



PROPOSED TEXT AMENDMENTS – PUBLIC HEARING – June 2019
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SECTION 9.3 TRAFFIC IMPACT ANALYSIS (TIA) REQUIREMENTS

A. Introduction

The purpose of this section is to enhance and further support the implementation of the Traffic Impact Analysis (TIA) of the Gaston County, North Carolina Unified Development Ordinance (UDO).

A Transportation Impact Analysis (TIA) provides information on the projected traffic expected from a proposed development. A Traffic Impact Analysis (TIA) is one of the tools Gaston County, NC employs to ensure development impacts are properly mitigated and the growth is manageable and sustainable. The Traffic Impact Analysis (TIA) will be used to inform decision makers regarding rezonings, preliminary plats, site plans, and some special exception applications.

Public policy makers, citizens, and developers all have a stake in understanding and responding to additional demands on the transportation network. A properly developed Traffic Impact Analysis (TIA) can provide the factual basis for more informed decision making and facilitate the timely implementation of effective mitigation measure.

The main purposes of the Traffic Impact Analysis (TIA) are:

- 1. Identify existing traffic conditions within the study area boundary.*
- 2. Detect volumes generated by the existing and proposed development on the parcel(s), including the morning peak, afternoon or evening peak, and average annual daily traffic levels.*
- 3. Identify the distribution of existing and proposed trips through the street network.*
- 4. Analyze capabilities of intersections located within the study area.*
- 5. Make recommendations for improvements designed to mitigate traffic impacts and to enhance pedestrian access to the development from the public right-of-way.*
- 6. Include other pertinent information, including but not limited to accidents, noise, and impacts or air quality and other natural resources.*

A development application (rezoning, site plan, preliminary plat, and some other special exceptions) will not be deemed complete until a final approved Traffic Impact Analysis (TIA), if required, is received and approved by the Gaston County Planning and Development Services Director or designee. In addition, applicants should note that interagency and intergovernmental coordination is necessary for projects that impact transportation facilities maintained by State or Municipal Governments.



B. Traffic Impact Analysis (TIA) Process

The first step in the TIA process is the preparation of a scoping report. The report will include a site plan, quantitative description of the proposed development and land use along with a vicinity map. The scoping report will be used to determine if a TIA is needed and if there are any safety issues associated with the development. The County, a Transportation Consultant for the County, the Applicant, the Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO), and NCDOT staff may participate in this initial step.

Traffic Impact Analysis (TIA) is required when a proposed development or redevelopment will generate one hundred (100) or more new peak hour trips or the total added volume is equal to one thousand (1,000) vehicles per day, based on the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, and that generally would have a significant impact on existing Level of Service (LOS).

The Traffic Impact Analysis (TIA) must be prepared by a qualified traffic engineer registered in the State of North Carolina and approved by Gaston County. The cost of the Traffic Impact Analysis (TIA) study shall be paid for by the applicant. Consultants completing the required TIA shall be selected from a list of qualified traffic engineer consultants established and approved by the Gaston County Planning and Development Services Director or designee on a biennial basis. Other consultants may be used with the advance written approval of the Gaston County Planning and Development Services Director or designee.

If the TIA scope for a proposed project includes roads or property within municipal limits, the municipality shall be provided with TIA drafts for courtesy reviews. For projects requiring a TIA, no plan approvals will be provided by Gaston County staff until the TIA is approved by all reviewing agencies. If a proposed project requires a Traffic Impact Analysis (TIA) that impacts a road or roads maintained by the North Carolina Department of Transportation (NCDOT), Gaston County staff shall not approve the Traffic Impact Analysis (TIA) until confirmation of approval of the project's general concept is received from the NCDOT staff.

The Traffic Impact Analysis (TIA) must conform to all the requirements in this section and shall be prepared in accordance with the NCDOT current Policy on Street and Driveway Access to North Carolina Highways manual. The Traffic Impact Analysis (TIA) report must describe and include:

1. The Study Methodology
2. The Data Used
3. The Study Findings
4. The Recommendations based on the results



If the results of a Traffic Impact Analysis (TIA) demonstrate that a proposed development may overburden the road system based on impacts to the general health, safety and welfare of the citizens of Gaston County, the Gaston County Planning and Development Services Director or designee may impose certain conditions to alleviate the negative impacts described by the Traffic Impact Analysis (TIA).

The following projects shall not be required to submit a Traffic Impact Analysis (TIA):

1. Developments (or phases of) that were approved prior to the effective date of the Traffic Impact Analysis (TIA) that have maintained valid planned development master plans, preliminary plats, major site plans or conditional use permits. Any additional phases need to be submitted according to the requirements of this section.
2. Where approved by the Gaston County Planning and Development Services Director or designee, redevelopment of any site on which the additional traffic at peak hour represents an increase of less than one hundred (100) trips from the previous development, where the redevelopment is initiated within twelve (12) months of the change of use of the previous project.
3. Minor subdivision, as defined in Chapter 13.

C. Traffic Impact Analysis (TIA) Application Modification

An applicant may modify an application to minimize the traffic-related effects identified in a Traffic Impact Analysis (TIA). The applicant may include:

1. A reduction in the projected vehicle trips per day
2. The dedication of additional right-of-way
3. The re-routing of traffic and proposed access and egress points
4. Participation in the funding of traffic signals or intersection improvements
5. Utilization of Public Transit System
6. Emerging Technologies
7. Other modifications determined to be necessary

All Traffic Impact Analysis (TIA) reports must include a statement of compliance with adopted transportation plans, programs, and policies adopted by Gaston County, Municipalities, NCDOT or GCLMPO for maintaining a safe, reliable, and efficient multi-modal transportation system.

D. Traffic Impact Analysis (TIA) Appeal

Final action on a Traffic Impact Analysis (TIA) may be appealed to the Gaston County Planning Board.

The Gaston County Planning Board may approve the Traffic Impact Analysis (TIA) if the



Board determines that the applicant has satisfactorily mitigated adverse traffic effects; or additional traffic from the project has an insignificant effect on Gaston County roads.

E. Traffic Impact Analysis (TIA) Expiration

If a proposed development does not commence in a timely fashion, fully built out within the proposed timeframe, or the market dictates a change in land use from what was approved within the Traffic Impact Analysis (TIA) document, changes or updates to a previously approved TIA may be required. To address these changes and other deviations from approved TIA scopes, these guidelines are provided to determine when a revised TIA is required.

An approved TIA will be considered valid unless:

1. The build year date is exceeded by more than twelve (12) months.
2. Road improvements have been constructed within the study area and were not considered in the original TIA or change the distribution of traffic within the study area.
3. Road improvements considered in the original TIA that were needed to achieve the targeted Level of Service (LOS) and mitigate the impacts of the proposed development or change the distribution of traffic within the study area were not completed within the timeframe projected in the TIA.
4. Development occurs within the study area that is significantly greater than the anticipated background growth (from a rezoning, annexation, etc).
5. The developer of the site proposes to increase the number of residential units in developments approved to contain up to three hundred (300) units by ten percent (10%) or more, in development approved to contain three hundred (300) or more units by five percent (5%) or more, or to increase the commercial square footage of gross and leasable floor area by twenty percent (20%) or more.
6. A change in use or scale of the development is proposed that may result in an increase in trip generation, a change in traffic distribution, change in access points, or additional impact to a Level of Service (LOS).

When a development's Traffic Impact Analysis (TIA) is considered to no longer be consistent with the previously approved scope for one or more of these reasons, additional development of the site shall not be approved by Gaston County Planning and Development Services Director or designee until a revised TIA is approved by all reviewing agencies.



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5.11.2 PROCEDURES

- C. 5. A traffic impact *analysis, if required, shall be in compliance with the requirements as defined in Chapter 9.* ~~study of the proposed development prepared by a qualified transportation or traffic engineer or planner. Information requested to be a part of the impact study may include:~~
- a. ~~Existing traffic conditions within the study area boundary.~~
 - b. ~~Traffic volumes generated by the existing and proposed development on the parcel, including the morning peak, afternoon or evening peak, and average annual daily traffic levels.~~
 - c. ~~The distribution of existing and proposed trips through the street network.~~
 - d. ~~Analyses of the capacities of intersections located within the study area boundary.~~
 - e. ~~Recommendations for improvements designed to mitigate traffic impacts and to enhance pedestrian access to the development from the public right-of-way; and~~
 - f. ~~Other pertinent information, including but not limited to accidents, noise, and impacts of air quality and other natural resources.~~



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TABLE 2.7-1 DEFINED TERMS		
Term	Use Table Subcategory*	Definition
Level of Service (LOS)		<i>The Highway Capacity Manual (HCM) defines levels of service as “qualitative measures that characterize operational conditions within a traffic stream and their perception by motorists and passengers”. Level of Service (LOS) is also a letter designation that describes a range of operating conditions on a particular type of road facility.</i>
Traffic Impact Analysis		<i>Also known as a Traffic Impact Study or Traffic Impact Assessment, is a specialized study that evaluates the effects of a development’s traffic on the surrounding transportation infrastructure. The report is produced by a qualified professional (a.k.a. Private Engineering Firms, Professional Engineer or Traffic Engineer) hired by applicant. A TIA is essential to determine required improvements to the State Highway System within the vicinity of the development necessary to mitigate potentially undesirable impacts. i.e. Transportation Engineer, Transportation Planner, Traffic Engineer, etc.), in association with subdivision plat approval that, at a minimum, addresses the following items in relationship to the proposed subdivision:</i> <ol style="list-style-type: none"><i>a. An estimation of traffic generated;</i><i>b. An estimation of trip distribution to and from the development;</i><i>c. An analysis of the existing road system serving the development (to the nearest major intersections) and the effect of the development on that system;</i><i>d. A listing of proposed improvements, both on and off site, and their effect on the existing system.</i>
Trip Generation		<i>A forecast of the amount of trips associated with specific land uses. A trip generation report should include:</i> <ul style="list-style-type: none"><i>• Total daily trips (unadjusted Average Daily Trips)</i><i>• AM peak hour (enter/exit)</i><i>• PM peak hour (enter/exit)</i> <i>A trip generation is used to provide a measure of the magnitude of the development and associated traffic impacts (unadjusted trips). Also forms the foundation of the Traffic Impact Analysis (TIA), and has a direct effect on the required mitigations.</i>