

ORDINANCE No. 2025-013

AN ORDINANCE OF THE TOWN OF THOMPSON'S STATION, TENNESSEE TO
AMEND CERTAIN PROVISIONS OF THE LAND DEVELOPMENT ORDINANCE
RELATED TO TRAFFIC IMPACTS AND TRANSPORTATION STUDY GUIDELINES

WHEREAS, the Board of Mayor and Aldermen (BOMA) adopted a comprehensive update to the Town's Land Development Ordinance (LDO), effective July 1, 2024; and

WHEREAS, BOMA, the Thompson's Station Planning Commission (TSPC), and Town Staff have identified provisions within the LDO and Traffic Impact Study Guidelines that require amendments to the LDO to better align with the All Aboard Comprehensive Plans and promote the health, safety, and welfare of the citizens and residents of the Town; and

WHEREAS, Town Staff and TSPC recommended changes to amend various sections throughout the LDO in order to clarify and bolster the newly created Transportation Study Guidelines, subsuming and superseding the Traffic Impact Study Guidelines; and

WHEREAS, the TSPC has reviewed these proposed changes and has recommended that the BOMA adopt the amendments to the LDO as proposed herein; and

WHEREAS, the BOMA has reviewed the LDO and has determined, based upon the recommendations of Town Staff, the TSPC, and the record as a whole, that the proposed amendments to the Traffic and Transportation Study Guidelines and other transportation related improvements are consistent with the All Aboard Comprehensive Plans, will not have a deleterious effect on the Town, make improvements to the LDO, and are in the best interest of the Town.

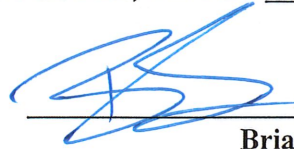
NOW, THEREFORE, BE IT ORDAINED by the BOMA of the Town of Thompson's Station, Tennessee, as follows:

Section 1. That the Town of Thompson's Station's LDO and Appendix E – Traffic Impact Study Guidelines are hereby amended by adopting the changes as set out in Exhibit A and Exhibit B attached hereto and incorporated herein by reference. After final passage, Town Staff is directed to incorporate these changes into an updated, codified LDO document with the date of BOMA approval, and said document shall constitute the updated Land Development Ordinance of the Town.

Section 2. If any section or part of the LDO, including any amendments thereto, is determined to be invalid for any reason, such section or part shall be deemed to be a separate and independent provision. All other sections or parts shall remain in full force and effect. If any section or part of the LDO is invalid in one or more of its applications, that section or part shall remain in effect for all other valid applications.

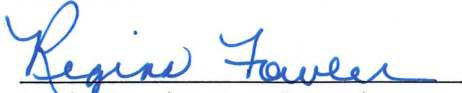
Section 3. This ordinance shall take effect immediately upon the publication of its caption in a newspaper of general circulation after final reading by the BOMA, the public welfare requiring it.

**DULY APPROVED AND ADOPTED BY THE BOARD OF MAYOR AND ALDERMEN
OF THE TOWN OF THOMPSON'S STATION, TENNESSEE, ON THE 9th DAY OF
September, 2025.**



Brian Stover, Mayor

ATTEST:


Regina Fowler, Town Recorder

TSPC Recommendation: 7-22-2025

Passed First Reading: 8-12-2025

Passed Second Reading: 9-9-2025

Public Hearing on the 9th Sept. 2025 at 6:00 p.m., after being advertised in *The Williamson Herald* Newspaper on the ____ day of _____, 2025.

APPROVED AS TO FORM AND LEGALITY:

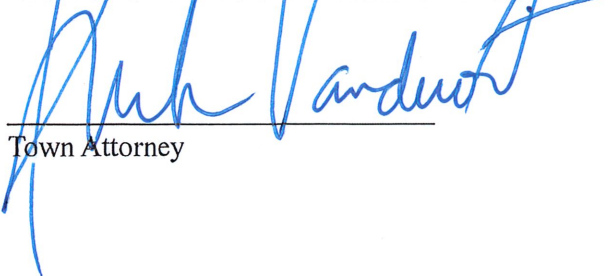

Town Attorney

EXHIBIT "A"

Words noted with a ~~strike through~~ are to be deleted and words in **red text** include new language to be added.

Throughout the LDO

Strike the words “Traffic Study” and replace with the words “Transportation Study”.

Strike the words “Traffic Impact Study” and replace with the words “Transportation Impact Study”.

Section 1.3 Definitions

Add the following terms and definitions to the existing section:

Average Daily Traffic: The average number of vehicle trips on a segment of road or highway during a set interval of time.

Core Intersection: The nearest signalized intersection from a site with one (1) or more access points to a collector, consisting of that collector and an arterial.

Level of Service (LOS): A mechanism used to determine how well a transportation facility operates, including a letter grade and delay time in seconds. Typically, six (6) levels of service are defined, and each is assigned a letter designation from A to F, with LOS A representing the best operating conditions and LOS F representing the worst.

Queue Study: An engineering study used to determine the length of the line of vehicles waiting at an intersection or bottleneck in a corridor, typically measured for each lane of traffic as a distance or number of vehicles.

Safety Study: An engineering study examining crash records to identify potential trends, issues, and high priority intersections or corridors. This study shall include mitigation options expected to decrease future crash rates.

Scoping Action Memo (SAM): A written understanding between the applicant of a transportation study and the Town detailing the study area, applicable developments and intersections, and plan content requirements, as well as other applicable criteria. The SAM will be produced from and be an outcome of the scoping meeting.

Signal Warrant Analysis: An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location to determine whether installation of a traffic control signal is justified at a particular location.

Speed Study: An engineering study for a specific road segment during a certain period of time for a specific sample set to determine mean speed and the speed distribution.

Study Area: A geographical boundary determined by the Town Engineer to be used as the extent for a transportation study, as discussed at the scoping meeting.

Substantial Impact: The burden placed on transportation infrastructure when a proposed development increases the trip generation in an area by a minimum of 5% or degrades Level of Service by one (1) or more levels.

Transportation: The action of taking or carrying someone or something from one place to another.

Transportation Assessment (TA): A preliminary assessment of the potential impacts of an annexation or rezoning request that is less intensive than a Transportation Impact Study.

Transportation Impact Mitigation Measures: Any measure or improvement taken by or required of the developer to lessen, abate, or reduce the transportation impact of the development on the public street and highway systems as outlined in a transportation study.

Transportation Impact Mitigation Offsets: Any measure or improvement taken by or required of the developer to mitigate preexisting substandard levels of service as outlined in a transportation study.

Transportation Impact Study (TIS): A study that assesses the impacts of a proposed development on the existing and future multimodal transportation network. The study must recommend mitigation efforts to address existing deficiencies, as well as anticipated impacts, and must analyze the adequacy of the development's planned access points.

Transportation Study Scoping Meeting: A planning meeting to determine the study area for a transportation study prior to the formal submission of any applicable development, rezoning, or annexation application.

Vehicle Miles Traveled (VMT) Analysis: A measurement of the number of miles traveled for all vehicles in a geographic region over a given period of time.

Volume to Capacity (V/C) Ratio: A measurement that quantifies the sufficiency of the roadway network capacity by dividing the number of vehicles passing through an intersection or roadway segment in a specific time by the expected capacity of the intersection or roadway segment.

Section 3.8.25 Transportation Studies

3.8.25 ~~Traffic Study~~ Transportation Studies

- a. A ~~traffic~~ **transportation** study shall be required by and comply with the Town's ~~Traffic Impact~~ **Transportation Study Guidelines** in addition to the requirements outlined in the LDO. The Town Engineer may require a ~~Traffic Study~~ **transportation study** for any project, based on the particular circumstances of the proposed development and its location in Town, in the Town Engineer's sole discretion.
- b. ~~Traffic~~ **Transportation** studies shall be ~~prepared~~ **performed and stamped** by a **Tennessee licensed Licensed** Professional Engineer **with demonstrated transportation engineering experience** and ~~in good standing with the State of Tennessee~~ using the ~~standard format~~ **required form and content** as outlined by the **Transportation Study Guidelines** ~~Town of Thompson's Station~~. The applicant shall meet with Town Staff prior to ~~initiating the project's~~ **pre-application meeting** ~~traffic study to review/determine the scope of the study.~~ **for a scoping meeting, which will determine the transportation study's parameters. The parameters will be documented in a Scoping Action Memo (SAM).** The completed ~~traffic~~ **transportation** study shall be submitted to the Town for review.
- c. Any project that does not require a ~~traffic~~ **transportation** study may be required by Town Staff to submit a ~~traffic~~ **transportation** analysis for access, trip generation, existing conditions and proposed changes to the existing conditions to ensure the ~~development~~ project complies with the recommendations of the Town's Policy Plans.
- d. **Transportation improvements required by a transportation study shall be constructed with the first phase of development and shall be completed prior to the submittal of the first building permit for the development. Depending on the type of development approval, the TSPC/BOMA may elect to organize the transportation study's recommended transportation improvements and the timing of their construction through the adoption of a Phasing Plan with a detailed Transportation Improvement Schedule that is included both within the vesting document and the transportation study.**

EXHIBIT "B"

Strike the entirety of Appendix E and add the following text:

Appendix E

TRANSPORTATION STUDY GUIDELINES

Introduction

Transportation studies are necessary and effective tools to help the Town of Thompson's Station determine the potential impacts of development on the operations of the surrounding roadways and transportation networks. Two (2) types of transportation studies are described in these guidelines: 1) a Transportation Assessment and 2) a Transportation Impact Study.

As a preliminary step, a scoping meeting will be conducted between Town Staff, the applicant, the study preparer, and the Tennessee Department of Transportation (TDOT), if the project impacts a State Route, to specify parameters for the transportation study, including, but not limited to:

- Approved developments in study area;
- Assumptions;
- Horizon year and phasing years;
- Methodologies;
- Planned transportation projects in study area;
- Mitigation actions, if applicable;
- Required study type(s);
- Study area boundaries and intersections;
- Traffic count requirements;
- Trip generation land use; and
- Sight distance evaluations.

The Town will coordinate with other applicable jurisdictions when appropriate.

These parameters, as determined in the scoping meeting, will be documented in a Scoping Action Memo (SAM). The SAM will be signed by both the applicant and Town Staff, indicating a

shared understanding and agreement of the study's parameters. Written recommendations on the applicable transportation study, along with the completed transportation study, will be provided with the submittal of the overall development application. Failure to complete a SAM with the initial submittal, per LDO Article 2 and the Land Development Manual, shall result in an administrative removal of the development application from the Thompson's Station Planning Commission (TSPC) submittal schedule.

Transportation Study Types

A *Transportation Assessment* is a preliminary assessment of the potential impacts of a rezoning or annexation request that is less intensive than a Transportation Impact Study. This assessment will help Town Staff, TSPC, and Board of Mayor and Aldermen (BOMA) understand the types and magnitudes of potential impact for a proposed zoning change or annexation.

A *Transportation Impact Study* is a more detailed assessment that requires significant investigation and analysis. This study is required at the time of submission of a site plan, preliminary plat, preliminary master plan, or any other development as requested by Town Staff. A Transportation Impact Study may require other relevant analyses, including, but not limited to: a signal warrant analysis, a speed study, a queue study, a safety study, and intersection Level of Service (LOS). The Town Engineer will confirm the required analyses for each specific development during the scoping meeting.

Transportation Assessments and Transportation Impact Studies are both required to be performed and stamped by a Tennessee Licensed Professional Engineer with demonstrated transportation engineering experience.

Transportation Assessment (TA)

A TA shall be required for all annexation or rezoning applications if the application includes a parcel of land that is two (2) acres or greater, or multiple parcels of land that are collectively two (2) acres or greater. TAs will be required for all applications specified above unless a Transportation Impact Study is required instead. In these cases, the requirement of a Transportation Impact Study will supersede the requirement to complete a TA.

The TA is required to be part of an annexation or rezoning application at the time of the annexation or rezoning application's final review and recommendation by Town Staff to TSPC.

Failure of the applicant to submit an approved TA shall result in the Town Staff's recommendation for deferral of the annexation or rezoning request. The TA shall be submitted with the development application per LDO Article 2 and the Land Development Manual.

Preexisting Substandard Conditions Requirements

The Town of Thompson's Station has defined LOS D or volume-to-capacity (V/C) ratio of 0.85 as the minimum standard for collectors, arterials, and intersections during peak hours. The TA must identify any existing conditions of LOS D or worse, or a V/C ratio with a value greater than or equal to 0.85, within the study area.

The applicant will be required to document the presence of preexisting substandard conditions in charts that are submitted as part of the TA. These charts should include a description of each preexisting substandard condition that is present.

Substantial Impact Requirements

If the TA indicates that the proposed annexation or rezoning is projected to increase trip generation in the study area by a minimum of 5% or degrade the LOS of a collector or arterial in the study area by one (1) or more levels, the annexation or rezoning is considered to cause substantial impact to the transportation network within the study area.

Such findings will require the applicant to thoroughly analyze the substantial impact(s). The applicant will be required to document the substantial impact(s) in charts that are submitted as part of the TA. These charts should include a description of the substantial impact(s).

Required Content and Form

Each individual TA will adhere to the parameters agreed upon in the scoping meeting and outlined in the SAM. All TAs must include, at a minimum, the following sections:

Mitigation Executive Summary:

This section should include:

- Whether or not preexisting substandard conditions are present; and
- Whether or not substantial impacts are present.

Project Description:

This section should include:

- Development address;
- Type of development and use;
- Number of units;
- Floor space;
- Anticipated occupancy date;
- Approximate days and hours of operation; and
- Phasing description.

Site Description:

This section should include:

- Site acreage and shape;
- Current zoning;
- Proposed zoning;
- Adjacent land uses; and
- Current roadway access(es).

Existing Transportation Conditions:

This section should include:

- Description of the current roadway(s) in the study area, including number of lanes, classification, posted speed limit, and general roadway condition;
- Existing bicycle and pedestrian facilities in the study area;
- Intersections and traffic control devices in the study area;
- Traffic counts for AM peak and PM peak for all intersections in the study area; and
- Existing LOS for all intersections in the study area, based on the latest edition of the Highway Capacity Manual.

Trip Generation:

This section should be based on practices and methodologies in the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual and include:

- Average Daily Traffic;
- Vehicular AM peak hour generation by the new project, based on maximum allowable density for the proposed zoning classification; and
- Vehicular PM peak hour generation by the new project, based on maximum allowable density for the proposed zoning classification.

Summary and Findings:

This section should include:

- Summary of current transportation network conditions;
- Summary of estimated transportation impacts resulting from the proposed rezoning, annexation, or future development; and
- Engineering-based opinion on the transportation network's ability to accommodate trips generated by the proposed rezoning or annexation and projected future development.

Transportation Impact Study (TIS)

A TIS shall be required for the following:

- a. Any development exceeding, in the aggregate, 15,000 square feet of floor space;
- b. Any development in a Community Commercial (CC), Neighborhood Commercial (NC), Light Industrial (LI), or Mixed Industrial (MI) zoning district;
- c. Any Planned Development Plan;
- d. Major Subdivisions (as defined in Subdivision regulations) at the preliminary plat stage;
- e. Any development located along or with access to an arterial within the Town's limits;
- f. Any development requiring a Special Exception approval by the Board of Zoning Appeals (BZA); or
- g. Any applicable development as determined by Town Staff.

Process Overview

When a TIS is required by these guidelines, it shall be the responsibility of the applicant to become familiar with the standards and requirements of these guidelines prior to submittal of the TIS. All TIS applications shall require a scoping meeting with Town Staff prior to the preapplication meeting for the development application. All other submittal requirements shall be per LDO Article 2 and the Land Development Manual.

A completed and approved TIS is a prerequisite to final approval of the application which required the TIS. To that end, all studies required by these guidelines and the corresponding regulations and resolutions must be completed and approved prior to or concurrently with approval of the application which required the TIS.

Special Considerations and TIS Revisions

If the TIS does not contain all required information prescribed by these guidelines, the applicant

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will be notified, and a revised study shall be submitted. Said notification will reset the TSPC application submission schedule.

Furthermore, if the proposed project changes, the TIS may need to be revised to align with the new request and resubmitted. Town Staff will determine the need for a revised TIS based on the character and extent of the proposed project changes.

Preexisting Substandard Conditions Requirements

The Town of Thompson's Station has defined LOS D or volume-to-capacity (V/C) ratio of 0.85 as the minimum standard for collectors, arterials, and intersections during peak hours. If the TIS identifies existing conditions worse than LOS D or a V/C ratio with a value greater than 0.85, transportation impact mitigatory offsets (mitigatory offsets) will be required to accompany the proposed project. Mitigatory offsets may include, but are not limited to:

- Right-of-way dedication for the offsets;
- Funding to implement the offsets;
- Roadway network improvements;
- Bicycle or pedestrian facilities; and
- Transportation Demand Management (TDM) measures that are directly correlated to the reduction of single occupancy vehicle trips generated by the development.

The applicant will be required to document the presence of preexisting substandard conditions and corresponding mitigatory offsets in charts that are submitted as part of the TIS. These charts should include a description of each proposed mitigatory offset, the cost to perform the mitigatory offset, and the timeline for completing the mitigatory offset. The applicant may be required to incorporate any or all of the identified mitigatory offsets into the project.

A queue study will be required for any intersections within the study area with current LOS D or worse. The Town Engineer may request a queue analysis for intersections with current LOS C or better when applicable. Any queue study or queue analysis should include a table illustrating the 95th percentile queue length for all intersection approaches and movements. If the queues are anticipated to interfere with the operations of an adjacent intersection, a figure may be required; this will be evaluated and determined in the scoping meeting.

Substantial Impact Requirements

If the TIS indicates that the proposed project is projected to increase trip generation in the study area by a minimum of 5% or degrade the LOS of a collector or arterial in the study area by one

(1) or more levels, the project is considered to cause substantial impact to the transportation network within the study area.

Such findings will require the applicant to thoroughly analyze the substantial impact(s) and propose transportation impact mitigation measures (mitigation measures) to address each substantial impact. The applicant will be required to document the substantial impact(s) and corresponding mitigation measures in charts that are submitted as part of the TIS. These charts should include a description of the substantial impact(s), a description of each corresponding mitigation measure, the cost to perform the mitigation measure, and the timeline for completing the mitigation measure (if the development consists of multiple phases, specify the project phase during which the mitigation measure will be implemented or installed). The applicant may be required to incorporate any or all of the identified mitigation measures into the project. Mitigation measures may include, but are not limited to:

- Right-of-way dedication for the measures;
- Funding to implement the measures;
- Roadway network improvements;
- Bicycle or pedestrian facilities; and
- Transportation Demand Management (TDM) measures that are directly correlated to the reduction of single occupancy vehicle trips generated by the development.

Vehicle Miles Traveled (VMT) Analysis for Specific Place Types

If the existing place type for the proposed project is Neighborhood Mixed Use, Town Center, the Columbia Pike Corridor, or the Lewisburg Pike Corridor per the All Aboard General Plan, the applicant may be required to include a VMT analysis in the TIS. Because these place types encourage walkability and multimodal access, LOS analysis alone will not accurately measure the project's impact on the surrounding transportation network. The VMT analysis requirement will be discussed during the scoping meeting, as applicable.

Required Content and Form

The TIS should include the following sections:

- a. Mitigation Executive Summary:
 1. Whether or not preexisting substandard conditions are present;
 2. If applicable, list the specific mitigatory offsets that will be incorporated into the project;
 3. Whether or not substantial impacts are present; and

4. If applicable, list the specific mitigation measures that will be incorporated into the project.

b. Project Description:

1. Purpose and objectives of the project and study;
2. Site location, including description and study area mapping;
3. Current site conditions and proposed use (number of lanes, lane widths including road shoulders, roadway classifications, speed limit, ditching or curb and gutter, sidewalks, zoning, proposed development size and type of development, availability of essential utilities, directional signage, existing multimodal infrastructure, etc.);
4. Locations of existing and proposed access point(s), distances between each access point and nearby driveways, etc.; and
5. Phasing and proposed timing of each development phase.

- c. Examination of all signalized intersections within one (1) mile of the site, measured linearly from the nearest property line on any point of an applicable site, as well as all intersections along an arterial within the Town limits if the project borders the same arterial. If the site has one (1) or more access points to a collector, the applicant shall also examine the nearest signalized intersection of the applicable collector and arterial (core intersection), as well as the core intersection's two (2) adjacent signalized intersections along the arterial, regardless of distance between the signalized intersections – three (3) signalized intersections along the nearest arterial in total, with one (1) signalized intersection located on either side of the core intersection. List the LOS for the overall intersection for signalized intersections as well as all individual movements of a signalized intersection and the LOS for all movements for unsignalized intersections. LOS calculations should be based on the latest edition of the Highway Capacity Manual.

- d. VMT analysis for any project that includes a Neighborhood Mixed Use, Town Center, the Columbia Pike Corridor, or the Lewisburg Pike Corridor place type in the study area. The VMT analysis should assess baseline conditions, as well as cumulative conditions, between the development and the proximate core intersection(s).

VMT calculations are to be based on the travel demand model utilizing an Origin Destination methodology to determine the project generated VMT. Generally, the project-generated VMT per capita of the project will be evaluated against a baseline VMT per capita for the purpose of evaluating the project against a baseline threshold. The baseline threshold that should be used for VMT comparisons will be

the most recent publishing of TDOT's HPMS DVMT Rural and Urban by County annual report. The VMT per capita should be calculated in the transportation study by taking the Williamson County VMT for the applicable road classes and dividing by the County population. Alternatively, the applicant's transportation engineer may choose to develop their own baseline VMT per capita if desired. Once the baseline VMT per capita is established, if the project VMT per capita exceeds the baseline VMT per capita, mitigation measures that reduce the project VMT per capita to be under the baseline threshold will be expected. Mitigation measures could generally be comprised of the following:

- Additional or enhanced multi-modal infrastructure such as dedicated/protected bicycle lanes;
- Multi-modal corridors;
- More direct pedestrian connections between origin and destination sites within the project;
- Pedestrian connectivity between the project and off-site origins or destinations;
- Complete Street cross-sections; and
- Road Diet considerations for both internal and off-site roadways.

The goal of the VMT per capita evaluation is to encourage alternative transportation modes that will reduce the number of vehicles on the Town's roadways by offering safe, reliable, and efficient alternatives to vehicular travel.

- e. Baseline Traffic Counts (i.e., existing traffic counts) shall be based on actual field data of current trip counts as follows:
- All traffic counts must be taken on a Tuesday, Wednesday, or Thursday that does not fall within the week of a federal holiday, unless specified otherwise during the scoping meeting as a result of a unique land use; and
 - All traffic counts must be taken during the days that school is in session and under normal operations, unless exempted by Town Staff.
 - Traffic counts must be collected during the:
 - a. AM peak hours: 6:00am to 9:00am CT;
 - b. Midday peak hours: 12:00pm to 1:00pm CT; and
 - c. PM peak hours: 4:00pm to 7:00pm CT.

- Project-generated traffic shall be determined using the data and methodology defined in the latest edition of the ITE Trip Generation Manual.
- f. Traffic forecasts for projects planned and under construction within one (1) mile of the site, measured linearly from the nearest property line to property line on any point of an applicable site.
- g. Horizon Date, i.e., future date when the proposed project is anticipated to become operational:
- Depending on the horizon date, intermediate evaluation forecasts may be required as discussed in the scoping meeting;
 - Projections shall be based on special counts factored by an increase of four percent (4%) per year (or other annual growth rate as warranted by current data and agreed upon in the SAM) to reach the required projection year; and
 - A TIS shall be updated with a new revised horizon date whenever the proposed project is not fully operational by the end of the latest Horizon Date set forth in the project TIS.
- h. Cumulative Background Impacts: Foreseeable traffic impacts generated by previously approved projects or projects under construction in the study area that are not yet operational, but are expected to be operational within the Horizon Date of the proposed project.
- Cumulative Projects List: Town Staff shall provide the applicant a list of all recently approved projects and projects under construction within the study area of the proposed project, and assist the applicant in obtaining an identical list from any other municipal jurisdictions within the study area; and
 - The cumulative background trip generation shall be the existing baseline trips and trips generated by all projects on the Cumulative Projects List.
- i. Passenger Car Equivalency Calculations (if deemed applicable during the scoping meeting):
- In counting project-generated traffic trips and cumulative project traffic trips, buses, construction-type trucks, three (3) or more axle trucks, and/or any other vehicles that have greater per-vehicle traffic impacts than the per vehicle impacts of passenger cars shall not be counted equal to passenger car trips; and

- The TIS shall employ passenger equivalency calculations of not less than two (2) to one (1) and adjustments to the trip calculations and impact assessments to account for the greater per-vehicle impacts of buses, construction-type trucks, three (3) or more axle trucks, and/or any other vehicles that have greater per-vehicle traffic impacts than the per-vehicle impacts of passenger cars.
- j. Transportation Impact Mitigatory Offsets, if required:
 1. Chart that clearly describes:
 - a. Each proposed mitigatory offset activity or component;
 - b. Cost associated with performing each proposed mitigatory offset; and
 - c. Timeline for completing each proposed mitigatory offset.
 - k. Transportation Impact Mitigation Measures, if required:
 1. Chart that clearly describes:
 - a. Each substantial impact;
 - b. Each proposed mitigation measure;
 - c. Cost associated with performing each proposed mitigation measure; and
 - d. Timeline for completing each proposed mitigation measure.
 - l. Conclusions and Recommendations:
 1. All recommended roadway improvements based upon the criteria outlined herein, the LDO, and industry standards, including, but not limited to: roadway widening, turn lanes or deceleration lanes, new roadway connections and extensions, bicycle or pedestrian improvements, as well as other appropriate and industry standard improvements. Specify turn lane storage lengths, taper and transition lengths, and lane widths.
 2. Any modifications to existing traffic control devices or additions of new traffic control devices.
 3. A list of site access evaluations and recommendations.
 4. Timing for the completion of the improvements. Timing should be based on logical construction phasing for buildout schedule and when the improvements are needed.

Definitions and Terminology

Refer to Section 1.3 Definitions of the LDO for relevant terms and definitions.

Specifications and Resources

The following organizations and materials may be referenced in these Guidelines or within submitted Transportation Studies:

- American Association of State Highway and Transportation Officials (AASHTO)
- Institute of Transportation Engineers (ITE)
- Tennessee Department of Transportation (TDOT)
- Transportation Research Board (TRB)
- U.S. Department of Transportation, Federal Highway Administration (FHWA)
- United States Access Board

- *“A Policy on Geometric Design of Highways and Streets”*, latest edition, AASHTO
- *“AASHTO Roadside Design Guide”*, latest edition, AASHTO
- *“Guide for the Development of Bicycle Facilities”*, latest edition, AASHTO
- *“Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400)”*, latest edition, AASHTO
- *“Highway Capacity Manual”*, latest edition, TRB
- *“Manual on Uniform Traffic Control Devices for Streets and Highways”*, latest edition, U.S. Department of Transportation, FHWA (often referred to as the *“MUTCD”*)
- *“Public Right of Way Accessibility Guidelines”* latest edition, United States Access Board (often referred to as the *“PROWAG”*)
- *“Traffic Engineering Handbook”*, latest edition, ITE
- *“Trip Generation Manual”*, latest edition, ITE
- The following TDOT publications, latest editions (often referred to as *“TDOT Standard Specifications”*):
 - *“TDOT Roadway Design Guidelines”*
 - *“TDOT Standard Drawings”*
 - *“TDOT Standard Specifications for Road and Bridge Construction”*
 - *“TDOT Survey Manual”*
 - *“TDOT Traffic Design Manual”*
 - *“TDOT Traffic Impact Studies”*