Athens Traffic Circulation Standards

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Athens
Traffic Circulation Standards
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City of Athens
Traffic Circulation Standards/Access Management Standards/ Traffic Impact Study Standards

1. GENERAL INFORMATION AND PURPOSE

The City of Athens has established Traffic Circulation Standards, Access Management Standards, and Traffic Impact Study Standards (hereinafter referred to as *Standards*) for the purpose of ensuring that both the quantitative and qualitative aspects of traffic circulation impacts on the citizens, neighborhoods and businesses of Athens are considered and properly mitigated. Application of these *Standards* is intended to appropriately regulate and balance the increased traffic flow generated by new development with the need to reasonably preserve the quality of life and the environment within our community and to reasonably ensure pedestrian and bicycle safety as alternate modes of transportation. These *Standards* shall be amended from time to time as the community develops.

2. STREET DEFINITIONS AND CLASSIFICATIONS

A Street is a dedicated and accepted public right-of-way for vehicular and pedestrian traffic which affords the principal means of access to abutting property, provides a roadway connection between major parts of the City and its environs, and collects traffic from neighborhoods and moves it to the arterial street system.

The establishment of a hierarchical circulation system in the City of Athens provides for a gradation in function from access to movement. This gradation is a continuum from unrestricted access to full control of access. Efficient and safe operation of the City's circulation system requires that specific facilities be designed to serve specific trip stages. The City has recognized that failure to do so will lead to the obsolescence of its streets and thwart development and orderly growth.

A listing of classified roadways within the City of Athens is presented in Section 3 of these *Standards*. Modification of the City's roadway classification system may occur as the City develops in the future, and land use conditions change. Modifications to the City's roadway

classification listing shall be undertaken by appropriate action of the City. Such action, when undertaken, shall modify the listing of classified roadways outlined in Section 3 of these *Standards* as well as in the City's Comprehensive Master Plan.

For the purposes of these *Standards*, the following roadways are defined:

2.1 Freeway – controlled access facilities with four or more lanes that provide fast and efficient movement of large volumes of traffic over a considerable distance by prohibiting access (ingress and egress) except at controlled intervals.

2.2 Arterial - a facility that serves as a primary artery of the city intended to mainly carry through traffic and to connect major activity centers in the City and its planning jurisdiction. Its function is to move intra-city and intercity traffic. The streets that are classified as arterials may also serve abutting property; however, their primary purpose is to carry traffic. Arterials shall not be bordered by uncontrolled strip development. Access to these facilities shall be carefully managed to ensure the capacity of the facility is not comprised by driveways. Arterials vary in width, and parking on-street is generally prohibited.

2.3 Collector - a street whose primary function is to collect traffic from an area and move it to the arterial street system while also providing substantial service to abutting land uses. A collector roadway will generally have lower design speeds than arterial roadways but higher than local streets.

2.4 Residential Collector - a street whose primary function is to provide direct access to residential properties as well as to residential subdivisions. Typically, residential collector streets collect traffic from the local streets in residential neighborhoods and channel it to the arterial system.

2.5 Minor Street – A street intended mainly to provide access to adjoining property and uses, providing access from individual lots to collector streets.

2.6 Residential Street - All minor streets, marginal access streets, and cul-de-sacs serving primarily residential property.

2.7 Cul-de-sac - a local street with one outlet and having an appropriate terminal for the safe and convenient reversal of traffic movement.

2.8 Marginal Access Street - a street that runs parallel to a major street, generally an arterial; its purpose is to separate through traffic from local traffic and to provide access to abutting properties. A service road in commercial/business areas intended to remove traffic from arterials would be considered a marginal access roadway. An access street in residential areas intended to remove local traffic from arterials and to buffer abutting residential lots from the effects of highway traffic as well as to limit the number of direct driveway accesses to arterials for safety purposes is also considered a marginal access roadway.

2.9 Alley - a public right-of-way primarily designed to provide a secondary access to the side or rear of properties and not intended for general traffic circulation.

3. ATHENS STREETS BY CLASSIFICATION

Street classifications for the City of Athens are currently reflected in the City's Comprehensive Master Plan. The following listing reflects the City of Athens' street classification system.

3.1 Freeways

Interstate 65

3.2 Major Arterials

Huntsville-Browns Ferry Road (Lucas Ferry Road to Eastern Study Limit)
U.S. Highway 31
U.S. Highway 72

3.3 Minor Arterials

Alabama Highway 251
Elm Street (Market Street to U.S. Highway 31)

Durham Drive
Forrest Street (Jefferson Street to Lindsay Lane)
Jefferson Street
Huntsville-Browns Ferry Road (Western Study Limit to Lucas Ferry Road)
Lucas Ferry Road (Elm Street to Malone Road/Moyers Road)
Market Street (Western Study Limit to Clinton Street)
Mooresville Road (Copeland Road to Southern Study Limit)
Pepper Road (Lindsay Lane to Mooresville Road)
Pryor Street
U.S. Highway 127 (North of Elm Street)

3.4 Major Collectors

5th Avenue (Market Street to Jefferson Street)
Browns Ferry Road
Clinton Street
Elm Street (Western Study Limit to Market Street)
Hine Street (Elm Street to south of Roy Long Road)
Hobbs Street (Jefferson Street to U.S. Highway 31)
Lindsay Lane
Malone Road
Moyers Road
Nick Davis Road
Roy Long Road
Sanderfer Road
Washington Street (U.S. Highway 72 to Hoffman Street)

3.5 Minor Collectors

Airport Road
Cambridge Lane
Edgewood Road
Elkton Street
Hall Road
Lucas Ferry Road (Malone Road/Moyers Road to Huntsville Browns Ferry Road)
Lucas Street
Newby Chapel Road (Alabama Highway 251 to Nick Davis Road)
Oakdale Road (Pepper Road to Alabama Highway 251)
Sanders Road
Sommers Road
Yarbrough Road

3.6 Residential Collectors/Minor Streets/Residential Streets/Cul-de-Sacs/Marginal Access Streets/Alleys

All other City streets, as applicable

4. STREETS AND CIRCULATION

Streets and intersections in the City of Athens and its planning jurisdiction shall be designed and constructed in conformance with all applicable standards of the City of Athens' *Subdivision Regulations*. Any design and construction of improvements on roadways controlled by the Alabama Department of Transportation (ALDOT) shall be in accordance with applicable standards of ALDOT and permitted by ALDOT prior to construction.

For all land uses, street layouts within all subdivisions shall provide for the continuation and connection of streets between adjacent properties to achieve one or more of the following goals: for the convenient movement and circulation of traffic, for effective police and fire protection, for access by public service vehicles, for efficient provision of utilities, and to be consistent with the City's Comprehensive Master Plan.

Existing streets that abut a subdivision shall be continued, and the continuation shall be at least as wide as the existing streets unless a reduction in width is approved by the City Engineer. Subdivision street layout shall provide stub-outs paved to the property line for the future continuation into undivided lands adjoining a sufficient number of streets to meet the previously outlined conditions.

5. ACCESS MANAGEMENT STANDARDS

5.1 Purpose, Intent, and Application

a. The purpose of these access management standards (*Standards)* is to establish minimum regulations for access to property. Standards are established for new roads, driveways, shared access, parking lot cross access, and service roads throughout the City of Athens. These *Standards* are intended to achieve the following goals:
   1. promote safe and efficient travel within the City of Athens along its collector and arterial roadway system;
   2. minimize disruptive and potentially hazardous traffic conflicts;
   3. ensure safe access by emergency vehicles;

4. protect the substantial public investment in the street system by preserving capacity and avoiding the need for unnecessary and costly reconstruction which disrupts business and traffic flow;
5. separate traffic conflict areas by reducing the number of driveways;
6. provide safe spacing standards between driveways and between driveways and intersections;
7. provide for shared access between abutting properties;
8. ensure reasonable access to properties (not necessarily by the most direct access); and
9. coordinate access decisions with the Athens Planning Commission and the Athens City Council, as applicable.

b. The requirements in these *Standards* apply to both public and private land along road rights-of-way for all roadways which are under the jurisdiction of the City of Athens. The requirements of these *Standards* shall be applied to all proposed development in addition to the standards of the City of Athens' Zoning Ordinance, the City of Athens' Subdivision Regulations, and the City of Athens' Comprehensive Master Plan. In the event of a conflict between any of the referenced documents in these *Standards*, the Athens City Engineer shall have the authority to make the final determination.

c. Failure by the applicant to begin construction of an approved road, driveway, shared access, service drive, or other access arrangement within eighteen (18) months from the date of approval, shall void the approval and a new application shall be required.

d. Prior to issuing an occupancy permit, a representative of the City of Athens shall inspect any new or modified driveway(s) constructed as a part of a development to determine conformity with the requirements of these *Standards*. The City of Athens shall not issue an occupancy permit until all applicable standards have been met.

5.2 Key Steps in Applying Access Management Standards

The Alabama Department of Transportation is responsible for access permits along state and federal routes, and the City of Athens oversees the land use, subdivision, and site design decisions

that affect access needs on federal, state, and local roadways. Therefore, state and local coordination is essential to effective access management. Lack of coordination can undermine the effectiveness of regulatory programs and cause unnecessary frustration for permit applicants.

For a development with existing or potential access on a state route, timely communications are essential to an effective review procedure, and it begins with a coordinated permit review process. Applicants shall send copies of the completed permit application to the designated local reviewing official for the City of Athens as well as the state permitting official at the ALDOT District Office. Prior to any decision or recommendation, the City of Athens reviewing official and the ALDOT permitting official shall discuss the application.

Before a building permit is issued, property owners shall be required to submit the necessary certificates of approval from other affected regulatory agencies. An effective method of coordinating review and approval between developers and various government agencies is through a tiered process. The first stage is an informal meeting and "concept review" period, which allows officials to advise the developer about information needed to process a development application. This includes information on required state and local permits as well as any special considerations for the development site. The concept review provides the developer with early feedback on a proposal, before the preliminary plat or site plan has been drafted. Once the preliminary plan is drafted, it can be checked to determine if additional conditions are required for approval. The final plan that is formally submitted should then require only an administrative review.

Prior to approval of plats located adjacent to the state highway system, the City of Athens shall request a recommendation from the Alabama Department of Transportation. Applicants requesting access to the state highway system shall send a copy of the subdivision application to the ALDOT access permitting official. This shall occur early in the plat review process, preferably during conceptual review. Early monitoring of platting activity allows the Alabama Department of Transportation an opportunity to identify problems and develop acceptable alternatives.

5.3 – Driveway Location and Design

All lots hereafter created and all structures hereafter created, altered, or moved on property with frontage on or adjacent to City of Athens streets, shall conform to the following standards:

5.3.1. General Driveway Design Standards.

- Construction of driveways along acceleration or deceleration lanes, left turn storage lanes, and tapers shall be avoided, unless no other reasonable access to the property is available.
- Driveways on undivided roadways shall be aligned directly opposite driveways on the opposite side of the road, or offset from each other in accordance with applicable City Standards, due to the potential for conflicting left turns or jog maneuvers and resulting safety or operational problems.
- Driveway width and return radius or flare shall be adequate to serve the volume of traffic and provide for efficient movement of vehicles onto and off of the major thoroughfare. However, the width of driveways shall not be so excessive as to pose safety hazards for pedestrians and bicycles.
- Driveways with more than two lanes shall incorporate channelization features unless a traffic impact study demonstrates that channelization is not beneficial to the traveling public.
- Restrict the number of curb cuts or access points to one per property frontage, or provide justification for additional access points as applicable.
- Shared driveways between two parcels at the property lines shall be used where practical.

5.3.2. Access Location Standards.

a. **Access Point Approval** - No access point shall connect to a public street or road, without first receiving approval of the location and cross-section specifications from the City of Athens and ALDOT, as applicable. No access point shall connect to a private road unless approved by the Planning Commission and by the parties with an ownership interest in the private road.

b. Factors on Location of Driveway Access - At a minimum, the following factors shall be considered prior to making a decision on the location of a driveway or other access point:

1. The characteristics of the proposed land use;
2. The existing traffic flow conditions and the future traffic demand anticipated by the proposed development on the adjacent street system;
3. The location of the property;
4. The size of the property;
5. The orientation of structures on the site;
6. The minimum number of driveways or other access points needed to accommodate anticipated traffic based on a traffic impact study, as provided by the applicant and verified by the City of Athens, and ALDOT, as applicable. Such traffic impact study shall demonstrate that traffic operations and safety along the public street would be improved (or at least not negatively affected), and not merely that another access point is desired for convenience;
7. The number and location of driveways on existing adjacent and opposite properties;
8. The location of abutting streets or roads and the carrying capacity of nearby intersections;
9. The proper geometric design of driveways;
10. The spacing between opposite and adjacent driveways as well as any nearby intersection;
11. The internal circulation between driveways and through parking areas;
12. The size, location, and configuration of parking areas relative to the driveways;
13. The intersection sight distance available at the proposed driveway location; and
14. The speed of the adjacent roadway.

c. Access Point Location - Each access point location shall conform to requirements outlined in these *Standards* and current regulations of the City of Athens and ALDOT, as applicable.

d. Access Points within Right-of-Way - Driveways including the radii but not including right-turn lanes, passing lanes, and tapers, shall be located entirely within the right-of-way

frontage, unless otherwise approved by the City Engineer upon written certification from the adjacent land owner agreeing to such encroachment.

e. Backing-up from Parking or Loading Area onto a Public Street or Service Drive - Driveway access shall not be permitted for parking or loading areas that require backing maneuvers in a public street or road right-of-way or onto a public or private service drive.

f. Relationship to Lot Line - No part of a driveway shall be located closer than a distance equal to the flare radius of the driveway from a lot line unless it is a common or shared driveway. This separation is intended to help control storm water runoff and provide adequate area for any necessary on-site landscaping.

g. Existing Driveways – Except for shared driveways, existing driveways that do not comply with the requirements of these *Standards* shall be closed and a new means of access conforming to these Standards shall be approved when either of the following two circumstances occurs: 1) an application for a change of use requires a zoning change, or 2) a site plan requiring approval is submitted. A closed driveway shall be graded and landscaped to conform to adjacent land, and any curb cut shall be filled in with curb and gutter per the standards of the City of Athens and ALDOT, as applicable.

h. Intersection Sight Distance – Driveways shall be located so as not to interfere with safe intersection sight distance so as to comply with the City of Athens' Subdivision Regulations and A Policy on Geometric Design of Highways and Streets, published by the American Association of State Highway and Transportation Officials (AASHTO). **Table 1** depicts the typical intersection sight distance required for a stopped passenger car to either; 1) turn left onto a two-lane highway with no median with a grade of 3 percent or less on the driveway, or 2) to turn right onto or cross a two-lane highway with no median with a grade of 3 percent or less on the driveway. For both conditions, any variations require the time gap to be modified and the required sight distance to be recalculated as per AASHTO. The values shown in **Table 1** originate from AASHTO's A Policy on Geometric Design of Highways and Streets. The design speed used to determine the required intersection sight distance shall be based upon the prevailing posted speed plus five miles per hour or the 85th percentile speed.

Table 1
Design Intersection Sight Distance

Design Speed (mph)	Left Turn from Stop Design Intersection Sight Distance (ft)	Right Turn from Stop/Crossing Maneuver Design Intersection Sight Distance (ft)
15	170	145
20	225	195
25	280	240
30	335	290
35	390	335
40	445	385
45	500	430
50	555	480
55	610	530
60	665	575
65	720	625
70	775	670

i. **Traffic Signals** – Any signals proposed for installation or modification on City streets shall meet the minimum criteria as outlined in the latest edition of the Manual on Uniform Traffic Control Devices as published by the Federal Highway Administration. Additionally, traffic signals proposed for installation on City streets shall only be considered at those locations where their spacing from existing signals would not deteriorate roadway capacity along the street. A request for traffic signalization shall address the minimum criteria for installation outlined above as well as the roadway capacity impacts created by signal spacing. A development shall be responsible for all of any right-of-way, design, hardware, and construction costs of a traffic signal or traffic signal modification if it is determined that the signal installation or signal modification is warranted by the traffic generated from the development unless a development agreement between the City and the applicant is otherwise reached. The procedures for traffic signal installation and traffic signal modification shall be in accordance with criteria established by the City of Athens and the Alabama Department of Transportation, as applicable.

5.3.3. Number of Driveways Permitted.

a. Access for an individual parcel, lot, or building site or for contiguous parcels, lots, or building sites under the same ownership shall consist of either a single two-way driveway or a paired system wherein one driveway is designed, and appropriately marked, to accommodate ingress traffic and the other egress traffic.

b. Direct access for single family residential lots or parcels shall not be permitted onto arterials roadways in the City of Athens, unless approved at the discretion of the City of Athens. Each such instance must be separately applied for and approved.

c. A temporary access permit may be issued for construction entrances at the discretion of the City of Athens and the Alabama Department of Transportation, as applicable. Field-entrance driveways shall be reviewed on a case-by-case basis. The review shall take into account the proximity of the adjacent driveways and intersecting streets, as well as traffic volumes along the roadway.

d. For a parcel, lot, or building site with frontage exceeding 600 feet, or where a parcel, lot, or building site has frontage on at least two streets, an additional driveway may be allowed, provided that a traffic impact study is submitted by the applicant showing that conditions warrant an additional driveway and that all driveways meet the access management spacing standards.

e. Certain developments generate enough traffic to warrant consideration of an additional driveway to reduce delays for exiting motorists. Where possible, these second access points shall be located on a side street or service drive, shared with adjacent uses, or designed for right-turn-in, right-turn-out only movements. These second access points shall also meet the spacing requirements of these *Standards*. In order to be considered for additional access points, the applicant shall be required to submit a traffic impact study to the City of Athens and the Alabama Department of Transportation, as applicable, which demonstrates the ability of the roadway system to accommodate the added access points and not degrade the levels of service on the roadway system beyond acceptable standards.

5.3.4. Driveway Spacing Standards.

a. Separation from Other Driveways

1. The minimum spacing between unsignalized driveways and other access points shall be as outlined in **Table 2**. The minimum spacing shall be measured from the centerline of one driveway to the centerline of another driveway. The City of Athens and the Alabama Department of Transportation, as applicable may grant temporary access approval for properties along the roadway covered in these *Standards* until such time minimum spacing standards can be met, or alternative access meeting the standards of this ordinance is approved.

Table 2
Driveway Spacing Standards

Classification	Minimum Driveway Spacing (ft) * Posted Speed Limit (MPH)					
	55	50	45	40	35	<30
Residential	As approved by the City per the Athens Zoning Ordinance					
Minor Street	N/A	N/A	N/A	200ft	150ft	150ft
Residential Collector	125 ft. Average					
Collector	350ft	300ft	250ft	200ft	150ft	150ft
Arterial	500ft	450ft	400ft	350ft	300ft	250ft

* measured from centerline to centerline

2. In the case of expansion, alteration, or redesign of an existing development where the applicant can demonstrate that pre-existing conditions prohibit adherence to the minimum driveway spacing standards, the City shall have the authority to modify the driveway spacing standards or grant temporary access approval until such time that minimum spacing standards can be met or alternative access meeting the requirements of these *Standards* is approved. Such modifications shall be of the minimum amount necessary.

b. **Access Point Separation from Intersections** – Access points allowed along arterial and collector roadways in the City of Athens shall be separated from the centerline of an intersecting street a distance equal to the minimum access spacing criteria as outlined in

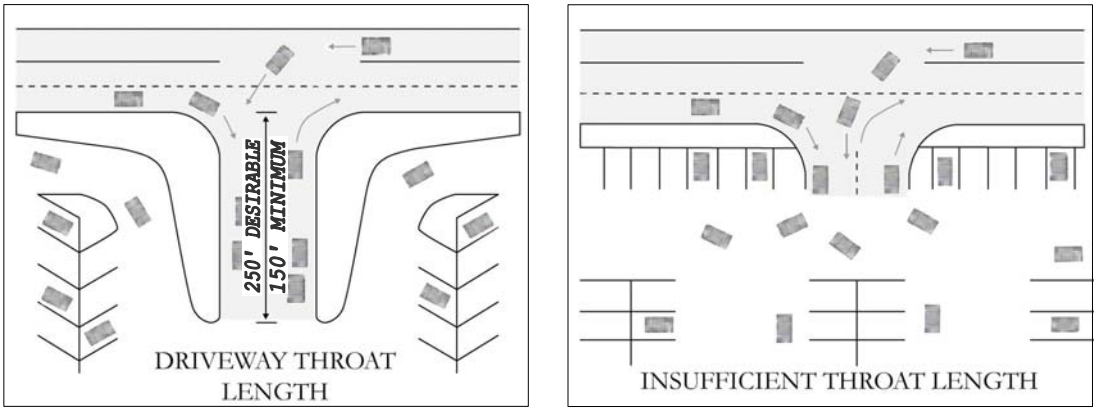
Table 2. Access point spacing from intersections shall be measured from the centerline of the driveway to the nearest extended edge of the travel lane on the intersecting street.

c. Access Alignment

1. Access offsets shall be in accordance with the minimum spacing standards as outlined in previous paragraphs.
2. Access points should be perpendicular to the existing public street or an approved private road and shall line up with existing or planned driveways on the opposite side of the road wherever facing lots are not separated by a median.

d. Throat Length or Vehicle Stacking/Storage Space - There shall be two-hundred and fifty feet (250') (150 feet minimum) of throat length for entering and exiting vehicles at the intersection of a driveway and pavement of the public road or service drive as measured from the pavement edge (see **Figure 1** below). In areas where significant pedestrian/bicycle travel is expected, as determined by either the City of Athens or the Alabama Department of Transportation, the ingress and egress lanes shall be separated by a 4' to 10' wide median with a pedestrian refuge area.

Figure 1
Throat Length Diagrams



e. Construction Standards

1. **Curb radii** – Curb radii standards for the roadway covered in these *Standards* shall meet the current standards of the City as outlined in their Subdivision Regulations and the Alabama Department of Transportation, where applicable.

2. Deceleration lanes and tapers:

a. Deceleration lanes shall be required at all permitted access points along an arterial roadway in the City of Athens. Additionally, deceleration lanes shall be required at all permitted access points along a collector roadway in the City of Athens unless a traffic impact study is conducted by the Applicant which illustrates that such lanes are not required, and the study is approved by the City Engineer.

b. Deceleration lane and taper lengths shall be constructed in accordance with the Alabama Department of Transportation Special and Standard Highway Drawings, most recent edition and/or standards of the City of Athens, as applicable.

c. Where the amount of frontage precludes the construction of a deceleration lane and taper combination entirely within the property lines of a parcel, the property owner shall work with adjoining property owners to coordinate access to both parcels of property.

d. A continuous right-turn lane may be required where driveway spacing standards restrict the use of consecutive turn bays with tapers and where it is determined by the City of Athens and the Alabama Department of Transportation, as applicable, that the continuous right turn lane would not be used as a through lane.

3. Left Turn Lanes – Left turn lanes shall be required at all access points requested to the City's arterial street system. Left turn lanes shall be required at all access points requested to the City's collector street system unless a traffic impact study is conducted by the Applicant which illustrates that such a lane is not required, and the study is approved by the City Engineer. On those roadways where medians currently exist, the construction of a median opening at a private access point shall require the construction of left turn lanes in accordance with the current standards of the City of Athens and the Alabama Department of Transportation, as applicable. Entities requesting permits for private driveways and/or public streets that align with existing median openings shall construct left turn lanes at said median openings, if they are not already present. All left turn lanes and taper lengths shall be constructed in accordance with the Alabama Department of Transportation Special and Standard Highway Drawings, most recent edition and/or standards of the City of Athens, as applicable.

4. **Directional Signs and Pavement Markings** - In order to ensure smooth traffic circulation on the site, directional signs and pavement markings shall be installed as outlined in the latest edition of the Manual on Uniform Traffic Control Devices in conjunction with the standards of the City of Athens and the Alabama Department of Transportation, as applicable.
5. **Shared Access** - Shared access is strongly encouraged and in some cases shall be required.

f. Shared Driveways: Sharing or joint use of a driveway by two or more property owners shall be encouraged. In cases where access is restricted by the spacing standards outlined in these *Standards*, a shared driveway may be the only access design allowed. The shared driveway shall be constructed along the midpoint between the two properties unless a written easement is provided which allows traffic to travel across one parcel to access another parcel and/or access the public street.

g. Frontage Roads: In cases where a frontage road exists, property access shall be provided via such frontage road, rather than by direct connection to the abutting arterial street.

h. Rear Service Drives: Rear service drives shall be encouraged, especially for locations where connection to a side street is available. In addition to access along the rear service drive, direct connection(s) to the arterial street may be allowed, provided that the driveways meet the requirements of these *Standards*.

i. Parking Lot Connections - Where a proposed parking lot is adjacent to an existing parking lot of a similar use, there shall be a vehicular connection between the two parking lots where physically feasible, as determined by the City of Athens and the Alabama Department of Transportation, as applicable. For developments adjacent to vacant properties, the site shall be designed to provide for a future connection. A written access easement signed by both landowners shall be presented as evidence of the parking lot connection prior to the issuance of any final zoning approval.

j. Access Easements - Shared driveways, cross access driveways, connected parking lots, and service drives shall be recorded as an access easement and shall constitute a covenant running with the land. Operating and maintenance agreements for these facilities shall be recorded with the deed.

k. Medians and Median Openings

1. The type, location, and length of medians on public roads shall be determined by the entity having jurisdiction over such roads. This determination shall be made in consultation with the City of Athens and the Alabama Department of Transportation as applicable, and shall be based on the following: existing and projected traffic conditions; the type, size, and extent of existing and projected development; the amount of traffic generated by development; traffic control needs; and other factors.
2. The minimum spacing between full median openings shall be twice the minimum access point standards as outlined in **Table 2** of these *Standards* based on the classification of the facility (example: arterial / 55 mph / 500 feet access point spacing – 1000 feet minimum median opening spacing).
3. Median openings intended to serve development shall meet or exceed the minimum median opening spacing standards and shall also be justified by a traffic impact study approved by the City of Athens and the Alabama Department of Transportation, as applicable. The cost for preparation of the traffic impact study and construction of the median opening or openings, including installation and operation of signals and other improvements where warranted, shall be borne by the applicant.

5.3.5. Service Drives and Other Shared Access Standards.

a. The use of shared access, parking lot connections, and service drives, in conjunction with driveway spacing, is intended to preserve traffic flow along major thoroughfares and minimize traffic conflicts, while retaining reasonable access to the property. Where noted above, or where the City of Athens and the Alabama Department of Transportation, as applicable, determines that restricting new access points or reducing the number of existing access points may have a beneficial impact on traffic operations and safety while preserving the property owner's right to reasonable access, then access from a side street, a

shared driveway, a parking lot connection, or service drive connecting two or more properties or uses may be required instead of more direct connection to the arterial or collector street. However, where traffic safety would be improved, and the driveway spacing requirements of these *Standards* can be met, then direct connection to the roadways covered by these *Standards* may be allowed in addition to a required service drive.

1. In particular, shared access, service drives, or at least a connection between abutting land uses shall be required in the following cases unless a traffic impact study is conducted by the Applicant which illustrates that the above mentioned is not required, and the study is approved by the City Engineer:

    a. When the driveway spacing standards of this section cannot be met;
    b. When the driveway could potentially interfere with traffic operations at an existing or planned traffic signal location;
    c. When the site is along a collector or arterial with high traffic volumes or along segments experiencing congestion and/or a relatively high number of crashes;
    d. When the property frontage has limited sight distance; and/or
    e. When the fire (or emergency services) department recommends a second means of emergency access.

2. In areas where frontage roads or rear service drives are recommended, but adjacent properties have not yet been developed, the site shall be designed to accommodate a future road/facility designed according to the standards of the City of Athens and the Alabama Department of Transportation, as applicable. The City of Athens and the Alabama Department of Transportation, as applicable, may approve temporary access points where a continuous service drive is not yet available and a performance bond or escrow is accepted to assure elimination of temporary access when the service road is constructed.

b. The standards for service drives shall be as follows:

1. **Site Plan Review** - The City of Athens and the Alabama Department of Transportation, as applicable, shall review and approve all service drives to ensure safe and adequate continuity of the service drive between contiguous parcels as part of the site plan review process.
2. **Front and Rear Service Drives** - A front or rear service drive may be established on property which abuts only one public road. The design of a service road shall conform to current design standards of the City of Athens and the Alabama Department of Transportation, as applicable.
3. **Location** - Service roads shall generally be parallel to the front property line and may be located either in front of or behind principal buildings and may be placed in required yards. In considering the most appropriate alignment for a service road, the City of Athens and the Alabama Department of Transportation, as applicable, shall consider the setbacks of existing and/or proposed buildings as well as anticipated traffic flow for the site.
4. **Distance from Intersections on Service Drives** - Frontage road and service drive intersections at collector or arterial streets shall be designed according to the same minimum standards as described for driveways in these *Standards*.
5. **Driveway Entrance** - The City of Athens and the Alabama Department of Transportation, as applicable, shall approve the location of all accesses to a service drive, based on current City of Athens and Alabama Department of Transportation driveway standards. Access to a service drive shall be located to ensure no undue interference with the free movement of service drive and emergency vehicle traffic, to provide safe sight distance, and to provide a safe driveway grade as established by the City of Athens and the Alabama Department of Transportation, as applicable.
6. **Parking** - The service road is intended to be used exclusively for circulation, not as a parking, loading, or unloading aisle. Parking shall be prohibited along two-way frontage roads and service drives. One-way roads or two-way roads designed with additional width for parallel parking may be allowed if it can be demonstrated through a traffic study that on-street parking will not significantly affect the capacity, safety, or

operation of the frontage road or service drive. Perpendicular or angle parking along either side of a designated frontage road or service drive is prohibited.

7. **Directional Signs and Pavement Markings** - Pavement markings may be required to help promote safety and efficient circulation. All directional signs and pavement markings along the service drive shall conform to the current Manual of Uniform Traffic Control Devices.
8. **Pre-existing Conditions** - In the case of expansion, alteration, or redesign of existing development where it can be demonstrated that pre-existing conditions prohibit installation of a frontage road or service drive in accordance with the aforementioned standards, the City of Athens and the Alabama Department of Transportation, as applicable, shall have the authority to allow and/or require alternative cross access between adjacent parking areas through the interconnection of main circulation aisles. Under these conditions, the aisles serving the parking stalls shall be aligned perpendicularly to the access aisle with islands, curbing, and/or signage to further delineate the edges of the route to be used by through traffic.

6. TRAFFIC IMPACT STUDY DETERMINATION STANDARDS

6.1 General

The traffic impact study report shall identify the traffic impacts and any traffic problems generated by a proposed land use. The report shall also identify the improvements required to ensure safe ingress and egress from a proposed development, maintain street capacity, and eliminate hazardous conditions. The following standards have been established for the preparation of Traffic Impact Studies (TIS) for development proposals of all land use types. These standards exist to ensure consistent and proper traffic planning and engineering practices are followed when land use actions are being considered. The standards provide for a standard process, set of assumptions, set of analytic techniques, and a presentation format to be used in the preparation of the TIS.

6.2 Applicability

Developers and/or property owners shall be required to conduct traffic impact studies, as described herein, for proposed developments that meet any of the following criteria:

a. When a development proposes to take direct access to a collector or arterial roadway and the proposed development is larger than the thresholds established by the Institute of Transportation Engineers (ITE) as shown in **Table 3**. This threshold shall be determined by the full buildout of the project, not by individual phases of the project. If a project is completed that does not meet the threshold established in **Table 3** and later a subsequent phase(s) of that project is built or a separate project on an adjacent or contiguous parcel of land to the previous project is built, the combined development size shall be used to determine if a traffic impact study is required; or

b. When in the opinion of the City of Athens, significant operational deficiencies, capacity deficiencies, and/or safety concerns on the surrounding roadways and intersections currently exist or would be created as a result of the development's expected project.

Table 3
Traffic Impact Study Thresholds by Land Use

Land Use	Size (units)
Residential – Single Family Detached	70 dwelling units
Residential – Townhomes/Condos	120 dwelling units
Residential – Apartments	100 dwelling units
Residential – Assisted Living	285 beds
Shopping Center	17,500 sf
Fast Food Restaurant w/drive-thru	1,500 sf
High-Turnover Sit-Down Restaurant	5,900 sf
Quality Restaurant	8,300 sf
Gas/Service Station w/Convenience Market & Car Wash	5 fueling positions
Bank w/drive-thru	2,200 sf
Pharmacy w/drive-in	8,500 sf
Hotel/Motel	95 rooms
General Office	43,000 sf
Medical/Dental Office	21,000 sf
General Light Industrial	102,000 sf
Manufacturing	137,000 sf

The thresholds for land uses that are not depicted in **Table 3** shall be based upon the ITE standard of 100 or more peak hour trips or 750 or more daily trips, whichever is less.

Developers who are proposing projects shall contact the City of Athens to discuss traffic impact standards prior to submitting a rezoning application or subdivision/site plans to determine the traffic impact study requirements for each project.

6.3 Applicant Responsibility

The responsibility for conducting a TIS and assessing the traffic impacts associated with an application for development approval rests with the Applicant. The assessment of these impacts shall be contained within a TIS report as specified herein. It shall be prepared under the supervision of, and sealed by, a Licensed Professional Engineer in Alabama with experience in traffic engineering and transportation planning/engineering.

For all State Highways within the study area, the Applicant is required to meet the requirements of the Alabama Department of Transportation (ALDOT) in addition to those of the City of Athens.

6.4 Capacity and Safety Issues

The goal of the TIS is to address traffic related issues that result from new development and to determine the improvements required to address and mitigate those issues such that street maximum capacities are not exceeded and traffic and pedestrian safety is maintained. Development of property has a direct impact on transportation, including vehicular, transit, bicycle, and pedestrian traffic. In order to meet capacity and safety needs as they relate to the traffic generated from a particular land use, specific traffic circulation improvements shall be made. The competing objectives of vehicular movement, pedestrians, bicyclists, and others must be balanced in the development review process. The TIS shall provide information and guidance as plans are developed and decisions are made for the proposed development plan.

6.4.1 Vehicular Traffic Improvements.

Examples of traffic capacity and safety improvements to mitigate development impacts include but are not limited to: road widening, turn lanes, deceleration lanes, intersection through lanes, traffic signals, traffic signal modifications, stop signs, design speed adjustments, modifications to access points, roundabouts, and other traffic calming techniques as approved by the City.

6.4.2 Pedestrian Traffic Considerations and Improvements.

Examples of street conditions that promote safe, comfortable, and convenient pedestrian environments include: narrower roadways that promote shorter walking conditions; short blocks; lower prevailing travel speeds; sidewalks; well-defined crosswalks, median refuge areas and islands at street intersections. Walkway tunnels and overhead structures are examples of safety improvements that afford maximum protection for pedestrians.

6.4.3 Bicycle Traffic Improvements.

The addition of on-street bicycle lanes or off-street bicycle paths may be needed to achieve connectivity between the proposed project and the existing bikeway system. All on-street bicycle lanes shall meet the standards of the City of Athens and the Alabama Department of Transportation, as applicable.

7. TRAFFIC IMPACT STUDY PROCEDURES AND CRITERIA

If a Traffic Impact Study is determined to be required by an Applicant for a development, the procedures and criteria discussed herein shall be followed.

7.1 Scoping Meeting/Telephone Conference

7.1.1 Purpose.

Prior to the submittal of a request for rezoning or site/development plan approval, a scoping meeting/telephone conference shall be required and used to determine the study area, study parameters, and documentation standards for conducting a Traffic Impact Study (TIS) for specific development proposals. The parameters determined in the scoping meeting/ telephone conference represent a general agreement between the City and the Applicant's consulting engineer, but they may not be all-inclusive. The City retains the right to require additional information and/or analysis to complete an evaluation of the proposed development project.

7.1.2 Meeting/Telephone Conference Setup and Content.

The applicant is required to contact the City to arrange for the scoping meeting/telephone conference to discuss the TIS standards and determine the base assumptions. It is incumbent upon the Applicant to discuss the following:

a. Previous TIS prepared for the site, if any;
b. Location of the site;
c. Proposed access and its relationship to adjacent properties and their existing/ proposed access;
d. Preliminary estimates of the site's trip generation and trip distribution at buildout;
e. Identification of proposed year of build-out;
f. Anticipated roadway improvements required to mitigate development impact;
g. Phasing plan proposed; and
h. Special analysis needs.

7.1.3 Results of Scoping Meeting/Telephone Conference.

The scoping meeting/telephone conference shall conclude with the City and Applicant in mutual agreement with regard to determining the level of detail and extent to which the TIS shall address each of the following:

a. Study area for the impact analysis;
b. Other developments within the study area;
c. Existing intersection counts;
d. Intersections and roadways to be studied in detail;
e. Existing traffic volume forecasts;
f. Location of the nearest bicycle and pedestrian facilities; and
g. Special analysis needs (non traditional peak hour volumes for some uses, neighborhood impacts, access management plans, etc.)

7.2 Evaluation Elements

The key elements of the project traffic impact assessment shall be specified by the City from the following list:

a. Conformity with the transportation related policies of the City of Athens, including any other adopted access plans;
b. Peak hour intersection and roadway level of service;
c. Appropriateness of access locations;
d. Location and standards for turn lanes or deceleration lanes at accesses or intersections, including recommendations for taper lengths, storage lengths, deceleration lengths, and other geometric design standards as required by the City and ALDOT, as applicable;
e. Sight distance evaluations and recommendations (intersection, stopping, passing);
f. Continuity and adequacy of pedestrian and bike facilities;
g. Recommended traffic control devices for intersections which may include two way stop control or yield signs, four way stop control, school flashers, school crossing guards, crosswalks, traffic signals, or roundabouts;

h. Traffic signal and stop sign warrants;
i. Traffic signal modification and/or traffic signal phasing changes;
j. Other items as requested by the City Engineer and agreed to in the scoping meeting/telephone conference; and
k. Neighborhood and public input issues.

7.3 Roadway Traffic Volumes/Traffic Counts

Current morning and afternoon commuter peak hour (7-9 A.M. and 4-6 P.M.) traffic counts as specified by the City of Athens shall be obtained for the roadways and intersections within the study area for one, non-holiday weekday. Each peak hour count shall be conducted over the designated hours (or as specified by the City of Athens) and shall include fifteen (15) minute count data to clearly identify the peak hours.

Weekend counts and/or average daily counts may also be required where appropriate and when required by the City of Athens. ALDOT average weekday traffic (AWT) counts may be used when available. Pedestrian counts and bike usage shall be obtained. Vehicle classification counts may be required.

In any case, these volumes shall be no more than one year old (from the date of application submittal). The source(s) of each of the existing traffic volumes shall be explicitly stated (ALDOT counts, new counts by Applicant, etc.). Summaries of current traffic counts shall be provided.

In most cases, the actual completion of developments will occur at some time in the future. As part of the TIS, an annual growth rate of adjacent roadways and intersections shall be developed unless the traffic impact study demonstrates that the completion of the development will occur within less than a year's timeframe. Growth rates utilized in the preparation of a TIS shall be based on historical traffic growth, use of a regional travel demand model, or other methods as approved by the City of Athens. Application of traffic growth shall be applied for buildout conditions and other interim development levels as required by and approved by the City.

7.4 Intersection Level of Service

As a minimum, A.M. and P.M. peak hour intersection levels of service shall be determined for the existing signalized and unsignalized intersections at all study intersections and roadways. Additional intersections shall be included in the analysis where post development conditions are considered by the City to be significant. The analysis shall use procedures as described in the latest edition of the Highway Capacity Manual. Capacity analyses for intersections shall be based on individual approach levels of service whereas impacts on roadways shall be based on daily traffic volumes and the specific roadway classification.

7.5 Trip Generation Rate

Trip generation shall be calculated from the latest data contained within the Institute of Transportation Engineers' Trip Generation Manual. Other industry publications (such as the ITE Journal or other sources) may be used upon approval by the City Engineer. Data limitations, data age, choice of peak hours (for the land use or adjacent street traffic), choice of independent variables, and choice of average rate versus statistically significant modification shall be discussed in the study when appropriate. When data is not available for a proposed land use or for a land use unique to the Athens area, the Applicant must conduct a local trip generation study following procedures prescribed in the ITE Trip Generation Manual and provide sufficient justification for the proposed generation rate. This rate must be approved by the City prior to its use in the TIS written study.

7.6 Preliminary Land Use Assumptions

The trip generation values contained in studies submitted prior to the establishment of a site-specific development plan shall be based on the maximum number of dwelling units permitted by the Athens Zoning Ordinance for the approved land uses, and/or the maximum trip generation rates for the nonresidential development proposed land use action. When a TIS is being developed for a project with an established site-specific development plan, trip generation shall be based on actual dwelling unit counts and square footage(s) proposed on the final plan for full buildout of the project and for subsequent phases of the project, as applicable.

7.7 Trip Generation Table

The Applicant shall prepare a Trip Generation Table, listing at a minimum, each type of land use within the site at build-out, the size and unit of measure for each land use, trip generation rates (total daily traffic, A.M. and P.M. peaks), and the resultant total trips generated.

7.8 Trip Distribution

The distribution of site generated traffic must be documented in the TIS. The procedures and rationale used in determining the trip distributions for proposed developments must be fully explained and documented. It is recommended the Applicant coordinate with the City of Athens to establish an acceptable distribution pattern.

7.9 Requirement for Additional Lanes

Within the study area of a TIS, as established by agreement between the City and the Applicant, additional lanes may be required on streets where minimum levels of service are exceeded for existing cross sections based on post development conditions. If such additional lanes are required, as established as part of the TIS, they can include general purpose through lanes, left turn lanes, and right turn lanes. Additional lanes, when determined by a TIS and in the opinion of the City that the need for such lanes is established, shall be provided by the Applicant. Such improvements shall be designed and constructed to city, county or state standards, as applicable. The cost of such improvements shall be borne entirely by the Applicant.

During the design phase of providing additional lanes on public streets and roadways, if it is determined that additional right-of-way is required to construct such additional lanes; the Applicant shall provide additional right-of-way along their property frontage as directed by the City. If the construction of such additional lanes requires right-of-way beyond the property frontage of the Applicant, the Applicant shall work with the City to devise a method to provide the additional right-of-way and related roadway improvements or modify their development plan to remove the requirement for such additional lanes.

7.10 Intersection Delay

An A.M. and P.M. commuter peak hour intersection level of service analysis shall be conducted for each intersection analyzed in the TIS, based on procedures specified in the most recent release of the Highway Capacity Manual. In those areas adjacent to or in close proximity to City schools, additional peak hour analyses shall be conducted for those afternoon hours which reflect the peaks for those facilities.

7.11 Driveway Access

Street access plan concepts for a development shall be submitted to the City for approval prior to development of construction plans. Because frequent curb cuts and driveways providing access to numerous adjoining properties are an impediment to the proper functioning of major streets, on-site circulation and cross-access agreements between lots are encouraged. Minimum spacing of driveways and other curb cuts shall conform to the minimum standards outlined in **Table 2** of these *Standards*.

Where an intersection contains a left-turn stacking lane, any driveway located within the stacking distance for such lane shall not permit left turns into or from the driveway. Raised islands or other approved methods of restricting these movements shall be required as approved by the City of Athens. Limitations on movements from driveways near intersections shall also apply to deceleration lanes.

Required distances between curb cuts and street corner property lines shall be measured from the edge of the curb cuts.

Various roadways in the City of Athens have center medians that have been constructed for both traffic safety and aesthetic considerations. Any alteration of existing or planned roadway medians shall be allowed at the discretion of the City of Athens and the Alabama Department of Transportation, as applicable, where such alternation is deemed by the City and ALDOT to be in the public interest. In those cases where medians are proposed for alteration as part of a

development, it shall be incumbent on the Applicant to demonstrate through traffic operational analysis in the TIS that such alteration can be implemented and not compromise public safety.

On those routes maintained by the Alabama Department of Transportation, an access permit is required from that agency. The City shall be copied on all ALDOT permit applications within Athens and its planning jurisdiction.

7.12 Traffic Signals

7.12.1 Proposed and existing access points, proposed intersections, and existing intersections affected by the land use actions being analyzed in the report that have any potential for traffic signalization or traffic signal modification shall be reviewed and discussed during the scoping meeting/telephone conference.

7.12.2 During the scoping meeting/telephone conference, an outline of any locations necessary for signal warrant analysis shall be agreed upon.

7.12.3 Signal Warrant Analysis for potential signal locations shall consist of a review of the applicable signal warrants contained in the Manual on Uniform Traffic Control Devices. On roadways controlled by the Alabama Department of Transportation, procedures for meeting traffic signal warrants as established by that Department shall be followed.

7.12.4 Alternatives to signalization at potential signal locations shall be discussed in the scoping meeting/telephone conference and the TIS report. The alternatives to adding new intersections would include additional access points, limited movements at access points, frontage roads, joint use access points, roundabouts, and other such designs as required and/or approved by the City.

7.12.5 If any signal timing and/or phasing changes are proposed as a finding of a TIS, an appropriate signal progression analysis shall be required if the signal is within a coordinated system. Such modifications to existing traffic signals in Athens shall require submittal of a

request for such change with supportive documentation of analysis and findings and shall not be undertaken without approval from the City.

7.12.6 Sight distance concerns that are anticipated or observed which may impact driveway, intersection, or roadway operation and safety need to be discussed in the TIS. Recommendations regarding stopping sight distance, intersection sight distance, and passing sight distance needs shall be provided by the Applicant's traffic engineer for detailing on the final development, site plan, or final construction plans. Intersection sight distance requirements shall meet the standards as established in the City of Athens's Zoning Ordinance, the City of Athens' Subdivision Regulations, and AASHTO's A Policy on Geometric Design of Highways and Streets.

7.13 Mitigation Measures

When a project's vehicular impacts are determined to not meet the minimum acceptable level of service standard, the TIS shall include feasible measures which would mitigate the project's impacts. These measures could include the addition of added through lanes (roadway widening), left turn lanes, right turn lanes, improved or modified traffic control, access management, and other such measures as deemed appropriate by analysis and concurrence by the City.

7.14 Traffic Signal Operations Improvements

Traffic Signal Operational improvements shall include upgrading signals to include additional signal phases and/or timing plans, signalization of an unsignalized intersection, and/or implementation of traffic signal systems. Signal improvements and/or installations on City streets must be approved by the City of Athens. Traffic signals recommended to be installed on ALDOT roadways shall be jointly approved by the State and City.

7.15 Street Widening and Other Physical Improvements

Mitigation measures, which include street widening and other physical improvements, shall be demonstrated to be physically feasible and shall meet minimum City standards and codes for

both on-site and off-site improvements. As part of the basic TIS analysis, a determination of the need for left and right turn lanes as a result of development generated traffic shall be undertaken. The analysis techniques utilized shall include procedures and methods outlined in the National Cooperative Highway Research Program (NCHRP) Report 279 or other methodologies as approved by the City of Athens.

7.16 Geometric Improvements

The need for turn lanes and other auxiliary lanes shall be determined based on the criteria as outlined previously for each development access and study intersection included in the TIS. The basis of design for such devices shall generally be ITE, AASHTO, ALDOT, or other nationally accepted standards as approved by the City. All proposed project entrances onto collector roadways and roadways with a lesser hierarchy shall be evaluated as to whether they require deceleration lanes.

7.17 Traffic Impact Study Report Conclusions

7.17.1 Recommended Improvements

The findings of the Traffic Impact Study shall be provided in summary format, including the identification of any areas of significant impacts and recommended improvements/ mitigation measures for each development.

a. Geometric and/or Traffic Control Improvements.

The TIS shall include recommendations for all geometric and/or traffic control improvements such as pavement markings, signs, adding through or turn lanes, adding project access and assorted turn lanes, changes in medians, traffic signal installations, traffic signal modifications, or other improvements as identified in the TIS. Sufficient dimensions/data shall be identified to facilitate review. Anticipated right-of-way needs shall also be identified. This information shall be made available to the project civil engineer for use in preparing scaled drawings.

b. Responsibility.

The Traffic Impact Study shall describe the location, nature and extent of all transportation improvements required to achieve the required post development levels of service within the study area. The responsibility for implementation of the post development mitigation measures shall rest with the Applicant.

8. TRAFFIC IMPACT STUDY REPORT OUTLINE

The following is the outline and format of topics to be addressed in the TIS in conjunction with the procedures and criteria for conducting a TIS already discussed herein.

8.1 Introduction (Purpose of report and study objectives)

8.2 Proposed Development

A. **Site Description** (include small version of site plan in appendices)
B. **Site Location** (include site location map)
C. **Zoning** (current and proposed)
D. **Time Frame of Development** (include any phasing of development which is anticipated)

8.3 Background Information

A. **Background Traffic Growth Rate** (include applicable projected traffic growth rate for the development time frames included in the proposed development, and include method for traffic growth projections)
B. **Off-Site Developments** (description of other significant development in the vicinity which could impact traffic conditions in the study area)
C. **Planned and Programmed Roadway Improvements** (description of any Planned or Programmed Roadway Improvements within the study area which could impact traffic

conditions within the study area during the time frame for development of the proposed project)

8.4 Existing Traffic Conditions

A. **Traffic Count Data** (introduce and illustrate current traffic counts for the study area roadways and intersections)
B. **Existing Conditions Capacity Analysis** (evaluate study area roadways and/or intersections based upon industry standard capacity analysis methods)
C. **Summary of Existing Traffic Conditions** in the study area

8.5 Future Traffic Conditions

These steps shall be taken for each phase of development within the corresponding time frame of construction for the project.

A. **Background Traffic Growth** (apply the applicable background growth rate for the time frame for a given phase of development)
B. **Inclusion of Planned or Programmed Improvements** (in the event any of the Planned or Programmed improvements are to be included in the analysis of future traffic conditions, a status of the projects and time frame of the projects shall be demonstrated)
C. **Trip Generation Estimates** (estimate trip generation potential for each level of development)
D. **Trip Distribution** (describe the anticipated routes for traffic expected to be generated by the proposed development)
E. **Traffic Assignment** (assign traffic expected by the proposed development to the study area roadways and intersections based upon the distribution patterns established)
F. **Future Conditions Capacity Analysis** (evaluate the study area roadways and intersections as well as site accesses with post-development traffic volumes)
G. **Identify Capacity Deficiencies** (identify roadways and/or intersections in which capacity deficiencies are expected for future traffic conditions)

H. Recommended Roadway and Traffic Control Improvements (develop and test potential improvements for the study area roadways and intersections aimed at mitigation of traffic impacts resulting from development traffic)

I. Internal Circulation (demonstrate the ability of the site's internal circulation pattern to handle site generated traffic)

J. Capacity Analysis with Recommended Improvements (demonstrate the effectiveness of Recommended Roadway and Traffic Control Improvements and resultant levels of service)

8.6 Summary and Conclusions (provide a summary of the findings of the study effort to include existing traffic conditions, future traffic conditions for each level of development, and the recommended improvements aimed at mitigating potential traffic impacts resulting from the proposed development for each level of development)