

## **TRAFFIC IMPACT ANALYSIS GUIDELINES**

### **PURPOSE**

The purpose of this section is to establish guidelines for the preparation of a traffic impact analysis (TIA). These guidelines supplement policies adopted as part of the County Transportation System Plan and standards provided in Lane Code 15.697.

The intent of these requirements is to minimize traffic related impacts on the existing land use in the immediate vicinity of the proposed development, the proposed development itself and on traffic conditions and control devices that are outside of the immediate vicinity of the proposed development but are expected to be affected by increased traffic volumes.

The Lane County TSP, Roadways Element Policy 3-c, and Lane Code 15.697 specify when a TIA is required.

### **1. GENERAL REQUIREMENTS**

The study must be conducted by a professional engineer registered in Oregon, with expertise in transportation engineering, or a recognized transportation planning firm having experience in the preparation of traffic impact analysis and routine traffic engineering studies. The final report shall be stamped by the professional engineer.

The report should follow the recommended practice in the Institute of Traffic Engineers (ITE) publication, "Traffic Access and Impact Studies for Site Development."

The engineer performing the analysis should request approval of a scope of work from Lane County staff prior to commencement of analysis. The intent is to reach agreement on the roadways and intersections to be studied, the information to be provided, the analysis time periods, methods, and software to be used, technical parameters (saturation flow rates, peak hour factor, etc) necessary to complete the analysis. Lane County staff will respond in a timely fashion to this request. Other affected agencies may be included in the scoping discussion. The applicant shall submit written documentation to the County for written approval of the agreed upon TIA scope.

### **2. PROJECT DESCRIPTION**

This section should include (but not be limited to) project name, location, size of project (including building sizes and their uses, total development area, total acreage of the subject property), number of parking stalls if applicable (standard, compact and handicap), type and number of access points and any other transportation related features. This section should also include a site plan, drawn to a conventional scale (1" equal to a number divisible by 10), that shows existing and proposed building locations, property line and road setbacks, existing and proposed parking lot layouts, if applicable, access points, and nearby driveways and intersections. The site plan shall be consistent with any associated land use planning actions and/or development permits.

### **3. EXISTING CONDITIONS**

#### **A. Road Network**

Include a detailed description of the adjacent, existing road network. This description should include (but not be limited to) number and width of travel lanes, median types, type and width of sidewalks, number and operation of existing driveways, bicycle lanes,

road signs, on street parking restrictions, bus stops, geometry and traffic controls at the pertinent intersections. Include the location of nearby driveways and streets (with dimensions).

**B. Traffic Conditions**

Provide a.m., mid-day, and p.m. peak hour turning movements counts at the pertinent intersections. These counts shall be no more than one year old. Some turning movements counts are available from the County. In addition to the peak hour turning movements counts, the County may require recent mechanical counts on certain streets. V/C and LOS analysis should be performed at the pertinent intersections and/or as identified by the County. The LOS analysis should be conducted in accordance with the *Highway Capacity Manual (2000)* using Highway Capacity Software (HCS) or other approved software. Additional analysis (signal coordination, queue length, delay, etc.) may be required by the County on a case by case basis.

**C. Traffic Crash Analysis**

Summarize recent, three-year traffic crash data. The traffic accident data can be obtained from a City, Lane County or State. The analysis should include (but not be limited to) total number of crashes by type (property damage only (PDO), injury and fatal, rear end, head-on, sideswipe etc.), total number of fatalities, high crash rate locations, crash patterns, road deficiencies and mitigation measures.

**D. Transit Facilities**

This section should discuss bus stop locations, bus routes and schedules, special routes (during AM and PM peak hours), proposed routes (if any), car and van pools.

**E. Non-Motorized Facilities**

The section should include a discussion of existing sidewalks, bike lane, pedestrian signals and push buttons at intersections, pedestrian crossings at intersections and mid blocks. Identify deficiencies and propose mitigation measures.

**4. PROJECT TRAFFIC**

**A. Trip Generation**

Trip generation for the proposed project should be developed in accordance with the most current edition of the *ITE Trip Generation* manual and supporting documents.

If the project is to be developed in stages, the trip generation section should address this and the trip generation table should reflect the staged development.

If the trip generation rates are not given in the *ITE Trip Generation* manual or if the project proponent wishes to use some other trip generation rates, then these proposed trip generation rates must be pre-approved by the County. The proposed trip generation rates should be supported by actual trip generation data from comparable existing sites and/or published reports in transportation and traffic engineering journals.

The trip generation should also include a discussion (if necessary) of trip types and any trip rate credits. The trip rate credit discussion should be supported by actual data and/or published reports in transportation and traffic engineering journals.

**B. Trip Distribution and Assignment**

The vehicular trips generated by the proposed development should be distributed to the existing street network in accordance with the existing traffic flow patterns, land use pattern, computer model developed by a city, Lane Council Of Governments (LCOG), or

an origin and destination survey. The trip distribution and assignments should be extended to a reasonable distance from the site, covering major intersections and, if required, to the nearest freeway interchange. Trip distribution and assignment should be made assuming access to the site consistent with Lane Code 15.130-139.

**5. FUTURE TRAFFIC WITHOUT PROJECT**

**A. Traffic Volumes and Performance Analysis**

V/C and LOS analysis should be performed at pertinent intersections as identified by the County. Additional analysis may be required by the County on a case by case basis.

**A. Proposed Transportation Improvements Projects**

This section of the report should identify any relevant Transportation Improvement Projects in an adopted City Capital Improvement Plan, Transplan, County Capital Improvement Program and Statewide Transportation Improvement Program (STIP) and the scheduled year for improvement.

**6. FUTURE TRAFFIC CONDITIONS WITH PROJECT**

The TIA should clearly identify future traffic volumes (including traffic generated by the proposed development). The following analysis should be conducted to identify the impacts of the proposed development:

- A. V/C and LOS analysis should be performed at the pertinent intersections and/or as identified by the County and at all site access points. The projected V/C and LOS for all intersections in the study area should be identified. Additional analysis may be required by the County on a case by case basis. Recommendations should be made for improvements that would be required to maintain V/C and LOS standards at affected intersections when the development is complete. Specific design recommendations should be made.
- B. A determination of the need for traffic signals based on traffic signal warrants in the *Manual on Uniform Traffic Control Devices (MUTCD)*.
- C. Recommendations should be made for improvements and/or transportation demand management measures that would be required to maintain an adequate level of safety on affected streets when the development is completed, such as turn widening, sight distance triangle and signing. Specific design recommendations should be made.
- D. Discuss proposed improvements to enhance bicycle and pedestrian usage and facilities, and the availability of mass transit to serve the proposed development.
- E. Determine on-site parking requirements in accordance with the applicable county or city requirements, and analyze the internal traffic circulation to the extent that it can be determined whether the points of access will operate properly.
- F. Internal roads, whether public or private, should be analyzed for safe and efficient internal traffic circulation.

**7. CONCLUSIONS AND RECOMMENDATIONS**

This section should include a summary of all proposed traffic mitigation measures and conclusions.

**8. APPENDIX**

All the calculation sheets and supporting data sheets should be included in this section.

All pages must be numbered. Calculation sheets should be labeled indicating pertinent information such as the year, time period, etc., and should be included in the table of contents.

**9. REPORT FORMAT**

The report should include a table of contents and references to all pages in the report, including calculation sheets, supporting materials, and computer output. The report shall include a vicinity map, maps for trip distribution and assignment, and numbered tables for trip generation, distribution, and assignment. The report must be submitted on 8 ½" x 11" paper. The County will specify the number of required copies during the TIA scoping meeting.