

2.1 Standards for Design

The purpose of this chapter is to present the City criteria and guidelines for the design of conventional streets and other related elements in the street right-of-way. It is to be used by the City, developers and their engineers in the design of public and private streets for which approval by the City Engineer is required. This chapter is not intended to address streets in areas designated as “traditional neighborhood development (TND)” areas, streets in the downtown urban core of the City, or streets in designated historic districts (**Chapter 3** addresses street design for traditional neighborhoods). However, certain criteria and guidelines in this chapter may be determined to be applicable to streets in these areas in order to preserve the public health, safety and welfare, as determined by the City Engineer.

2.1.1 General

All design drawings and support data submitted to the City Engineer for approval must be sealed by a registered Professional Engineer, licensed to practice in the State of Tennessee.

The design criteria, as presented, are intended to aid in preparation of plans and specifications, and include minimum standards where applicable. These design criteria are considered minimum and a complete design will usually require more than is presented in this document. Design of streets shall follow “*TDOT Standard Specifications*” unless otherwise noted in these specifications. For items not addressed in “*TDOT Standard Specifications*”, AASHTO’s “*Green Book*” and other relevant AASHTO design documents shall be consulted for guidance. Where conflicts exist or interpretations are required, the City Engineer shall make the final determination in consultation with the designer.

2.1.2 Location and Layout of New Streets

The location and layout of new streets shall be as identified in the Major Thoroughfare Plan, Subdivision Regulations and Zoning Ordinance. Streets not identified in the Major Thoroughfare Plan shall meet the needs of the specific development and satisfy all other specific requirements of this chapter. The City Engineer retains the authority to designate collector and arterial streets as needed for circulation and emergency access and retains authority for approval of the overall street layout.

All streets shall have a logical relationship to the existing topography and to the location of existing, platted or planned streets within adjacent properties. In instances where a proposed street is not indicated on the Major Thoroughfare Plan, it should support a rectangular grid or modified grid street network to the maximum extent practicable. Curvilinear street networks shall only be used when topographic or environmental constraints make use of the grid pattern undesirable, or when established development patterns on adjacent lands make the grid pattern infeasible.

The street layout for all subdivisions shall be designed to ensure connectivity, enhance general circulation and to provide secondary points for emergency access. They shall also provide safe, efficient, and convenient vehicular, bicycle, and pedestrian access within and between developments. Certain streets may need to be extended to property boundaries to provide for the future logical extension of the street through adjacent properties. If an arterial or collector street is located within or adjacent to a development, the development shall continue the street to a logical termination point as determined by the City Engineer.

A major component in street layout is neighborhood traffic safety. This is an essential transportation issue in the City. Streets shall be designed to limit excessive traffic speeds and volumes in neighborhoods and provide for safe travel for all modes of transportation including pedestrian, bicycle, and vehicles. In addition, new streets in neighborhoods shall be laid out to minimize opportunities for cut-through traffic.