

TRAFFIC IMPACT STUDY APPLICATION PROCESS AND METHODOLOGY

A Traffic Impact Study (TIS) is required upon a developer submitting application for a building permit and/ or zoning approval. However, the Department strongly urges developers to request a preliminary TIS determination early-on in the development process (i.e. at the time of submitting documents to the Development Review Committee). Studies completed very early in the development process may need to be updated to include additional details as the site plans become specific. The initial study should be reviewed to ensure consistency with the current development plan or to indicate the need for additional study because of substantial changes in impact over those predicted initially.

1.0 STEP BY STEP PROCESS

1. Applications for a Traffic Impact Study shall be addressed in the form of a letter to: Senior Traffic Engineer, City of Coral Gables, Department of Public Works, 2800 SW 72 AVE, Miami, FL 33155. Requests transmitted by email will be considered. Requests should also be copied to staff of other departments involved in the project such as: Planning & Zoning Division Director, City of Coral Gables, 427 Biltmore Way, Suite 201, Coral Gables, FL 33134.
2. Applications shall state the name, address and phone number of the developer or developer's representative, the location and scope of the project and any maps, drawings, site plans, an estimate of the number of vehicle trips generated by the proposed development using the procedure outlined in the latest edition of Institute of Traffic Engineering (ITE) Trip Generation Manual/Handbook, or other information that may be useful to the Department in making a preliminary determination on the need for a Traffic Impact Study. Maps should not be larger than 11" x 17".
3. Within 5 business days of the receipt of the application, the City of Coral Gables Senior Traffic Engineer will notify the applicant by email:
 - a. Whether and, if so, what additional information is needed to evaluate the application; or,
 - b. If no additional information is needed, whether a Traffic Impact Study is required
4. A Traffic Impact Study is required if it will generate fifty (50) or more added (new) peak hour two-way trips to or from the site during the adjacent roadway's peak hours or the development's peak hours. If a TIS is required, the applicant shall schedule an appointment with the Department staff and consultants to participate in a scoping meeting to prepare a scope/budget for the TIS.
5. Within 5 days of the scoping meeting, the applicant will receive a Standard Agreement which outlines the terms and conditions of the study performance, scope, and estimated fee. The Department shall not issue Notice to Proceed on the Traffic Impact Study until the estimated fee is paid in full.
6. Within 45 days of receipt of payment, the Department shall transmit the draft Traffic Impact Study to the applicant, along with a statement of charges required for final payment, if necessary.
 - a. If, at any time during the conduct of the Traffic Impact Study, the applicant makes significant changes to the size, use or design of the proposed development, the applicant is required to promptly notify the Senior Traffic Engineer in writing. Upon receipt of said changes, the Department shall promptly adjust the Scope of Work and advise the applicant of additional costs or delay in the completion of the Study.
7. In the case of a development proposed by a City, State, or Federal agency, the respective Agency will be considered as the applicant.

2.0 TRAFFIC IMPACT STUDY METHODOLOGY

A TIS is required:

- Whenever a proposed development will generate fifty (50) or more added (new) peak hour two-way trips to or from the site during the adjacent roadway's peak hours or the development's peak hours
- When any current traffic problems or concerns in the local area such as an offset intersection, a high number of traffic accidents, etc. exist
- When development occurs in a sensitive area where the adjacent neighborhoods or public in general may perceive an adverse impact

- When other site specific problems or concerns that may be aggravated by the proposed development (at the City's discretion)

The City of Coral Gables has established the following guidelines for the preparation of Traffic Impact Studies (TIS) reports to ensure consistency of analysis and adequacy of information presented and timely review by city.

- **Project scoping meeting:** To be held between the applicant, the City's consultant and the Senior Traffic Engineer, to discuss the methodology, study area, requirements, format and submission date(s)
 - Study Area Limits
 - All site access drives
 - Adjacent roadways and major intersections
 - First signalized intersection in each direction from the site based on local policy
 - When the study area identified do not provide sufficient information to meet the intent of the TIS, the Public Works Director or designee may require expansion of the study area
- **Background Data Needed**
 - Traffic counts (passenger cars and heavy vehicles). May include pedestrian and bicycles if requested by the City
 - Two-hour peak periods (7:00-9:00 AM and 4:00- 6:00 PM) intersection turning movement counts (TMCs). Traffic counts shall be performed on typical midweek days – no accidents, weather events, holidays, school closures, special events, etc. If the proposed project is not expected to generate new net trips or a very low number of new trips during either the morning or evening peak periods the requirement to analyze one or both of these periods may be waived by the Public Works Director or designee. Where the traffic peak hour in the study area occurs during a time period other than the normal commuting morning or afternoon peak periods of the adjacent street network, or occurs on a weekend, or if the proposed project has unusual peaking characteristics, these peak hours must also be analyzed.
 - Roadway Link Counts (hourly for 72 hours) shall be collected on the links most impacted by the proposed development

The traffic volumes for the analysis hours should be adjusted for the peak season. Use of seasonal adjustment factors should be approved by the Public Works Director or designee.

- Signals location, timing and signal operating plan (SOP).
 - Traffic signals shall be identified by Miami-Dade County Asset ID. Existing signal timing and operating plan shall be utilized in the analysis
- Committed developments
 - All committed developments (any project currently under construction or in any stage of the official development review process) within the study area shall be quantified. If quantifiable data cannot be obtained, an alternative method will be to apply an annual growth factor, developed according to accepted professional practice, in consultation with and approved by the Public Works Director or designee.
- Project trip generation
 - Trip generation shall be estimated using the latest edition of Institute of Traffic Engineering (ITE) Trip Generation Handbook/Manual
 - Trip Distribution shall begin by defining the traffic analysis zone (TAZ) number for the project location. Project trips will be distributed and assigned to the study area using the cardinal distribution data for the project's TAZ from the current adopted Miami-Dade Long Range Transportation Plan (LRTP).
- Future transportation projects
 - Future transportation projects which add capacity to the network shall be quantified. These must be approved and funded projects within the TPO's adopted Transportation Improvement Program (TIP) or improvements to the transportation system programmed by the City or State or private forces included in the most recent Capital Improvement Program
- Build out year

- Represents a date in the future in which the facility/development will be operational. It shall be used as the date for future conditions analysis. Full occupancy and build-out shall be assumed for single-phase developments. Multi-phase developments may require assessment of up to three horizon year corresponding to key phases as directed by the Public Works Director or designee.
- **Level of service (LOS) analysis**
 - Multimodal capacity/LOS/operational analyses for the selected intersections and links for the AM and PM peak hours shall be done using the Synchro software based on the current edition of the Highway Capacity Manual (HCM), and the multimodal LOS (MMLOS) analyses could be performed using ARTPLAN (current version).

Using the data collected, analysis will be undertaken to portray existing conditions, future conditions with committed developments, and future conditions with the project and committed developments. All analyses shall be done utilizing the latest edition of the HCM methodologies and the FDOT Quality/Level of Service Handbook.

- **Mitigation measures**
 - Based on the results of the Level of Service analysis, the TIS must identify one or more reasonable improvements to the transportation system capable of contributing to an acceptable level of service. Types of measures required by applicants to mitigate any traffic impacts may include, but are not limited to:
 - Roadway improvements such as added travel lanes, turning lanes storage requirements, provision of acceleration or deceleration lanes, paving, new traffic signals, pavement markings, signs, signal timing and phasing adjustments, revision of on-street parking regulation, one-way or two way conversions, traffic calming, curb return radii at intersections
 - Transit, bicycle and pedestrian improvements such as new or increased bus service, designation of bicycle lanes or routes, construction or upgrading of sidewalks
 - Transportation Demand Management strategies such as creation of park-and-ride facilities, car pools, car shares, traffic calming measures
 - Monetary Contribution to fund capital or operational costs for roadway, transit or infrastructure improvements
- **Additional technical analysis requested by the Department on a case-by-case basis may include:**
 - Arterial Travel Time and Delay
 - Site access & on-site circulation
 - Vehicle Classification
 - Parking Demand, Utilization and Turnover studies
 - Queuing analysis
 - If the site is to have gates to control access or include a drive-thru, then a queuing analysis shall be performed to determine vehicular queue lengths waiting to enter the site and their impact on the adjacent roadways.
 - Sight distance analysis
 - Gap and Speed studies
 - Origin-Destination Studies
 - Traffic signal timing optimization
 - Signal warrant analysis per Manual on Uniform Traffic Control Devices guidelines
 - Left turn phasing analysis for signalized intersections
 - Safety analysis and review of historical accident data
 - Traffic Calming evaluation
 - Pedestrian and Bicycle Level of Stress
 - Transit Boarding, Alighting and Level of Service, and
 - Evaluation of intersection geometry including turning radii, particularly related to freight movement