

## ARTICLE 13 TRANSPORTATION

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### 13.1 Purpose

The purpose of this Article is to ensure that adequate transportation facilities are constructed to serve new development and save unnecessary expenditures of funds by requiring the proper initial construction of transportation networks, sidewalks, and drainage facilities and establish a procedure to assist in the funding of road improvements required by new growth in the Apex Planning Area.

### 13.2 Authority

Pursuant to the powers conferred by the General Assembly of North Carolina under Articles 1, 8, 15, and 19 of Chapter 160A, as well as other applicable sections of the North Carolina General Statutes, the Town of Apex ("the Town") has authority to regulate development including requiring development to ameliorate the transportation impacts of development.

### 13.3 Findings

**13.3.1** The Town is experiencing rapid population and employment growth, in part, because of its proximity to regional employment facilities such as the Research Triangle Park and Raleigh Durham International Airport.

**13.3.2** The Town's population and employment growth creates demand for additional capital improvement funds for roadway facilities, which include but are not limited to streets, intersection improvements, culverts and other road related drainage improvements, turn lanes, and signalization.

**13.3.3** The Town and the North Carolina Department of Transportation are responsible for and committed to providing road related improvements at a level-of-service necessary to support anticipated residential and employment growth.

**13.3.4** The Town has adopted and the North Carolina Department of Transportation has approved, the Town of Apex Official Map of Thoroughfare Plan, which identifies additional road capital improvements necessary to serve new construction.

### 13.4 Definitions

As used in this Article, the following words shall have the meanings indicated.

#### **Benefit District**

A defined area within which thoroughfare infrastructure improvements benefit all construction and intensification of use occurring within the defined area.

#### **Building**

Any structure enclosed and isolated by exterior walls constructed or used for residence, business, industry or other public or private purpose, or accessory thereto, the construction of which requires or would require a building permit under the building code in effect in the Town.

#### **Building Permit**

A permit issued by the Town Building Official in accordance with the building code then in effect in the Town.

#### **Construction**

Building, construction, new construction, reconstruction, erection, extension, betterment or improvement of land providing a building or structure or any part thereof, which provides or increases dwelling units or the floor area of a residential or nonresidential use.

**Developer**

Any individual, group, or entity proposing development.

**Development**

Any construction or intensification of use as those terms are defined herein.

**Dwelling Unit**

A building or a portion thereof designed, arranged, or used for living quarters for one (1) family.

**Floor Area**

The total of the gross horizontal areas of all floors below the roof and within the outer surface of the main walls and the gross horizontal areas within lines drawn parallel to and 2 feet within the roof line of any building or portion thereof without walls. If the building has party walls, the center line of the party wall is used for the "area" calculation. Useable basements and cellars are included. With respect to nonresidential facilities, the following areas are not included in the area calculation: porticos, arcades, and similar areas open to the outside air, which are not designed or used as sales, display, storage, service, or production areas even if such areas are accessible to the general public.

**Intensification of Use**

A change of use of a property that intensifies its use whether or not construction is involved.

**Land Development Project**

A development or interrelated set of developments, approved by the Town pursuant to a subdivision plat, site plan, planned development, or other development plan.

**Nonresidential Construction**

Construction for any use other than residential use.

**Office Park**

A subdivision or site containing more than one (1) office building.

**Pass-By Trip**

Trips entering and exiting a new development site that are attracted to the site from the existing traffic flow. Pass-by trips are not considered new trips to the road network.

**Pass-Through Trips**

Trips that enter, travel through, and exit the planning area of the Town without stopping at any destination within the Town. Pass-through trips impact the road network, but are not attributable to development within the Town planning area.

**Peak Hour Trips**

The greatest number of vehicle trips generated by a unit of new development during any one (1) hour period.

**Residential Use**

A residential use as defined in the Zoning Ordinance of the Town of Apex.

**Certificate of Occupancy**

The certificate of occupancy required by Section 5-30 of the Town of Apex Code of Ordinances.

**Town**

The Town of Apex, North Carolina.

**Thoroughfare**

A major street, road, or highway which is designated as a thoroughfare on the adopted Thoroughfare Plan.

**Thoroughfare Improvement**

Any improvement to any highway, road, or street designated on the Thoroughfare Plan.

**Thoroughfare Plan**

The Official Map of Thoroughfare Plan, as adopted by the Town of Apex and the NCDOT, which identifies major road improvements necessary to serve projected growth.

**13.5 Applicability**

This Article applies to all construction and intensification of use in the planning area of the Town, and applies uniformly within each benefit district.

**13.6 Condition of Approval**

No subdivision, site plan, other development plan, or certificate of occupancy shall be approved or issued for construction or intensification of use within the Town's planning jurisdiction unless and until any applicable transportation improvements have been completed or performance has been guaranteed in accordance with UDO Sec. 7.5.13 *Performance Guarantee in Lieu of Construction Prior to Acceptance of Final Plat*.

**13.7 Benefit Districts**

The entire planning jurisdiction of the Town constitutes one benefit district for the purposes of this Article.

**13.8 Reserved**

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**13.16 Developer Agreements**

Where a development includes a thoroughfare shown on the approved Thoroughfare Plan, by mutual consent, the Town and the Developer may enter into an agreement regarding the terms of the participation of the developer in the construction and/or financing of such road. Such agreement may provide for appropriate compensation to the developer for his participation in the financing and/or construction of the road.

The agreement shall be on a form approved by the Town and shall identify:

**13.6.1** the estimated cost of the road improvement, based on the approved bidding process and using the lowest bid approved by the Public Works and Transportation Director;

**13.6.2** a schedule for initiation and completion of the improvement;

**13.6.3** a requirement that the improvement be designed and completed to Town standards; and

**13.6.4** such other terms and conditions as deemed necessary by the Town.

**13.17 Reserved**

**13.18 Reserved**

**13.19 Traffic Impact Analysis Required**

A Traffic Impact Analysis (TIA) shall be prepared by a qualified professional engineer registered to practice in North Carolina and submitted with the initial application for any development that would generate 1,000 or more vehicular trips per day or 100 a.m. or p.m. peak hour trips, whichever is greater. A TIA is also required for a subdivision that individually or collectively (with the subdivision(s) it has its only access to a thoroughfare through whether that access is at one or more points) generates 1,000 or more vehicular trips per day or 100 a.m. or p.m. peak hour trips, whichever is greater. For sites designated as a North Carolina Certified Site by the North Carolina Department of Commerce, the TIA may be submitted at the time of Minor Site Plan submittal instead of Master Subdivision Plan submittal. The calculation of vehicular trips per day as used in this section shall be determined according to the current Institute of Transportation Engineers (ITE) Trip Generation Manual. If an applicable ITE land use is not available or contains limited data, an alternate trip generation rate may be approved by the Town. The TIA shall indicate the average daily and peak hour vehicular trips generated by the proposed development and shall indicate the trip distribution allocation on all roads and intersections within a study area approved by the Town. The recommendations provided in the TIA shall at a minimum be based on the following:

- 13.19.1** The TIA shall propose geometric and/or traffic control improvements which will be required to prevent the traffic generated by the proposed development from causing any intersection or roadway approach within the study area to fall below an overall Level of Service (LOS) D, as defined by the latest edition of the Highway Capacity Manual (HCM).
- 13.19.2** For intersections projected to operate worse than LOS D for background (future without proposed development) conditions, the TIA shall propose geometric and/or traffic control improvements which will be required to minimize the increase in average overall intersection delay when traffic generated by the proposed development is at least 10% of the projected total a.m. or p.m. peak hour traffic at the intersection.
- 13.19.3** Stop-controlled minor street approaches to intersections may exceed LOS D provided the addition of development traffic at the intersection is not anticipated to warrant a traffic signal upon build-out and the resulting congestion does not block traffic movements at adjacent intersections.
- 13.19.4** At existing or proposed stop-controlled intersections, guidelines provided by the North Carolina Department of Transportation (NCDOT) shall be used in the evaluation of the need for and length of exclusive right and/or left turn lanes to support development traffic.
- 13.19.5** For any and all turning movements in the study area where the development is anticipated to add at least 10% to the existing a.m. or p.m. peak hour traffic volume, and the existing storage available within the turn bay(s) is shown to be exceeded by existing or projected traffic, the TIA shall propose improvements which may be required to mitigate the impact of development traffic.

The Town Council reserves the right to challenge the assumptions, methodology or conclusions of the study.

**13.20 Reserved**