

## **GUIDELINES FOR TRAFFIC IMPACT ANALYSIS (ZONING PETITIONS)**

### **(A) INTENT**

This Section is intended to help ensure that new development does not adversely affect the capacity of streets and intersections to safely and efficiently accommodate vehicular traffic. It seeks to do so by providing a standard set of analytic tools and format that can be used to identify a development's expected traffic impacts on the road system, any traffic problems associated with access to and from the development site, and any improvements or site design modifications needed to solve potential adverse traffic impacts and access problems.

### **(B) TRAFFIC IMPACT ANALYSIS REQUIRED**

A traffic impact analysis shall be required as part of any rezoning petition (see Section 1-1-7), Special Use Permit petition (see Section 1-1-11), or other application for a land use permit (as authorized under Section 1-1-23) that would allow or proposes development expected to generate (A) one hundred (100) or more added vehicle trips (i.e. new trips – no pass-by or internal capture shall be used in calculating “added vehicle trips”) to or from the site during the peak traffic hour of either the proposed development or the adjacent roads and intersections, or (B) one thousand (1,000) or more added vehicle trips to or from the site in a day - based on trip generation estimates made in accord with the most recent editions of Trip Generation and Trip Generation Handbook, published by the Institute of Transportation Engineers (ITE).

The Planning Director may waive this requirement where the petitioner or applicant shows that that the proposed development's impact on adjacent roads and intersections will be minimal and insignificant, or will be no greater than those projected by a traffic impact analysis prepared and submitted within the past two (years) for the same site under the same or similar background conditions. The Planning Director shall document the reasons for any waiver.

### **(C) TRAFFIC OPERATIONS STANDARDS**

The traffic impact analysis must demonstrate that the proposed development would not cause build year peak hour levels of service on any arterial or collector road or intersection within the analysis area to fall below Level of Service (LOS) "D" (as defined by the latest edition of the highway capacity manual) or, where the existing level of service is already LOS "E", that the proposed development would not cause the LOS to fall to the next lower letter grade. If the road segment or intersection is already LOS “F”, the traffic impact analysis must demonstrate that the proposed development, with any proposed improvements, would not cause buildout year peak hour operation to degrade more than 5% of the total delay on any intersection approach. To the extent that the petition or application proposes specific access points, the analysis must also demonstrate that the proposed development would avoid unsafe congestion conditions on adjacent roads. Failure to meet these standards may serve as a basis for denying the petition or application, or (except with rezoning petitions) for conditioning approval of the petition or application on

provision of improvements or other mitigation measures needed to correct deficiencies due to the proposed development's impacts.

(D) ANALYSIS AREA

The analysis shall address the proposed development's traffic impacts on at least:

- (a) Roads and intersections within the development site as designated by county planning staff or review consultant;
- (b) Road segments and intersections abutting the development site as designated by county planning staff or review consultant; and
- (c) off-site road segments and intersections where traffic from the proposed development is expected to account for at least ten (10) percent of the average daily traffic (i.e., percent increase to existing volumes) on the road segment or any approach leg of the intersection.

(E) TRAFFIC IMPACT ANALYSIS CONTENTS

The analysis shall include charts, graphics, and narrative presenting at least the following information:

- (1) Existing conditions: a description of existing land uses and development intensities in the analysis area, the location and characteristics (functional classification, number of lanes, speed limit, signalization, etc.) of roads and intersections in the analysis area, and the existing traffic volumes and conditions (including levels of service) of those roads and intersections.
- (2) Proposed development: a description of the location and traffic-related characteristics (land use(s), intensity, expected date of full build out and occupancy, vehicular access points and characteristics, etc.) of the proposed development and other developments in the analysis area that are under construction, approved, or pending approval, as well as roadway and other transportation facilities and improvements in the analysis area that are under construction, programmed, or planned (adopted Thoroughfare Plan, Collector Street Plan, etc.).
- (3) Projected traffic: projections of future background traffic (existing traffic volumes forecasted to buildout year levels based on agreed upon growth rate plus traffic generated by other development in the analysis area that is under construction, approved, or pending approval, future site traffic, and total future traffic (the sum of future background traffic and future site traffic). Future background and site traffic projections shall be made for the peak hour(s) (as identified by county planning staff or review consultant) of the adjacent road segments and intersections and for the development's expected full build-out and occupancy date, and shall include trip generation, trip distribution (using pre-approved distribution by county planning staff or review consultant), and traffic assignment estimates.
- (4) Traffic impact analyses: analyses of the proposed development's incremental impacts on road capacity during peak hours at all site access points and at road

segments and intersections in the analysis area (including determination of the level of service for the road segments and intersections, review queuing vs. existing/proposed storage), on the need for signalization of intersections in the analysis area, and on existing or potential high accident areas as referenced in the adopted transportation plan or determined by county planning staff). A qualitative analysis/review of sight distance at access points shall be included where appropriate.

- (5) Recommended impact mitigation measures: a description of the location, nature, and extent of site access and transportation improvements and other measures recommended to mitigate any failure to meet traffic operation standards due to the proposed development's traffic impacts, including the expected effectiveness of each mitigation measure in addressing deficiencies, the feasibility of implementing the measures, suggested allocation of responsibility for funding and implementing the measures, the measures' relationship to planned public transportation improvements, and a suggested time schedule for the implementation of the measures.
- (6) Qualifications: (a P.E. certification shall be required of the preparer of the analysis) a resume of the preparer(s) of the analysis, demonstrating specific education, training, and professional experience in traffic-related analyses and, if the analysis involves roadway or traffic signal design, traffic engineering.

Where the analysis accompanies a rezoning petition, its description of the proposed development shall indicate the full range of land uses and development intensities allowed by the proposed zoning and identification of the allowable land use/intensity that can be expected to have the greatest traffic impact on peak hour traffic on adjacent roads and intersections. This highest impact land use/intensity shall constitute the "proposed development" for which traffic projections are made and traffic impacts are analyzed.

The analysis shall identify all assumptions and data sources used in its projections, analyses, and recommendations. (A trip generation comparison should be conducted between existing vs. proposed zoning)

## **TRAFFIC IMPACT ANALYSIS (SUBDIVISION PETITIONS)**

### (A) INTENT

This Section is intended to help ensure that new development does not adversely affect the capacity of streets and intersections to safely and efficiently accommodate vehicular traffic. It seeks to do so by providing a standard set of analytic tools and format that can be used to identify a development's expected traffic impacts on the road system, any traffic problems associated with access to and from the development site, and any improvements or site design modifications needed to solve potential adverse traffic impacts and access problems.

(B) TRAFFIC IMPACT ANALYSIS REQUIRED

A traffic impact analysis shall be required as part of any application for preliminary plan approval (as authorized under Section 3-3-2) that proposes a subdivision whose development is expected to generate (A) one hundred (100) or more added vehicle trips (i.e. new trips- no pass-by or internal capture shall be used in calculating “added vehicle trips”) to or from the site during the peak traffic hour of either the proposed development or the adjacent roads and intersections, or (B) one thousand (1,000) or more added vehicle trips to or from the site in a day - based on trip generation estimates made in accord with the most recent editions of Trip Generation and Trip Generation Handbook, published by the Institute of Transportation Engineers (ITE).

The Subdivision Administrator may waive this requirement where the applicant shows that that the proposed development's impact on adjacent roads and intersections will be minimal and insignificant, or will be no greater than those projected by a traffic impact analysis prepared and submitted within the past two (years) for the same site under the same or similar background conditions. The Subdivision Administrator shall document the reasons for any waiver.

(C) TRAFFIC OPERATIONS STANDARDS

The traffic impact analysis must demonstrate that the proposed development would not cause build year peak hour levels of service on any arterial or collector road or intersection within the analysis area to fall below Level of Service (LOS) "D" (as defined by the latest edition of the highway capacity manual) or, where the existing level of service is already LOS "E", that the proposed development would not cause the LOS to fall to the next lower letter grade. If the road segment or intersection is already LOS “F”, the traffic impact analysis must demonstrate that the proposed development, with any proposed improvements, would not cause buildout year peak hour operation to degrade more than 5% of the total delay on any intersection approach. To the extent that the petition or application proposes specific access points, the analysis must also demonstrate that the proposed development would avoid unsafe congestion conditions on adjacent roads. Failure to meet these standards may serve as a basis for denying the petition or application, or (except with rezoning petitions) for conditioning approval of the petition or application on provision of improvements or other mitigation measures needed to correct deficiencies due to the proposed development's impacts.

(D) ANALYSIS AREA

The analysis shall address the proposed development's traffic impacts on at least:

- (a) roads within the development site;
- (b) road segments abutting the development site; and
- (c) off-site road segments and intersections where traffic from the proposed development is expected to account for at least ten (10) percent of the average daily traffic on the road segment or any approach leg of the intersection.

(E) TRAFFIC IMPACT ANALYSIS CONTENTS

The analysis shall include charts, graphics, and narrative presenting at least the following information:

- (2) Existing conditions: a description of existing land uses and development intensities in the analysis area, the location and characteristics (functional classification, number of lanes, speed limit, signalization, etc.) of roads and intersections in the analysis area, and the existing traffic volumes and conditions (including levels of service) of those roads and intersections.
- (2) Proposed development: a description of the location and traffic-related characteristics (land use(s), intensity, expected date of full build out and occupancy, vehicular access points and characteristics, etc.) of the proposed development and other developments in the analysis area that are under construction, approved, or pending approval, as well as roadway and other transportation facilities and improvements in the analysis area that are under construction, programmed, or planned (adopted Thoroughfare Plan, Collector Street Plan, etc.).
- (3) Projected traffic: projections of future non-site traffic (through traffic growth plus traffic generated by other development in the analysis area that is under construction, approved, or pending approval), future site traffic (traffic from generated by the proposed development, and total future traffic (the sum of future non-site traffic and future site traffic). Future non-site and site traffic projections shall be made for the peak hour(s) of the adjacent road segments and intersections and for the development's expected full build-out and occupancy date, and shall include trip generation, trip distribution, and traffic assignment estimates.
- (4) Traffic impact analyses: analyses of the proposed development's incremental impacts on road capacity during peak hours at all site access points and at road segments and intersections in the analysis area (including determination of the level of service for the road segments and intersections, review queuing vs. existing/proposed storage), on the need for signalization of intersections in the analysis area, and on existing or potential high accident areas as referenced in the adopted transportation plan or determined by county planning staff). A qualitative analysis/review of sight distance at access points shall be included where appropriate.
- (5) Recommended impact mitigation measures: a description of the location, nature, and extent of site access and transportation improvements and other measures recommended to mitigate that could any failure to meet traffic operation standards due to the proposed development's traffic impacts, including the expected effectiveness of each mitigation measure in addressing deficiencies,

the feasibility of implementing the measures, suggested allocation of responsibility for funding and implementing the measures, the measures' relationship to planned public transportation improvements, and a suggested time schedule for the implementation of the measures.

- (6) Qualifications: (a P.E. certification shall be required of the preparer of the analysis) a resume of the preparer(s) of the analysis, demonstrating specific education, training, and professional experience in traffic-related analyses and, if the analysis involves roadway or traffic signal design, traffic engineering.

The Where the analysis accompanies a rezoning petition, its description of the proposed development shall indicate the full range of land uses and development intensities allowed by the proposed zoning and identification of the allowable land use/intensity that can be expected to have the greatest traffic impact on peak hour traffic on adjacent roads and intersections. This highest impact land use/intensity shall constitute the "proposed development" for which traffic projections are made and traffic impacts are analyzed.

The analysis shall identify all assumptions and data sources used in its projections, analyses, and recommendations. (A trip generation comparison should be conducted between existing vs. proposed zoning)