A guide for traffic studies
in partial fulfillment of Sections 59.7 & 71 of the Zoning Ordinance
& Section 32 of the Subdivision Ordinance requiring traffic studies
for projects creating 100 peak hour trips.
Traffic Impact Study Standards

Minimum Requirements

The application for all proposed developments must include a transportation information sheet completed by the applicant. The information on this sheet includes the Project Name, existing zoning or use, proposed zoning or use, total number of proposed units in the case of residential development, gross floor area (thousands of square feet) in commercial and industrial developments or the appropriate variable(s) as determined in consultation with County and MPO Staff for estimating the trip generation characteristics of the proposed development, using the Institute of Transportation Engineers (ITE) Trip Generation Manual (most recent edition) and an estimate of the AM and PM peak hour driveway (street) traffic to be generated by the proposed development. Any estimates of peak hour traffic not using the most recent ITE Trip Generation Manual must identify the source of the information. The information sheet should also have attached a project location map and minor thoroughfares at a scale that adequately identifies possible areas of concern. The applicant should also identify any proposed thoroughfares in the immediate vicinity of the proposed development on the map attached to the information sheet. The location of any improvement to a street or the provision of other transportation services proposed by the applicant should be noted on the information sheet.

After this initial review a traffic impact study may be requested in accordance with the following additional requirements. Consideration will also be given to NCDOT to eliminate any duplication of study recommendations that they may require.

Additional Requirements

Those new developments that are anticipated to generate more than 100 trips during any peak hour period on the surrounding roadways (generally 7:45 - 8:45 AM and 4:45 - 5:45 PM) upon completion of all or any portion of the project must submit a written traffic study prepared by a reputable firm or individual with expertise in traffic engineering or planning. In the case of currently developed property a net increase of 100 peak hour trips will also require the completion of a study. The firm and individual conducting the study should meet with County and MPO staff as well as representatives from NCDOT to establish the scope of the study. These staff members will inform the consultant of the site-specific issues that need to be addressed by the study in a timely manner after the scoping meeting. Staff will make available existing data on traffic operations in the vicinity of the proposed project upon request by the applicant. The information will be provided at no cost to the applicant, will include all existing and appropriate signal timing, capacity, and traffic count information in the vicinity of the proposed project. The traffic impact study shall be submitted at least four weeks in advance of the first scheduled meeting at which the project will be reviewed.

The Study shall include the following items at a minimum.

(A) Study purpose and objectives:

(B) Description of site and study area boundaries including appropriate mapping and the rationale for selection of the study area boundaries:

(C) A summary of existing conditions including but not limited to surrounding street and key intersection traffic volumes, turning movements, and capacities, safety deficiencies and funded transportation improvements:

(D) Anticipated or approved developments in the area;
Trip generation, trip distribution, modal split, and discussion
the source of trip generation rate including the ITE code used to
ty and intersect operating conditions for the year of the ultimate
determine projected background traffic as well as the traffic generated by the proposed development. If the unphased buildout period
the project is greater than nine years, then a minimum of one intermediate and one full buildout impact assessment is required.
Assessments should include the following three scenarios:
- Maximum possible development under existing use or zoning;
- For assessment of project phases the cumulative development of the portion(s) of the property to be built out during phasing is to be assessed; the impact of the development of a phase is not to be compared with the total possible build out of the entire project location.
- Proposed development

Recommendation for site access and transportation improvements or mitigation measures needed to maintain traffic flow to,
within and adjacent to the proposed development at an acceptable and safe level of service (generally assumed at LOS D). Any recommendations for travel demand measures, extension of public transportation or roadway improvements should identify funding sources for these improvements.

Data collected for the study will be made available to County MPO staff for evaluation of the study conclusions. The format
r data submission as well as the format for data to be provided by

The County will be determined at the study scoping meeting.

(I) When a traffic impact study projects that the intersection(s) or roadway(s) in the study area will be inadequate then either of the
following alternatives shall be considered by the County:

1. The project is deferred or reduced in scope so that the level of service standard is not exceeded, or

2. A mitigation plan is submitted for review by the County and/or the NCDOT. The mitigation plan together with the recommendations of the departments are presented to the Planning Board and/or County Commissioners. The elected body has the authority to either approve or disapprove those projects solely under its jurisdiction.

3. The developer's proportionate share of the improvements recommended in the mitigation plan are the responsibility of the developer to implement unless 100% of construction costs for the projected improvements and the subject budget year of the seven year Transportation Improvement Program or the local Government's Capital Improvements Program.

4. The developer may agree to pay fees to fund the necessary improvements by written agreement with the County and/or NCDOT.

(J) If the existing level of service is inadequate (i.e. "E" or "F"), or
the existing plus the background growth (not including the site)
causes an inadequate level of service, then the developer will be expected to mitigate only the traffic to be generated by the proposed project.

(K) If the proposed development is of significant economic importance it may be recommended that the developer be granted an exception and/or waiver where improvements are scheduled or included in either the NCDOT TIP or locally approved Capital Improvements Program.
A mitigation plan is:

1. an addition to a traffic impact study, (the recommendation for which is identified by preliminary study results).
2. Intended to identify specific causes of lowered levels of service (traffic impacts);
3. Recommends improvements that will moderate the effects of projected traffic impacts;
4. Recommends transportation demand management options.

Where legally allowed, examples of possible mitigation plan improvements may include, but are not limited to: construction of new roads, road improvements, traffic signals, ridesharing programs, off-site parking facilities, and para-transit, signal timing/phasing changes, channelization modifications, changes in ingress/egress points, reducing the number of entrances, and/or lane widening.

Mitigation Plan improvements may be phased and shall be sensitive to the following:

1. timing of short-term and long-term network improvements that are already planned, scheduled and/or funded;
2. time schedules of adjacent developments;
3. size and timing of individual phases of development;
4. right-of-way needs and availability of right-of-way within appropriate time frames;
5. local priorities for transportation improvements and funding;
6. local priorities for transportation demand management strategies;
7. necessary lead time for additional design and construction;
8. that the sum of improvements are proportional to the projected impact.

Analysis of traffic needs by development phase should provide the information needed to determine the appropriate sequence of improvements.