

# **City of Valdosta Land Development Regulations**

## **Appendix I – City of Valdosta Traffic Study Standards**

# City of Valdosta Land Development Regulations

## APPENDIX I

### City of Valdosta Traffic Study Standards

#### Traffic Study Required

A traffic impact study is required when applying for certain types of re-zonings, conditional use permits, land development permits and preliminary plat approvals as specified in the City of Valdosta Land Development Regulations. Three (3) copies of the final traffic impact study must accompany these applications for the proposed developments. Applications for developments which require traffic studies must be accompanied by copies of the final traffic impact study before the application deadline or they will be declared incomplete.

#### Preliminary Conference

An applicant proposing a development which requires a traffic study should arrange a preliminary conference with the Director to discuss how the traffic impact study requirements apply. This discussion will cover subjects such as trip generation, distribution, and assignment assumptions, the County's road classification map, planned road improvements, and other approved developments nearby which should be considered in the traffic impact study.

#### Scope of Traffic Study

- A. Traffic studies must describe the extent, nature, and location of traffic impacts for all property for which the application is being sought and further all contiguous property owned by the applicant. The study area shall include the entire site being developed, future phases of multi-phase development, and the surrounding roadways which are likely to be significantly impacted. At a minimum, the surrounding roadways to be included are:
  - 1. The expected routes of access to the site as far as the nearest major arterials serving the site from each direction nearest the site;
  - 2. The routes and site access to freeway interchanges or major intersections expected to carry fifteen (15) percent of the project's traffic; and
  - 3. Other roadways expected to carry over 100 additional Peak Hour vehicles as a result of the development.
- B. It is recommended that a preliminary traffic assignment be performed to establish the scope of the study before beginning the inventory of existing conditions.
- C. Traffic studies must include the following elements:
  - 1. Site development proposal;
  - 2. Inventory of existing conditions;
  - 3. Trip generation;
  - 4. Trip distribution;

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5. Trip assignment;
6. Planned transportation improvements;
7. Identification of traffic impacts, problems, and deficiencies; and
8. Recommended transportation improvements and other impact mitigation measures.

### Site Development Proposal

- A. The traffic study must include a conceptual site plan for the overall project. The site plan should include the following information:
  1. District, land lot, and the parcels that are the subject of the application and all parcels in a multi-phase development;
  2. Location of the above parcels with respect to existing adjacent private and public roadways;
  3. Location of on-site parking, vehicular, and pedestrian circulation elements on the site;
  4. Dimensioned locations of land lot lines, property lines, existing and proposed rights-of-way, roadway centerlines, and driveways to public roadways which are part of the overall project;
  5. Locations of intersecting streets and public or private driveways which abut the site or are opposite the site on the adjacent public roadways.
- B. In addition, the site development proposal will include a narrative description of the phases of the project, the amount of land for each phase, along with the size and location of buildings and amount of parking for each phase, keyed to the site plan, and the expected date of occupancy for each phase.
- C. Impact studies for multi-phased projects may be accepted without a layout of proposed buildings, parking, and driveways. Similarly, the level of analysis may be less detailed if approved in advance by the Director. In these cases, the Director will recommend that, as a condition of rezoning, a complete site plan and a revised traffic study must be submitted and approved for each phase of the development before preliminary plat approval may be issued pursuant to the Comprehensive Land Development Ordinance.

### Inventory of Existing Conditions

The inventory of existing conditions will include a location map of the overall project and the surrounding roadways. For each of these roadways, the inventory will identify:

- A. Adjacent land uses;
- B. Existing travel lanes and rights-of-way;
- C. Existing pavement conditions;
- D. Existing peak hour volumes, turning movement data collected within six (6) months prior to application date, and levels of service for the peak hour period used in the assignment phase; and

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- E. Existing problems or deficiencies, such as excessive horizontal or vertical curvature, inadequate sight distances, drainage, paving markings or other deficiencies.

### **Trip Generation**

- A. The traffic study will include trip generation data for each phase of the overall project. Trip generation data will include the total number of vehicles computed to be entering and exiting the site on an average weekday and during a.m. and p.m. peak hours. Trip generation rates will usually be based on the peak hour of adjacent roadways described in the latest edition of *Trip Generation* (ITE). If the planned development includes more than 50,000 square feet of retail space, include similar trip generation data for Saturdays. If the existing site is zoned for a use other than single-family residential, include trip generation data for the site developed as zoned.
- B. Trip generation rates must be taken from the latest edition of the ITE *Trip Generation* publication unless suitable documented local data are provided from at least three similar developments collected within the past five (5) years. Suitable documentation includes the type, location, and size of each development; the dates and hours of data collection; the availability of public transportation; and the vacancy rate for the development. Copies of actual trip data may be required.
- C. Vehicle trips will be computed by multiplying appropriate trip generation rates by the appropriate units for which the rates were intended. There are exceptions to this procedure:
  - 1. When mixed use developments are designed to encourage a significant number of internal trips, the total vehicle trips may be reduced by the estimated number of internal person trips, divided by the average auto-occupancy rate. The study must provide adequate published documentation or evidence of its assumptions concerning internal trips.
  - 2. When retail developments are located along an arterial where a significant number of passerby traffic is reasonable, an appropriate adjustment may be made if adequate published documentation or evidence is provided in the study.
  - 3. When the applicant commits to provide pedestrian improvements, ridesharing programs, flextime, or other means of reducing peak hour vehicle travel, appropriate reductions may be allowed in the published trip generation rates for use in the traffic impact study. The Department encourages these strategies and will provide limited technical assistance to applicants requesting this consideration. The Department encourages applicants to pursue travel demand management techniques which are implementable, verifiable, and can be maintained through the life of the project. Annual reports may be required.

### **Trip Distribution**

The trip distribution process will estimate the directional distribution of travel to and from the site for the approximate year of occupancy. Note that trip distribution for residential development (home-based work trip productions) and office development (home-based work trip attractions) are different. Retail development has a trip distribution similar to office development. The trip distribution process may be accomplished by one of three means:

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- A. Use appropriate trip distribution rates from trip tables prepared by state or regional planning agencies; or
- B. Prepare a custom trip distribution based on the “area of influence” method described in the American Planning Association publication *Traffic Impact Analysis* by Greenberg and Hecimovich (PAS Advisory Service Report No. 387, 1984); or
- C. Prepare another acceptable distribution and assignment using data approved in advance by the Department in the Pre-application Conference.

### Vehicle Trip Assignment

- A. The traffic impact study will prepare vehicle trip assignments for the peak hour period or periods which represent the worst case in terms of the sum of existing traffic and the traffic generated by the overall proposed development. Normally this would be the p.m. peak hour. If the trip generation for the a.m. peak hour exceeds 75 percent of the traffic generated by the p.m. peak hour, then both a.m. and p.m. peak hour trip assignments should be prepared. Two trip assignments will be prepared for each peak hour period stipulated above:
  - 1. Generated vehicle trips added to existing traffic assigned on the existing roadway system; and
  - 2. Generated vehicle trips added to existing traffic and to traffic from other planned developments near the site, assigned on the system of existing roadways including recommended improvements; include other nearby large developments which have been rezoned or issued a development permit during the past 24 months. When information about nearby developments is not available, growth factors may be used to inflate existing traffic in lieu of estimating traffic from other developments. Growth factors should be computed from the forecast population and employment of the Census tract which includes the site, and can be obtained from the Department during the Pre-application Conference.
- B. These trip assignments will be prepared and illustrated for the internal roadways and driveways within the overall development, along with the surrounding roadways, intersections, and interchanges in the study area. Trip assignments will describe the peak hour directional vehicle volumes and turning movements at intersections.

### Planned Transportation Improvements

- A. The traffic impact study will include a description of transportation improvements for the study area which are contained in the adopted transportation plans of the City of Valdosta or the Georgia Department of Transportation.
- B. The description of the planned improvements will indicate the current status of planning, engineering, design, and implementation of each project and the relationship of each to the proposed site development plan.

### Identification of Impacts, Problems and Deficiencies

- A. The traffic impact study will analyze the vehicle trip assignments with respect to:
  - 1. The adequacy of existing transportation facilities for existing plus generated traffic;

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2. The adequacy of the existing facilities with planned transportation improvements for the total traffic (existing, plus generated, plus traffic generated by other specified developments); and
  3. Other on-site or off-site improvements or mitigation measures recommended by the applicant.
- B. This analysis will include a comparison of the appropriate peak hour levels of service for the intersections on the surrounding roadways:
1. With existing traffic and geometrics;
  2. With existing plus generated traffic assigned on the existing roadways; and
  3. With total traffic assigned on the roadway system recommended by the applicant.
- C. This analysis will quantify the traffic impacts of the proposed development and address specific traffic problems and roadway deficiencies which the recommendations are designed to relieve. For purposes of this analysis, level of service at intersections will be evaluated using either critical movement summation or delay estimations described in the *Highway Capacity Manual*. Recommended improvements or mitigation measures will be designed such that intersections on all public roadways are expected to operate at level of service D or better at all times.

### Recommended Improvement Measures

- A. The traffic study will conclude with a summary of recommended transportation improvements and impact mitigation measures needed for the overall project and the surrounding roadways to function at the minimum level of service upon full occupancy. When a multi-phase project is proposed, the improvements will be identified for each phase of the project so that a minimum level of service will be maintained throughout all development phases. The traffic study will identify the rights-of-way dedications, paved road lanes and widths, geometrics of principal driveways and intersection improvements, and traffic control devices recommended to achieve this result.
- B. For multi-phase projects, assignments for later phases extending more than ten (10) years in the future may have less detailed recommendations. At a minimum, specify the number of through-lanes required on access routes and major interior roadways, the location of major intersections, and general criteria for spacing driveways and traffic signals.
- C. In addition to roadway and intersection improvements, the traffic impact study may identify other traffic mitigation measures to reduce peak hour traffic vehicle trip-making. One example would be the incorporation of special site plan concepts, including sidewalks, pedestrian amenities and shuttle bus between homes, offices, and stores both within the site and to off-site attractions which may reduce vehicle trip generation to a significant degree. Another example would be an aggressive carpool or vanpool program which includes a computer rideshare matching program and employer-sponsored incentives. "Flexitime" programs can be used, especially for large single occupant buildings with a past history of staggered shift work hours. In each of these cases, the applicant will confer with the Department staff prior to

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submitting the traffic study to discuss the specifics of such a proposal and to agree upon the extent of traffic reduction to be assumed.

- D. The County staff encourages creative approaches to traffic impact mitigation and will give such plans full consideration and support. However, there must be ample evidence of the effectiveness of the specific plan, the commitment of the applicant to implement the program, and a specific mechanism to maintain the program and sustain the full participation of successive owners, managers, and tenants for the life of the project.

### Report Format

The traffic impact study will be presented in an 8 ½" x 11" typed report. The report should include one chapter for each of the eight elements listed in Section 120. The traffic impact study report should include the following illustrations not larger than 11" x 17":

- A. Conceptual site plan – showing the size, location, and arrangement of proposed buildings, parking, and driveways on the site;
- B. Existing roadways in the study area – showing the relationship of the site to the surrounding area and roadway network;
- C. Trip distribution – showing the directional distribution of traffic between the site and the market area;
- D. Existing trip assignments – showing the peak hour turning movement volumes and levels of service at selected intersections in the study area, using a diagram which is as continuous as possible;
- E. Future trip assignments – showing the peak hour turning movement volumes and levels of service at selected intersections in the study area, using a diagram which is as continuous as possible; prepare a separate diagram for each of the assignments required. Project-generated traffic volumes should be indicated distinctly from total traffic volumes in each of these diagrams.
- F. Recommended transportation improvements – illustrating the location and extent of recommended new roadways, widenings, intersection improvements, traffic control devices, and other physical improvements, either on-site or off-site.

### Staff Review of Traffic Impact Studies

The Department will coordinate the review of traffic impact studies by affected Departments prior to the first review of the corresponding applications for rezoning, conditional use permit or preliminary plat approval by the Department. If necessary, the Department will convene a meeting and prepare a consolidated set of written comments from the reviews made by affected Departments. Those comments will be summarized in the normal staff review process of applications prepared by the staff for agenda packages of the Department and City Council.