subject to the approval of the City pursuant to a agreement executed by all parties sharing in the cost.

6) Residential Streets Traffic Monitoring Program

The City may require the developer of a project to establish a traffic monitoring program to ensure project traffic does not impact a residential street, or employees of, and visitors to, the project do not impact parking in nearby residential neighborhoods. For the monitoring process, the developer shall be required to take baseline "before-project" traffic counts and parking surveys prior to construction, and "after-project" traffic counts and parking surveys. A residential streets traffic monitoring program may be required by the City at the time of a project's conditional approval including, but not limited to, the posting of a letter of credit and related penalty charges in amounts as determined by the City. The monitoring program shall include measures to evaluate the effectiveness of the residential street traffic monitoring program and/or the project specific conditions of approval. If the monitoring results indicate one or more of the condition(s) of approval are not being achieved,

the City may draw monies from the letter of credit for a number of purposes including, but not limited to, penalty charges.

7) Residential Neighborhood Traffic Management Program (NTMP)

The City may require the developer of a project to pay for all costs to mitigate a project's impacts using the City's Residential Neighborhood Traffic Management Program (NTMP). Typical elements of an NTMP may include, but not be limited to, speed humps, street diverters, traffic circles, one-way streets and turn restrictions.

I. Congestion Management Program

A CMP analysis shall be provided if a project meets the latest criteria established in the County of Los Angeles Metropolitan Transportation Authority (Metro) CMP guidelines. A CMP Transportation Impact Analysis (CMP-TIA) shall be prepared for all projects required by the City to prepare an environmental assessment. The geographic area examined in the CMP-TIA shall include, but not be limited to, the following:

- 1) All CMP arterial monitoring intersections, including existing and proposed freeway on-ramps and off-ramp intersections, where a proposed project will add 50 or more trips of adjacent street traffic during either the AM or PM weekday peak hours;
- 2) Mainline freeway monitoring locations where a project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours; and
- 3) Other specific locations on the state highway system to be identified in consultation with CalTrans.

If the above referenced CMP-TIA criteria identify no impact to regional facilities, then further CMP traffic analysis is not required. A copy of the latest CMP Guidelines can be obtained from the Metropolitan Transportation Authority (Metro) as follows:

County of Los Angeles Metropolitan Transportation Authority (Metro)  
One Gateway Plaza  
Los Angeles, California  
90012-2952  
(213) 922-2000  
E-mail: [planning@metro.net](mailto:planning@metro.net)

5. **REVIEW PROCESS**

A. Administrative Draft

Following the approval of an MOU and the preparation of a draft traffic study consistent with the terms of the approved MOU, the applicant shall submit four (4) bound copies and an electronic version in a format as directed by the City of the "administrative draft" traffic study to the Engineering Division for review and comment, to determine if the report has been prepared per the established criteria and is reflective of the site and project specifics. Payment of all fees required by the City to review the traffic study shall be submitted at that time. If corrections are required by the City, the applicant shall be provided with applicable notations for report revision and resubmission.

B. Final Draft

Once deemed acceptable, the applicant shall be informed by the Engineering Division as to the number of copies of the "final draft" traffic study that must be submitted during each phase of the project review process [i.e., copies for staff, the Planning Commission, the City Council, and public organizations and officials, and for the general public]. Additional copies may be required by the City for subsequent meetings and/or presentation. The applicant and the traffic consultant preparing the report shall be present at all public meetings and hearings on the proposed project, and they shall be available to respond to all questions from City representatives and the public.

The City reserves the right to request reasonable additional information to be added to the "administrative draft" and/or "final draft" traffic study at any time during the preparation and review period including, but not limited to, new information on the proposed project site, proposed development and/or data gathered from the staff and public review process during the review and approval process of the traffic study.

C. Approved Traffic Study

Once the traffic study is approved by the City, the applicant shall submit to the Engineering Division a minimum of four (4) bound copies and an electronic version of the City approved traffic study in an electronic format as directed by the City. All copies shall be made at the applicant's sole cost and expense.

**6. CITY CONTACTS**

In the event additional information is required, please contact the following:

- A. Public Works Department / Engineering Division  
9770 Culver Boulevard  
Culver City, California  
90232-0507  
(310) 253-5600  
E-Mail: [engineering@culvercity.org](mailto:engineering@culvercity.org)
  
- B. Community Development Department / Planning Division  
9770 Culver Boulevard  
Culver City, California  
90232-0507  
(310) 253-5710  
E-Mail: [planning@culvercity.org](mailto:planning@culvercity.org)
  
- C. Transportation Department / Administrative Division  
4343 Duquesne Avenue  
Culver City, California  
90232-0507  
(310) 253-6500  
E-Mail: [transportation@culvercity.org](mailto:transportation@culvercity.org)

**7. CRITERIA UPDATE**

The Public Works Director / City Engineer – in consultation with the Community Development Director and the Transportation Director [and/or their designees] – shall periodically review these guidelines to ensure the subject standards and procedures used to prepare traffic studies remain current and adequate to properly analyze the traffic of proposed projects within the City limits and make revisions to these guidelines as deemed necessary. Any significant changes in policy to this traffic study criteria shall be recommended to the Planning Commission and/or City Council as deemed necessary by the Public Works Director / City Engineer and the Community Development Director.

**Attachment A**

**Memorandum Of Understanding For a Traffic Study**

This Memorandum Of Understanding (MOU) acknowledges and agrees to all of the City of Culver City requirements and fees for the review of a traffic study for the following project:

Project Name: \_\_\_\_\_  
 Project Address: \_\_\_\_\_  
 Project Description: \_\_\_\_\_ GFA\* Office / \_\_\_\_\_ GFA Industrial  
 \_\_\_\_\_ GFA Retail / \_\_\_\_\_ Residential Units  
 \_\_\_\_\_ GFA Other / \_\_\_\_\_ GFA Other

Project Horizon Year: \_\_\_\_\_ Ambient Growth Rate: One (1.0) % Per Year  
 Directional Distribution: N: \_\_\_\_\_ % S: \_\_\_\_\_ % E: \_\_\_\_\_ % W: \_\_\_\_\_ %  
 [Attach map(s) illustrating directional distribution percentages at all intersections and driveways.]

Trip Generation Rate(s): ITE Latest Edition / Other: \_\_\_\_\_  
 [Show AM, PM and daily trip generation rates for each land use]  
 Land Use:

	ITE Code # _____		ITE Code # _____		Total In	/	Total Out
	In	Out	In	Out			
AM Trips:	_____ / _____	_____ / _____	_____ / _____	_____ / _____	_____ / _____		
PM Trips:	_____ / _____	_____ / _____	_____ / _____	_____ / _____	_____ / _____		

Attach Total Daily Trips Generation Calculations.

- Prior to the start of any proposed project analysis, the Traffic Consultant shall:
1. Obtain a list of related projects from the Planning Division of Culver City and other affected jurisdictions;
  2. Prepare a draft list of "related projects specific to the proposed project"; and
  3. Obtain written approval from the City of the "related projects specific to the proposed project" list.

Study Intersections:  
 No. Intersection: \_\_\_\_\_ / Jurisdiction: \_\_\_\_\_

Residential Streets To Be Studied:  
 No. Street Name: \_\_\_\_\_ / Limits: \_\_\_\_\_ / Jurisdiction: \_\_\_\_\_

\* Gross Floor Area (GFA) shall be as defined in the most recent ITE publication.  
 \*\* Indicate intersections subject to capacity analysis credit for advanced traffic signal control synchronization.  
 \*\*\* Indicate non-signalized intersections to be studied.  
 \*\*\*\* Use the same numbering system for all lists of intersections and figures in the traffic study.

<u>Indicate Trip Credits To Be Requested (Amount Subject To City Approval):</u>		<u>Yes</u>	<u>No</u>
1.	Existing Uses:	<input type="checkbox"/>	<input type="checkbox"/>
2.	Pass-By Trips:	<input type="checkbox"/>	<input type="checkbox"/>
3.	Internal Trip Capture:	<input type="checkbox"/>	<input type="checkbox"/>
4.	Transit Oriented Developments (TOD):	<input type="checkbox"/>	<input type="checkbox"/>
5.	Transportation Demand Management (TDM):	<input type="checkbox"/>	<input type="checkbox"/>

Maps:

The following maps shall be attached to the MOU:

1. A map showing the project's trip distribution percentages for each land use (inbound and outbound) at the study intersections and project driveways; and
2. A map showing the project's trips at the study intersections and project driveways.

Proposed Traffic Mitigation:

Any proposed traffic mitigation measure shall be listed and accompanied by a drawing of the existing and proposed improvements [including city boundary lines and existing / proposed property lines] and plans shall be of a minimum scale of one inch (1") equal to forty feet (40'-0").

Post-Occupancy Traffic Counts:

By signing below, the Property Owner / Developer / Applicant hereby agrees to pay for and submit to the City a post-occupancy traffic count analysis of the development to the satisfaction of the City. The analysis shall determine the amount of actual traffic (motor vehicle, bicycle and pedestrian) generated by the development compared to the ITE trip generation rates. The analysis shall include a traffic count of all onsite driveways taken upon reaching eighty five percent (85.0%) occupancy of the total building gross floor area or within one (1) year of the issuance of the first Temporary Certificate of Occupancy (TCO), as determined by the City. The data shall be used to confirm the findings in the approved traffic study, and shall not result in any additional traffic mitigation measures and/or conditions of approval on the subject project.

Congestion Management Plan (CMP):

This project shall also be subject to all City imposed CMP developer fees if the Planning Commission approval date is on or after the effective date of any City Council imposed CMP developer fees or as may be otherwise imposed by the City.

Fee:

Payment of a fee to the Engineering Division for the City's processing of a traffic study shall be required prior to the City's approval of the MOU. Said fee shall be in accordance with the most recent Fee Schedule as approved by the City Council.

Signatures:

Property Owner / Applicant:

Developer / Applicant:

Name [Signed]: \_\_\_\_\_  
Name [Printed]: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City / State / Zip: \_\_\_\_\_  
Office: (\_\_\_\_) \_\_\_\_\_  
Fax: (\_\_\_\_) \_\_\_\_\_  
Cell: (\_\_\_\_) \_\_\_\_\_  
E-Mail: \_\_\_\_\_

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Traffic Consultant:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City / State / Zip: \_\_\_\_\_  
Office: (\_\_\_\_) \_\_\_\_\_  
Fax: (\_\_\_\_) \_\_\_\_\_  
Cell: (\_\_\_\_) \_\_\_\_\_  
E-Mail: \_\_\_\_\_

If any of the intersection(s) to be studied as part of this traffic study are located within the City of Los Angeles, the unincorporated areas of Los Angeles County and/or impact any other public agency [i.e., CalTrans], then this MOU shall also be approved by the reviewing staff representative from each agency:

City of Los Angeles:

County of Los Angeles:

Name [Signed]: \_\_\_\_\_  
Name [Printed]: \_\_\_\_\_  
Title: \_\_\_\_\_  
Department: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Address: \_\_\_\_\_  
City / State / Zip: \_\_\_\_\_  
Office: (\_\_\_\_) \_\_\_\_\_  
Fax: (\_\_\_\_) \_\_\_\_\_  
Cell: (\_\_\_\_) \_\_\_\_\_  
E-Mail: \_\_\_\_\_

City of Los Angeles  
\_\_\_\_\_  
\_\_\_\_\_  
(\_\_\_\_) \_\_\_\_\_  
(\_\_\_\_) \_\_\_\_\_  
(\_\_\_\_) \_\_\_\_\_

Other Public Agency:

Other Public Agency:

Name [Signed]: \_\_\_\_\_  
 Name [Printed]: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Department: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City / State / Zip: \_\_\_\_\_  
 Office: ( ) \_\_\_\_\_  
 Fax: ( ) \_\_\_\_\_  
 Cell: ( ) \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

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Approved By:

\_\_\_\_\_/\_\_\_\_\_  
 Property Owner – Applicant Date

\_\_\_\_\_/\_\_\_\_\_  
 Developer – Applicant Date

\_\_\_\_\_/\_\_\_\_\_  
 Traffic Consultant Date

\_\_\_\_\_/\_\_\_\_\_  
 City of Culver City Date

**Note:** This MOU shall become valid as of the date of the City's signature and shall expire one (1) year thereafter. If the "administrative draft" of the traffic study has not been filed with the City by the expiration date, this MOU shall also expire and a new MOU filing, fee, review and approval process shall be required.