



TRAFFIC IMPACT ANALYSIS INFORMATION

Scope of Review Meeting

Project Name: _____ Date: _____

Project Description: _____

Project Location: _____ State Road: __ Yes __ No

Developer: _____ Phone/E-Mail: _____

Consultant: _____ Phone/E-Mail: _____

Study Area Details:

The following intersections will be analyzed:

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Weekday: A.M. _____ P.M. _____ Growth Rate: 2.2% or _____

Weekend: Day _____ Hours _____ ITE Land Use Codes: _____

Design Year: _____ Passby Percentages: _____

Background Traffic (other approved development plans in the vicinity)

1. _____ 3. _____

2. _____ 4. _____

Approved Capital and Development Projects:

1. _____ 2. _____

Notes: _____

TRAFFIC IMPACT ANALYSIS REPORT OUTLINE

Developers of all projects projected to generate 25 new peak hour trips per day or 249 trips per day are required to submit a traffic impact analysis.

§ 165-118 Design standards.

The purpose of good subdivision and site design is to create a functional and attractive development

D. Circulation system design.

- (1) General. The road system shall be designed to permit the safe, efficient, and orderly movement of traffic; to meet, but not exceed, the needs of the present and future population served; to have a simple and logical pattern; to respect natural features and topography; and to present an attractive streetscape.
- (2) Minimum requirements for a Traffic Impact Analysis (TIA).
 - (a) A complete TIA is required for any residential, industrial, institutional or commercial development that is projected to generate 25 new peak-hour trips or 249 trips per day. If a development will generate fewer than 25 new peak-hour trips or 249 trips per day, the Town may, at its discretion, require a TIA. Trip generation projections shall be determined by utilizing methods set forth in the latest available Institute of Transportation Engineers (ITE) Trip Generation Manuals available.
 - (b) The minimum acceptable level of service (LOS) in a residential district shall be "C." The minimum acceptable level of service (LOS) in commercial/industrial districts shall be "D." If any intersection within the study area falls below the minimum LOS, the TIA shall recommend mitigating improvements that address the development's impacts and brings the intersection up to the minimum LOS. If recommended improvements are approved by the Town, it will be the responsibility of the developer to implement the recommendations in the TIA at the developer's sole expense. [Amended 12-19-2011 by Ord. No. 746-11]
 - (c) The study area shall be determined by Town staff, who shall consider the following when determining the parameters of the study area:
 - [1] Study area. The typical study area for a TIA shall consist of a minimum area encompassed by a radius of one quarter mile from the site to be developed and shall include collector or higher-functioning classification road intersections from all approaches to the site as specified in the Town of Bel Air Comprehensive Plan. This area may include intersections which are subject to the jurisdiction of the Maryland State Highway Administration or Harford County. Coordination with these government agencies may be required. **[Amended 12-19-2011 by Ord. No. 746-11]**

TRAFFIC IMPACT ANALYSIS REPORT OUTLINE (Cont.)

- [2] Design year. The design year shall be the projected date of completion of the project, which will be discussed at the preliminary conference. If the projected date of completion is changed significantly, the preliminary plan may be subject to a new TIA. This requirement is to be determined at the sole discretion of the Town.
- [3] Traffic data requirements.
 - [a] Existing traffic counts shall be conducted within a twelve-month period of the submittal date of the TIA. Traffic counts shall be taken on a Tuesday, Wednesday or Thursday, not following a holiday, unless approved otherwise by the Town. If the proposed project is residential or a school is located within either, one mile of the proposed development, or the TIA study limits, then traffic counts shall be taken while school is in session unless approved otherwise by the Town. [Amended 12-19-2011 by Ord. No. 746-11]
 - [b] Trip generation for each land use shall be obtained by utilizing the ITE Trip Generation Manual, current edition. The land use code in the manual shall be indicated for each category. Where a land use is not recognized within the ITE Manual or where local conditions indicate that a development could generate more or less trips than projected by the ITE standard for a particular land use, local trip rates may be required to be developed; however, the data must be submitted to the Town with supporting documentation prior to approval of the rates.
 - [c] For commercial uses or other uses generating peak trip numbers on weekends, the Town may require the TIA to include traffic counts on either Saturday or Sunday (depending upon which day best reflects the proposed land use's peak operation), and the TIA shall include a traffic report for specifically identified peak hours. Operational analyses for the site and or the immediate surrounding road system may be required as well. Pass-by and diverted trip reduction factors may be considered for certain uses if Town staff permits.
- [4] Trip distribution and assignment.
 - [a] Any of the following methodologies shall be acceptable for the purpose of determining trip distribution:
 - [i] Gravity model. This technique may require calibration prior to its use if utilizing an old gravity model for the study area.
 - [ii] Utilization of demographic data.

TRAFFIC IMPACT ANALYSIS REPORT OUTLINE (Cont.)

- [iii] Current directional distribution. (NOTE: This may be unacceptable if the directional distribution will change before the design year to future changes in the land use or transportation system improvements.)
- [b] In any of the above methodologies, Town staff approval is required for use in the study.

- [5] Capacity analysis.
 - [a] Capacity analyses shall be performed for all intersections, roadways, ramps, weaving sections, internal circulation and access points. The analysis shall be in accordance with the latest published version of the Highway Capacity Manual (HCM). Other types of capacity analysis may be requested, such as Critical Lane Volume (CLV), depending on requirements of other jurisdictions with road systems within the Town of Bel Air. It may also be necessary to complete traffic progression analysis, utilizing such programs as HCM (Highway Capacity Manual), VISSIM or Synchro. Queuing analyses may be required to determine both on- and off-site operational concerns where queuing could impact the roadway/internal site operation. The Maryland State Highway Administration has established acceptable cycle lengths. See below. However, actual field-documented cycle lengths may be used if approved by staff.

Level of Service	2 Phases	3 to 5 Phases	6 to 8 Phases
A	90	100	120
B	90	100	120
C	100	120	135
D	120	135	150
E	135	150	165
F	150	165	180

TRAFFIC IMPACT ANALYSIS REPORT OUTLINE (Cont.)

- [b] Unsignalized intersections not meeting the adopted level of service may be required to complete a traffic signal warrant analysis. Unsignalized intersections will be evaluated based on the level of service on the minor approaches to the intersection. Accident history of the intersection may be considered as well.
 - [c] When analyzing background and future conditions, only capital projects with one-hundred-percent funding may be utilized. Other road improvements associated with other developments that have approved plans and an executed public works agreement or state highway access permit may be utilized as well.
- [6] Traffic Operational Analysis. Certain types of developments may have operational impacts within the site, as well as outside the site along the adjacent street system. These impacts may need to be evaluated along with the intersection capacity to accurately assess the potential issues that can be caused by the development. As part of the traffic analysis scope review, staff may identify operational areas of concern, such as on-site vehicle circulation, potential queuing issues, as well as traffic progression issues along the adjacent road system. Staff may request that intersections, outside the study area along the impacted adjacent road system, be included in the operational analysis. To conduct these analyses, programs such as Synchro, Sim Traffic or VISSIM may be required as part of the overall traffic analysis.
- [7] Peak-hour observations. Of particular interest to the Town is the current operation of its roadway system. The Town shall require peak-hour observations be performed by a qualified traffic engineer. The observations shall be conducted at the direction of the Town to address specific operational issues. The specific traffic concerns of the Town will be presented at the preliminary plan meeting. Documentation of the observations shall be included in the transportation impact analysis, with correlations to the existing analyses conducted. If the existing condition analysis and observation identify operational issues, the study should reflect the problem. The Town may not require the developer to fix existing condition problems unless the issue is exacerbated by the development.
- [8] Recommendations. The TIA shall include recommendations if traffic impacts and conditions so warrant. The improvements shall be described in the TIA and should include a basic concept plan that illustrates the recommended improvements. The recommended improvements should be achievable utilizing the latest AASHTO, Maryland State Highway Administration or Harford County guidelines. A TIA without specific

TRAFFIC IMPACT ANALYSIS REPORT OUTLINE (Cont.)

recommendations to mitigate negative impacts shall not be considered complete. [Amended 12-19-2011 by Ord. No. 746-11]

[a] If the TIA determines the existing LOS does not meet the minimum requirements in § 165-118D(2), the developer will be required to mitigate the traffic impacts to an acceptable level of service (LOS) as defined in § 165-118D(2)(b).

- (3) Pedestrian circulation. If pedestrian circulation is identified as an issue by the Town, a pedestrian circulation plan may be required. Observational Analysis of pedestrian movement and volume may be required as part of any traffic study. The pedestrian system shall be designed to permit safe, efficient pedestrian movement, connecting neighborhoods and other destination points. Walking trails identified in the Town of Bel Air Comprehensive Plan and sidewalk connectivity shall be provided by the developer. Developments adjacent to these trails identified in the Town of Bel Air Comprehensive Plan shall have connectivity to these trails. ADA-compliant sidewalks should be placed parallel to the street, with exceptions permitted to preserve natural features or to provide visual interest. Sidewalks proposed to be placed away from the road system may be required to parallel the street for safety reasons. Paving materials and construction shall be in conformance with the Harford County Road Code and State Highway Administration specifications.