



Chapter 3 AVAILABLE RESOURCES

3.1 Overview of Resources

There are many local resources that are available to assist in the design of land development projects. Some basic websites and design references are listed in Chapter 15. Many of these resources are also posted on websites, with the advantages of being free and convenient. Some resources (maps, manuals, etc.) may be purchased from government agencies at a nominal cost. Resources are grouped into the following broad categories, with examples in parentheses:

- Regulations (ordinances, policies, subdivision requirements)
- Physical data (topography, survey monuments, photographs)
- Design guidance (Knoxville BMP Manual, drainage design charts, standard details and specifications, AASHTO green book, MUTCD)

In addition to physical resources, the Stormwater Engineering Division can typically answer specific questions. The most common points of contact during site design and construction are:

Plans review, design questions	<i>David McGinley, Charissa Oglesby and Ken Oliver</i>
Plat review, agreements, covenants	<i>Molly Hyatt and Floyd Smith</i>
Construction inspections and certifications	<i>Christian Thompson</i>
Bonds, performance agreements, covenants	<i>Christine Sliger</i>

The Stormwater Engineering Division has floodplain maps and profiles to determine if a development project is in a floodplain or other flood hazard area. The maps are revised and issued by the Federal Emergency Management Agency (FEMA) for official use in establishing floodplains and flood zones. Paper maps can be ordered directly from FEMA, or the Stormwater Engineering Division can photocopy portions of particular maps as needed to assist developers.

3.2 Engineering Department Website

The City of Knoxville Engineering Department (including the Stormwater Engineering Division) maintains a website that includes the following items to assist with land development:

- Knoxville BMP Manual
- Stormwater and Street Ordinance
- Work Zone Traffic Control Policy
- City of Knoxville standard details
- City of Knoxville technical specifications

The Knoxville BMP Manual contains design guidance and details for stormwater channels, ditches, pipes, culverts, stormwater detention structures, erosion control features, good housekeeping, etc. The Knoxville BMP Manual also has lists of useful websites and drainage reference documents. The Civil Engineering Division is responsible for reviewing and issuing Temporary Traffic Control Permits and Construction Right-Of-Way Permits.



3.3 Technical Services Counter

The Technical Services Counter (865-215-2103), part of the Stormwater Engineering Division, is located in Suite 462 of the City County Building. The counter maintains the official ward maps, subdivision plats and other records necessary to efficiently support the Stormwater Engineering Division and other parts of city government. The products for sale are nominally priced to help recover the production cost. The Geographic Information System (GIS) is a countywide system established jointly by the City of Knoxville, Knox County, and the Knoxville Utilities Board.

- Full-sheet (24" x 36") copy of standard GIS topographic map at 1" = 200' ** \$10.00
- Half-sheet (18" x 24") copy of standard GIS topographic map at 1" = 200' ** \$5.00
- Computer-generated plot (any scale) of GIS information on 11" x 17" paper ** \$8.00
- Printed page from microfilm records on 11" x 17" paper \$1.00
- Aperture camera cards (per card) \$1.00
- Special request map for GIS data on large plotter, with color printing *** \$53.00

** Available within Knoxville city limits only - (contact KGIS if outside of Knoxville city limits)

*** Only within Knoxville city limits, and subject to KGIS limitations on various types of data

The current price list is maintained at the Technical Services Counter, along with examples of these products. The counter staff is very helpful in assisting homeowners or developers in choosing the best product for a particular purpose. The City of Knoxville maintains city survey control monuments to assist in surveying; this information is freely available to surveyors who need to know coordinates and elevations. See the interactive survey mapping website (hosted by KGIS and the Civil Engineering Division jointly) for more information at

<http://www.ci.knoxville.tn.us/engineering/civil/surveypoints.asp>

Other sources of maps, aerial photographs, historical records, plats, and other data include KGIS and MPC. KGIS is the lead agency for developing and maintaining the GIS database on a continual basis for various government entities and utility boards. Therefore, KGIS offers a wider variety of products and services, particularly for obtaining electronic data. See the MPC website for a further description of historical maps, census data, traffic counts, etc. MPC also assigns and revises street addresses early in the design and development process.

Knoxville / Knox County / KUB
Geographic Information Systems (KGIS)
606 Main Street, Suite 150
Knoxville TN 37902
Telephone (865) 215-2641

Metropolitan Planning Commission (MPC)
City County Building, Suite 403
Knoxville TN 37902
Telephone (865) 215-2500

Additional resources such as tax maps, property deeds, recorded plats and other types of property information are located on the 2nd floor of the City County Building. The Knox County Register of Deeds maintains the official property records for the City of Knoxville and surrounding areas.

Knox County Property Assessor
City County Building, Suite 204
Telephone (865) 215-2360

Knox County Register of Deeds
City County Building, Suite 225
Telephone (865) 215-2330



3.4 Metropolitan Planning Commission (MPC)

The MPC offices are located on the 4th floor of the City County Building (telephone 215-2500). MPC offers assistance and information to anyone who is involved in the development process through the following means:

- Development Services Counter (a staffed help desk on the 4th floor).
- A comprehensive website with requirements and services. (<http://www.knoxmpc.org>)
- A library and records department which is open to the public.
- Many items for sale such as publications, maps, photographs, etc.

MPC maintains the official updated versions of critical development design documents on its website, such as the Zoning Ordinance and the Minimum Subdivision Regulations. These documents must be carefully reviewed by all concerned parties early in the conceptual design process. An error in understanding or interpreting these documents may result in rejected applications, design delays, additional fees or other unpleasant events. MPC regularly meets on the second Thursday of each month and is required to conduct all meetings publicly. Therefore, the website also has meeting schedules and a list of submittal dates necessary to be placed on the agenda. The website also has the list of MPC review fees and downloadable forms.

3.5 Knoxville Inspections Bureau

The website at <http://www.ci.knoxville.tn.us/development/forms.asp> contains the basic procedures to apply for a building permit and an overview of the inspection process. In addition to the building permits, the Inspections Bureau also handles site development permits for most small projects with moderate grading and drainage work, in conjunction with building construction. The Inspections Bureau is located at Suite 505 of the City County Building (telephone 865-215-4520). Other permits such as electrical permits, gas permits, mechanical permits, plumbing permits and sign permits help to protect the general public and are required before a building can be declared ready for occupancy. See Section 5.1 for further discussion of the Knoxville Inspections Bureau and the types of permits which are typically issued.

3.6 Tennessee State Board of Architectural and Engineering Examiners

A state website that contains many features is the State Board of Architectural and Engineering Examiners at <http://www.state.tn.us/commerce/ae.html>. It has an online roster of registered professionals with current status and address, a list of laws and regulations with regard to the practice of architects and engineers, and a useful document called the Reference Manual for Building Officials and Design Professionals.

The state of Tennessee is authorized to license and regulate design engineers by authority of TCA Title 62, Chapter 2, which cites the state's interest in protecting life, health and property and to promote the public welfare. The rules of the State Board of Architectural and Engineering Examiners are also contained on this website. Minimum education and experience levels, renewal procedures, continuing education requirements, and rules of professional conduct are all addressed. The Reference Manual for Building Officials and Design Professionals addresses many questions with regard to site grading and development in addition to building construction.



3.7 Tennessee Department of Transportation (TDOT)

TDOT is the primary source of information in the state for good construction specifications, details, design parameters, and highway design/construction updates. TDOT Standard Specifications for Road and Bridge Construction is a helpful reference in terms of earthwork, street pavements, concrete, drainage structures, culverts, aggregates, incidental construction, and miscellaneous materials such as erosion control or seeding. This document can be viewed or downloaded at <http://www.tdot.state.tn.us/construction/specbook.htm>

TDOT Standard Roadway and Structure Drawings contain over 300 standard details in the following categories: roadway design, culverts and endwalls, catch basins and endwalls, roadway and pavement appurtenances, safety appurtenances and fence, traffic control appurtenances, and erosion control and landscaping. Contact TDOT for further details on how to purchase this reference (approximately \$100 for a complete set of TDOT standard details). These details may also be viewed or downloaded at http://www.tdot.state.tn.us/Chief_Engineer/engr_library/design/Std_Drwg_Eng.htm

3.8 Federal Highway Administration (FHWA)

FHWA has design manuals for almost every aspect of drainage design and hydrology. Some of the manuals are available online at <http://www.fhwa.dot.gov/bridge/hydpub.htm> Three very useful manuals are Hydraulic Design of Highway Culverts (HDS-5), Hydraulic Design of Energy Dissipators for Culverts and Channels (HEC-14), and Urban Drainage Design Manual (HEC-22).

FHWA also has the authoritative reference document for temporary and permanent traffic control. The Manual on Uniform Traffic Control Devices (MUTCD) is located online at <http://mutcd.fhwa.dot.gov/>

3.9 Knoxville/Knox County/KUB Geographic Information System (KGIS)

The KGIS website at <http://www.kgis.org/> has a feature called KnoxnetWhere? which allows viewing and printing of interactive maps to display property lines, property ownership, addresses, buildings, streets, zoning, city and county limits, political representatives, school zones, CLT numbers, parcel numbers, wards, districts, etc. The user can zoom in and out, print drawings to scale, and select which features are displayed. Additional features will be added to the interactive mapping from time to time.

The City survey control points website is jointly hosted by KGIS and the Civil Engineering Division at <http://www.ci.knoxville.tn.us/engineering/civil/surveypoints.asp> Survey control points are established and maintained by the Civil Engineering Division. This website helps to locate and identify survey control points, print location maps, retrieve the survey information, and compute bearings & distances between any two survey control points. KGIS and the Civil Engineering Division will update the website as new survey control points are established throughout the City of Knoxville.