Existing Conditions

Chapter 2

This chapter represents a comprehensive inventory and assessment of conditions and community features noted in the study area. It communicates how land is organized, used, and supported by public facilities and services. A review of current studies, plans, programs, and policies applicable to the study area acknowledges the invisible forces that could affect the planning process or resulting recommendations for the City of Hendersonville Land Use & Transportation Plan.

Natural Environment

Topography

The study area is generally characterized by gently rolling hills, with elevations ranging from 445 feet above sea level around Old Hickory Lake to over 800 feet above sea level in the northwestern areas of the Hendersonville Urban Growth Boundary (a change in elevation of nearly 350 feet). High elevation areas in the northwestern portion of the study area have the steepest slopes, creating the greatest development difficulties in the study area.

Soils

According to the Local Planning Assistance Office of the Department of Economic and Community Development there are three predominant soil types in the City of Hendersonville. The first soil group is found predominantly in steep slope areas, on the larger hills and ridges in the northwestern portion of the study area, and the smaller hilltops and ridges found throughout the study area. This group is mainly composed of Sulphura and Barfield soil types characterized as upland soils, with a rocky composition, and greater than five percent slopes. These characteristics can create challenges for providing infrastructure. The second soil type, comprised primarily of Arrington and Byler soil types, is found in relatively flat, low lying areas that are prone to flooding. These soils can cause development constraints because they retain moisture and have low compaction levels. The third group of soils presents the fewest challenges to development. They are comprised of gently rolling upland soils between two and twelve percent slopes and include Harpeth and Mimosa soil types. These soil types are suitable for construction of roads, buildings, and water and sewer lines.

Floodplains

Floodplains are located in areas surrounding Old Hickory Lake and its tributaries. Areas identified in the FEMA Flood Insurance Rate Maps as "prone to flooding" include areas along Mansker Creek, specifically areas near Main Street and along Center Point Road, and all areas along Drakes Creek and Station Camp Creek. These areas are commonly reserved as passive and open space in the study area.

Parks and Recreation Areas

The City of Hendersonville has a total of 465 acres of parkland in five parks. The vast majority of parkland is located along the shoreline. All lakeshore parkland is owned by the Army Corps of Engineers and operated by the City of Hendersonville. Amenities among the parks include softball/baseball fields, football fields, greenways, soccer fields, basketball courts, tennis courts, sand volleyball courts, picnic areas and pavilions, a frisbee golf course, a skate park, a model airplane field, and lakeside walking paths.

There are nine boat launches and three private marinas (i.e., Anchor High, Creekwood, and Drakes Creek) in the City, all on Army Corps of Engineers' land. The City does not operate marinas or boat slip facilities. Additionally, the City owns a public 18-hole golf course off Saundersville Road.

Additional planned park and recreation areas include an expansion of Veterans Park, walking/multi-use trails in Indian Lake Village to tie into Veterans Park and Drakes Creek Park, and a boardwalk on Sanders Ferry Road.

These recreational areas serve as regional attractions for fishing and soccer tournaments.

Forested Areas

Forested areas are those areas in the City relatively undisturbed, with large stands of mature trees. These areas are predominantly found north of Main Street, with the highest concentrations in the northwest portion of the study area.

Lakes, Rivers, Streams, & Creeks

The major water feature in the study area is Old Hickory Lake. Old Hickory Lake is a man-made lake constructed by the Army Corps of Engineers on the Cumberland River in 1952. Old Hickory Lock and Dam was built on the lake as one of a series of locks and dams on the Cumberland and Tennessee Rivers to regulate the river systems for year-round navigation, to reduce flooding, and for hydroelectric power generation. The lake and amenities near the water's edge provide for many recreational opportunities, including water sports, fishing, boating, and picnicking.

The Lake's shoreline is managed by the Army Corps of Engineers through the recently updated Old Hickory Lake Shoreline Management Plan (SMP) (updated in 2008). A brief summary of this plan is provided on page 2.18.

Streams and creeks in the study area flow in a southeasterly direction toward Old Hickory Lake and the Cumberland River.

Wetlands

Small pockets of wetlands are found in the study area along the shoreline of Old Hickory Lake, in close proximity to the flood zone, and around other small ponds and lakes in the study area.

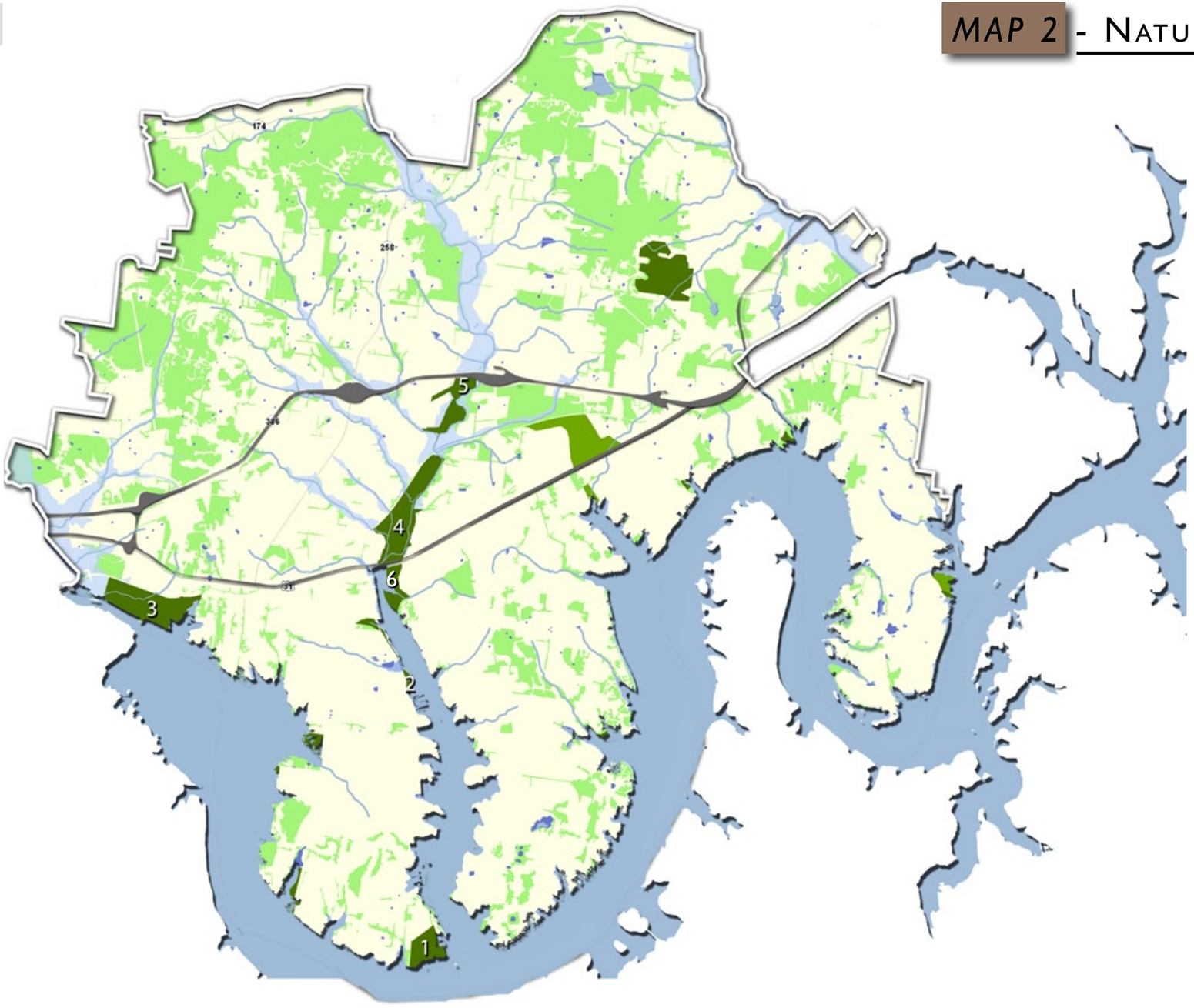
Summary

Together these features comprise the existing natural features found in the study area. These areas represent the natural treasures of the study area and the greatest opportunity for keeping the community green. Map 2 on page 2.1 illustrates the natural features found in the study area.

MAP 2 - Natural Features

Legend

- Private Parks
- Public Parks
  1 - Sanders Ferry Park
  2 - Mallard Point Park
  3 - Rockland Recreation Area
  4 - Drakes Creek Park
  5 - Veteran's Park
  6 - Memorial Park
- Floodplains
- Wetlands
- Water Bodies
- Forested Areas



Built Environment

Land Use Profile

The existing land use profile details important information regarding the general development patterns and characteristics in the study area. Analysis of existing land use helps form the basis for future land use recommendations for the study area.

Existing land use for the study area was inventoried using tax assessor data (2006), aerial photography (2005), windshield surveys, and staff/ local knowledge. The existing land use profile for the study area is detailed in Table 2-1 and the location of all land use categories is illustrated in the Existing Land Use Map (see Map 3 on page 2.3). A general description of the built environment is provided below:

The predominant land use in the study area (48%) is classified as single family residential. This land use category includes detached, semi-detached, and attached dwelling units on individual lots. The majority of land in this category is found south of Main Street on Walton Ferry Peninsula, Indian Lake Peninsula, and Cages Road Peninsula. Pockets of residential development exist between Main Street and Vietnam Veterans Boulevard and in isolated areas in the northern portion of the study area. Multi-family residential land uses, including townhomes, apartments, and multi-family developments make up 1.2% of land in the study area. These areas are in close proximity to major roads and often serve as a buffer between commercial and single family uses.

More than one-third of the study area (37%) is classified as agricultural/unimproved. The majority of this land use category is found north of Vietnam Veterans Boulevard and in the eastern peninsula of Cages Bend. This land use category includes all vacant parcels (including large tracts and small vacant infill lots), active agricultural parcels, and parcels containing committed development projects in the City that have not yet been constructed. (Note: 5% of the agricultural/unimproved land is already committed for future residential, commercial, and institutional projects, see the Committed Development section).

Institutional and business/office uses comprise about 3.3% and 3.4% of land in the study area, respectively. Institutional uses are found throughout the study area and include schools, churches, government buildings, hospitals, libraries, public safety facilities, and assisted living facilities. Business/office land uses, mainly found along Main Street, Indian Lake Boulevard, and New Shackle Island Road, include all retail businesses (both neighborhood and larger scale), shopping centers, professional offices, and restaurants.

About 1.4% of land in the study area is categorized as light industrial. This land use category includes manufacturing facilities, warehouses, storage units, and similar facilities. These uses are predominately found in industrial parks adjacent to the railroad and in pockets along Main Street and Vietnam Veterans Boulevard. Just under 2% of land in the study area is classified as mining/extractive. This land use category encompasses all mining and related activities associated with the Rogers Group Quarry. The quarry is located between Vietnam Veterans Boulevard and Gallatin Road in the eastern extreme of the City.

Parkland, comprising about 3.4% of the land use in the study area, is found along the shoreline or in flood-prone areas.

Table 2-1- Existing Land Use Profile

Land Use	Acreage	Percent
Agricultural/Unimproved	9,590.08	37.0%
Single Family Residential	12,468.02	48.0%
Multi-Family Residential	323.69	1.2%
Mobile Home Park	22.52	0.1%
Institutional	858.06	3.3%
Business/Office	878.62	3.4%
Light Industrial	355.90	1.4%
Mining/Extractive	477.70	1.8%
Parks and Recreation	885.67	3.4%
Public Utilities	100.74	0.4%
TOTAL	25,961.00	100.0%

Development/Redevelopment Potential

Committed Development

Currently about 1,450 acres of agricultural/unimproved land on the existing land use map is approved for new development, predominantly low density residential development projects. Committed single family projects comprise over 86% (1,258 acres) of all committed development projects in Hendersonville. As shown in Map 4, single family projects are found predominantly in the northeast portion of the study area and scattered throughout the peninsulas. The Indian Lake Boulevard corridor and Glenbrook area are experiencing the most substantial non-residential development in the City. Commercial developments comprise about 4.3% (63 acres) of committed development projects. Multi-family development projects approved or underway in Hendersonville include Aventura at Indian Lake Village, Anderson Grove Apartments, and the Grove at Waterford Crossing Apartments. Three institutional projects, comprising slightly over 7% (108 acres) of the committed developments, have been approved in the City.

Remaining Development Potential

Large tracts of vacant land exist north of Main Street and throughout the Cages Bend Peninsula. In total, roughly 1/3 of land in the study area is classified as agriculture/unimproved and not yet committed for development. A build-out analysis was performed for the remaining areas to forecast additional development potential within the study area.

Areas deemed highly-constrained for development (i.e., wetlands, steep slope areas, lakes and rivers, 50-foot riparian buffers, parkland, and institutional uses) were removed before the build-out calculations were performed. A site efficiency factor was also applied to vacant parcels (see footnote F in Table 2-1) greater than 20 acres in size to account for land typically dedicated to on-site improvements (e.g., internal streets, utility easements, storm water management, and open space) necessitated by new development. This reduction is generally accepted as an industry standard for estimating the build out potential of large vacant parcels. The remaining portion(s) of a parcel, after removal of highly-constrained areas for development and on-site infrastructure, was used to determine development potential within the study area.

Based on current development controls and available land in the City, it is estimated that the City could support 6,094 new dwelling units and almost 5.9 million sq. ft. of new non-residential development. The results of the build-out analysis are summarized in Table 2-2.

Table 2-2 - Town of Hendersonville, TN Comprehensive Transportation / Land Use Plan
Build-Out Analysis for Vacant Land w/o Committed Development in the Study Area

	Total Area	Areas Deemed Constrained to Development [D]	Areas Reserved for On-Site Infrastructure [E, F]	Net Buildable Area [G]	Maximum Residential Density	Observed FAR [H, I]	New Dwelling Units	New Non-Residential Square Footage
Units	Acres	Acres	Acres	Acres	D.U. / Acre	-	D.U.'s	Sq. Ft.
Residential Zoning [A]								
Agriculture/Residential, AR	1,149.70	329.72	29.13	790.85	1.1	-	870	-
Low Density Residential, R-40	885.95	360.02	22.26	503.67	1.1	-	554	-
Residential A, RA & R1A	3,961.99	1,798.92	81.63	2,081.44	1.1	-	2290	-
Low Density Residential, R-20	671.64	264.16	33.45	374.03	2.2	-	823	-
Low Density Residential, R-15	432.55	94.25	42.98	295.32	2.9	-	856	-
Low Density Residential PUD, LDR-PUD [B]	99.75	24.63	8.21	66.91	2.2	-	147	-
Medium Density Residential, MDR-PUD [B]	29.90	6.73	3.00	20.17	3.5	-	71	-
Medium Density Residential, R-10	2.91	0.00	0.00	2.91	4.4	-	13	-
High Density Residential, RM-1	24.65	8.04	0.00	16.61	10.0	-	166	-
Town Center Residential, TC-R	7.90	0.74	0.00	7.16	8.7	-	62	-
Subtotal	*7,259.04*	*2,886.47*	*220.66*	*4,151.91*			*5,790*	-
Non-Residential Zoning [A]								
General Commercial Service, GCS	680.32	136.90	42.78	500.64	-	0.20	-	4,361,576
Industrial General, IG	41.03	21.90	0.00	19.13	-	0.22	-	183,327
Industrial Restrictive, IR	57.24	7.97	0.00	49.27	-	0.26	-	558,012
Mixed Use Commercial Service, MCD	51.43	2.83	6.62	41.98	-	0.25	-	457,162
Office/Professional Service, OPS	33.31	4.15	0.00	29.16	-	0.13	-	165,127
Town Center Commercial, TC-C	11.99	6.43	0.00	5.56	-	0.19	-	46,017
Subtotal	*875.32*	*180.18*	*49.40*	*645.74*			-	*5,771,221*
Mixed-Use Zoning [A]								
Multiple Residential/Office Districts, MRO [C]	50.13	19.70	0.00	30.43	10.0	0.25	304	165,691
Subtotal	*50.13*	*19.70*		*30.43*			304	*165,691*
Totals	**8,184.49**	**3,086.35**	**270.06**	**4,828.08**			**6,094**	**5,936,912**

Notes:

A = Height, bulk, and density characteristics associated with each zoning district are based on information published in either the Combined Zoning Ordinance for the Town of Hendersonville and the Hendersonville Planning Region or the Sumner County Zoning Ordinance.

B = Zoning district represented in the Sumner County Zoning Ordinance.

C = Multiple Residential/Office Districts, MRO allows both residential and non-residential permitted uses. This analysis assumes a 50/50 split between residential and non-residential uses for future build-out.

D = Areas deemed constrained to development include wetlands, steep slope areas, lakes and rivers, 50-foot riparian buffers, parkland, and institutional uses. These areas were removed from the area of a parcel before calculating development potential.

E = On-site infrastructure includes internal streets and storm water infrastructure. A site efficiency factor was used to estimate the impact of on-site infrastructure. A site efficiency factor was only applied to parcels greater than 20 acres in size.

F = The following site efficiency factors were used for this analysis: AR (95%), R-40 (95%), RA & R1A (95%), R-20 (90%), R-15 (85%), LDR-PUD (85%), MDR-PUD (85%), R-10 (80%), RM-1 (80%), TC-R (85%), GCS (85%), IG (70%), IR (70%), MCD (80%), OPS (80%), TC-C (90%), and MRO (85%).

G = (Total Area - Areas Deemed Constrained to Development) * Site Efficiency Factor = Net Buildable Area

H = Floor area ratio measures the relationship between total square footage in a building (all floors) divided by the total area of a parcel in square feet. For example, a 10,000 sq. ft., one-story building on a one acre parcel (43,560 sq. ft.) would be 0.23 FAR.

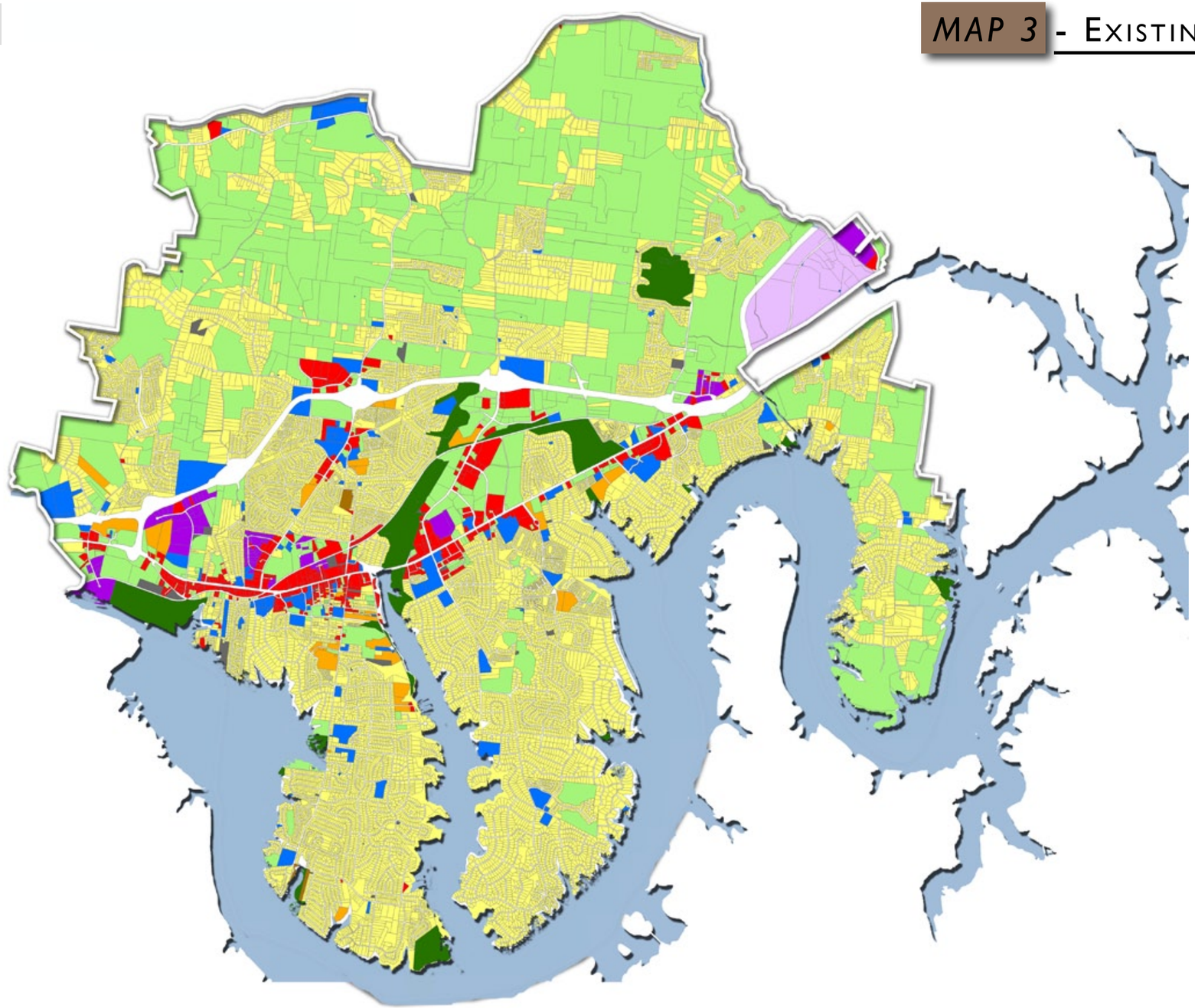
I = Observed FAR statistics were estimated using GIS data for building footprint, parcel, and zoning available from the Town of Hendersonville. Building heights (i.e., number of stories) was estimated from consultant's windshield survey.

MAP 3 - EXISTING LAND USE

LEGEND

- AGRICULTURAL/UNIMPROVED
- SINGLE FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MOBILE HOME PARK
- INSTITUTIONAL
- BUSINESS/OFFICE
- LIGHT INDUSTRIAL
- MINING/EXTRACTIVE
- PARKS & RECREATION FACILITIES
- PUBLIC UTILITIES
- WATER BODIES

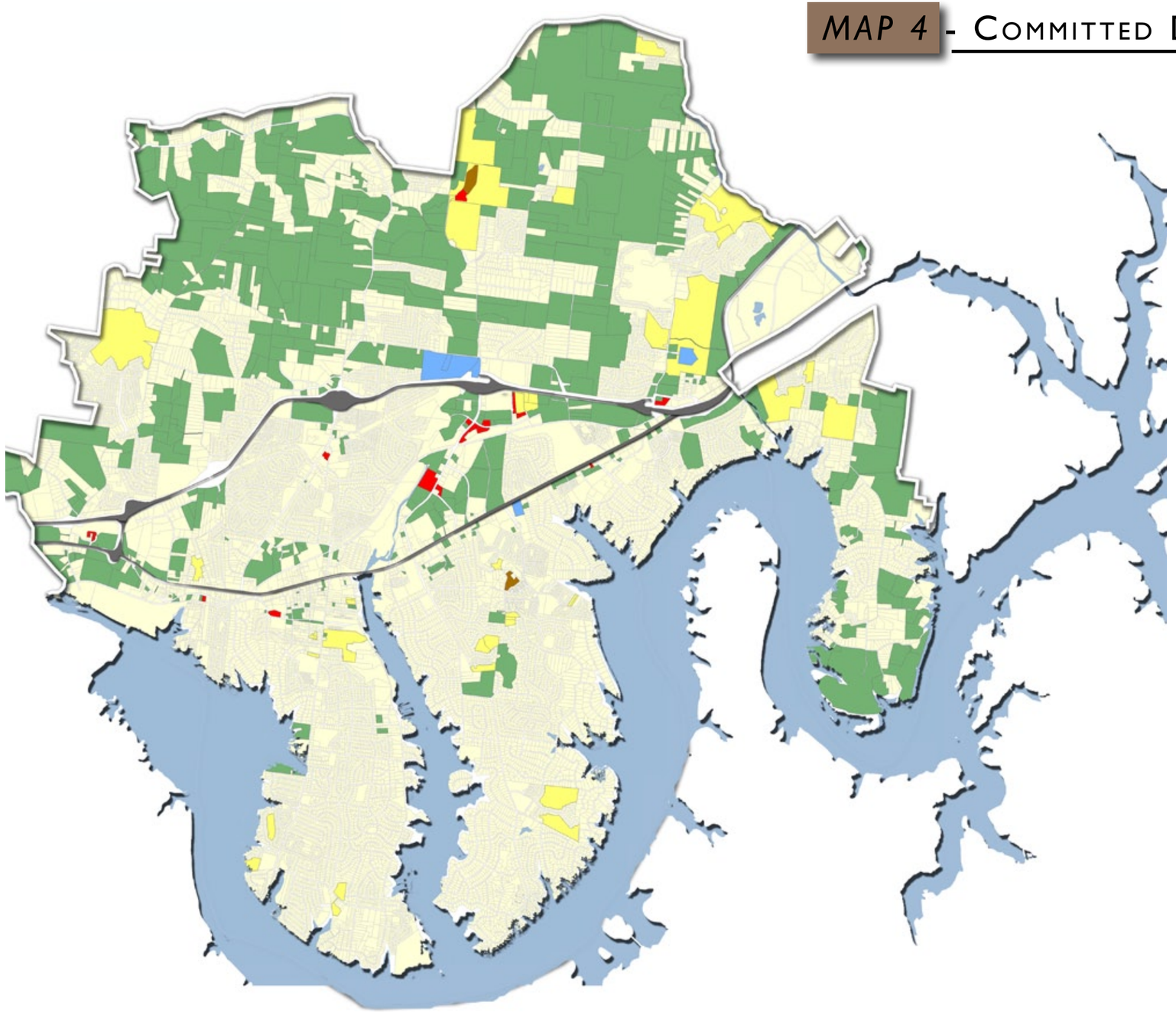
Note: Existing Land Use as of June, 2009.



MAP 4 - COMMITTED DEVELOPMENT

LEGEND

- AGRICULTURAL LAND/VACANT PARCELS
- APPROVED COMMERCIAL
- APPROVED MULTI-FAMILY RESIDENTIAL
- APPROVED SINGLE FAMILY RESIDENTIAL
- APPROVED PRIVATE INSTITUTIONAL
- STUDY AREA
- WATER BODIES



Redevelopment

As described in the introduction, Hendersonville has a finite amount of vacant, developable land remaining for development. Redevelopment of existing sites will be a crucial and integral part of future development in the study area. Redevelopment opportunities exist in residential and non-residential areas of the community that exhibit the following characteristics: aging areas, areas with high vacancies, areas that lack identity, or areas that are underdeveloped.

The rapid growth in residential development in the City has resulted in a significant amount of housing stock about the same age. Most older neighborhoods are well organized and have a strong sense of identity. Some neighborhoods; however, are experiencing some decline for varying reasons, including failure to keep up personal property or common areas or market pressures to convert residential homes to businesses. The location of new roads or the development of higher intensity commercial uses in proximity to neighborhoods can make older neighborhoods prime for redevelopment. Similarily, areas with large amounts of nonconforming uses will transition as those uses are phased out and replaced with new uses.

Many areas of the City with large concentrations of nonresidential uses are also ripe for redevelopment. Characteristics of these sites include buildings approaching their useful life, structures built before incorporation or application of a zoning ordinance, areas benefitting from expanded water and sewer service, or strip centers with high vacancies, and where lease rates are less than average.

Some areas prime for redevelopment in the City include:

- West Main Street
- New Shackle Island Road
- Old Town
- Nonconforming lakefront mobile homes parks
- Rockland Road

General recommendations to address these concerns will be provided in subsequent chapters of the Plan. Some of these potential redevelopment areas were identified as focus areas and strategic corridors.

General Development Characteristics

Historically, Hendersonville has been characterized by low density, suburban-scale development patterns. Residential development is generally represented by single family homes on relatively large lots with cul-de-sacs. Outside of a handful of apartment complexes, few other housing options exist. Commercial developments are in the form of retail shopping centers or strip malls, all categorized as single story with surface parking. Residents must drive to reach different uses in town, mostly on a handful of roads including Main Street, Indian Lake Boulevard, Saundersville Road, New Shackle Island Road, Old Shackle Island Road, Walton Ferry Road, and Sanders Ferry Road.

As the City continues to expand, the community has recently been presented with large master planned developments that include a mixture of uses and housing types. These developments offer a mix of residential and non-residential uses on the same site, and are developed at a scale that encourages active living and walkable streets.

Public Utilities

Public Sewer

Two public utility companies provide sanitary sewer service to residents and businesses in the study area: the Hendersonville Utility District (HUD) and the White House Utility District (WHUD). Both providers supply sewer service through a cooperative arrangement with Nashville's treatment facilities. There is one private sewer system serving the Tanasi Shores condo development on the Cages Bend Peninsula. The remainder of the population in the study area uses septic systems for the collection, treatment, and disposal of sewage.

The service area boundaries for the two major providers were established mutually about 60 years ago. HUD serves the majority of areas south of Vietnam Veterans Boulevard. Approximately 85% of their service area is served, with unserved areas concentrated in the southern portions of the Indian Lake Peninsula. WHUD serves the Cages Bend Peninsula and areas north of Vietnam Veterans Boulevard into the planning region and urban growth boundary. The predominant unserved areas include areas of Cages Bend Peninsula and northwest portions of the study area.

All wastewater in the City and surrounding areas is treated at the Dry Creek Wastewater Treatment Plant in Nashville. The plant has ample capacity with an average daily demand of 30 MGD and a capacity of 45 MGD. Neither provider has or anticipates having capacity issues with their lines or mains.

WHUD's policy is to not extend existing sewer lines, but developers can pay to connect new development to existing lines. HUD has a 10-year Capital Improvement Plan for prioritizing expansions that is reviewed every two years. Their current plan shows service provision to all remaining unserved portions of the study area in their service area.

The City and utility providers have a strong working relationship and have worked to coordinate planning and service opportunities. Utility providers are involved in the city's development review process, make annual presentations, and participate in quarterly meetings with the Mayor. Per the City of Hendersonville Subdivision Regulations, sewer service is required for all new commercial and industrial construction and for subdivisions within the Hendersonville Planning Region and City Limits.

Map 5A on page 2.8 depicts the location of sewer lines for both utility providers serving the study area.

Water Service

Surface water from Old Hickory Lake is the primary source of potable water supply in the region. Two utility companies provide water service to residents and businesses in their service areas: the Hendersonville Utility District (HUD) and the White House Utility District (WHUD).

The capacity of the water treatment plants is sufficient, with the average daily demand at the HUD plant at 4.8 MGD with a capacity of 8.0 MGD and the average daily demand at the WHUD plant at 11.0 MGD with a capacity of 20.0 MGD. The greatest difficulty for provision of water service is in the northwest portion of the study area because of environmental constraints, most notably steep slopes.

Map 5B on page 2.9 depicts the location of water lines for both providers within the study area.

Other Utilities

Nashville Electric Service (NES) and Cumberland Electric Membership Corporation (CEMC) provide electric service within the study area. Nashville Gas Company provides natural gas service. Telecommunication service is provided by AT&T and Comcast. Internet and mobile phone service are widely available.

Through the *Hendersonville Tomorrow Plan* the City has also undertaken initiatives to improve communication technology distribution in Hendersonville. The City is actively working to make high-speed wireless internet access widely available throughout Hendersonville, with an initial focus on civic buildings and public parks.

Roadway Characteristics

As the City of Hendersonville transitions from a bedroom community to a self-sustaining city, the frequency and length of trips on the current system of highways and streets can be expected to increase. This increase in traffic volumes will create new deficiencies on the existing transportation network. Traffic bottlenecks may become evident in places that currently function adequately while existing deficiencies will be magnified. Prior to anticipating future traffic problems, it is helpful to gain an understanding of the existing roadway characteristics. The discussion of existing roadway characteristics is organized into five sections — Corridors and Activity Nodes, Functional Classification, Corridor Operations, Traffic Safety and Crash History, and Programmed and Committed Improvements. Each is summarized on the following pages.

Corridors and Activity Nodes

As development occurs and more vehicles take to the road, transportation improvements are needed to respond to traffic congestion. These roadway improvements often include the construction of new roads which enhances access, thus raising land values and attracting more development. Table 2-3 below illustrates this continuing cycle of influence between land use and transportation.

Table 2-3 - Activity Centers

Regional Activity Center (e.g., Regional Activity Center/Employment Center)
Large-scale, transit-supportive center of employee-intensive land uses
Core areas contain large-scale and high intensity urban land uses supported by serving communities within the region
Accessed by interstates/freeways, principal arterials, and public transportation
Served by municipal water and sewer
Higher residential densities
Balance between residential/non-residential land uses
Community Activity Centers (e.g., Suburban Center/Suburban Neighborhood)
Include a combination of retail, personal services, civic, educational, and social uses
Core areas contain medium-scale development that serve the day-to-day needs and activities of the core area occupants and the surrounding neighborhoods
Accessed by principal arterials and public transportation
Served by municipal water and sewer
Medium density residential areas
Land use mix is approximately 60% residential and 40% non-residential
Neighborhood Activity Centers (e.g., Neighborhood Mixed-Use Center)
Mostly residential with a mixed-use core that serves as a focal point for the neighborhood and provides retail and service needs
Accessed by major and minor arterials with integrated collector street access
Mixture of low and medium density residential areas
Transit service provided or desired

MAP 5A - Public Sewer lines

Legend

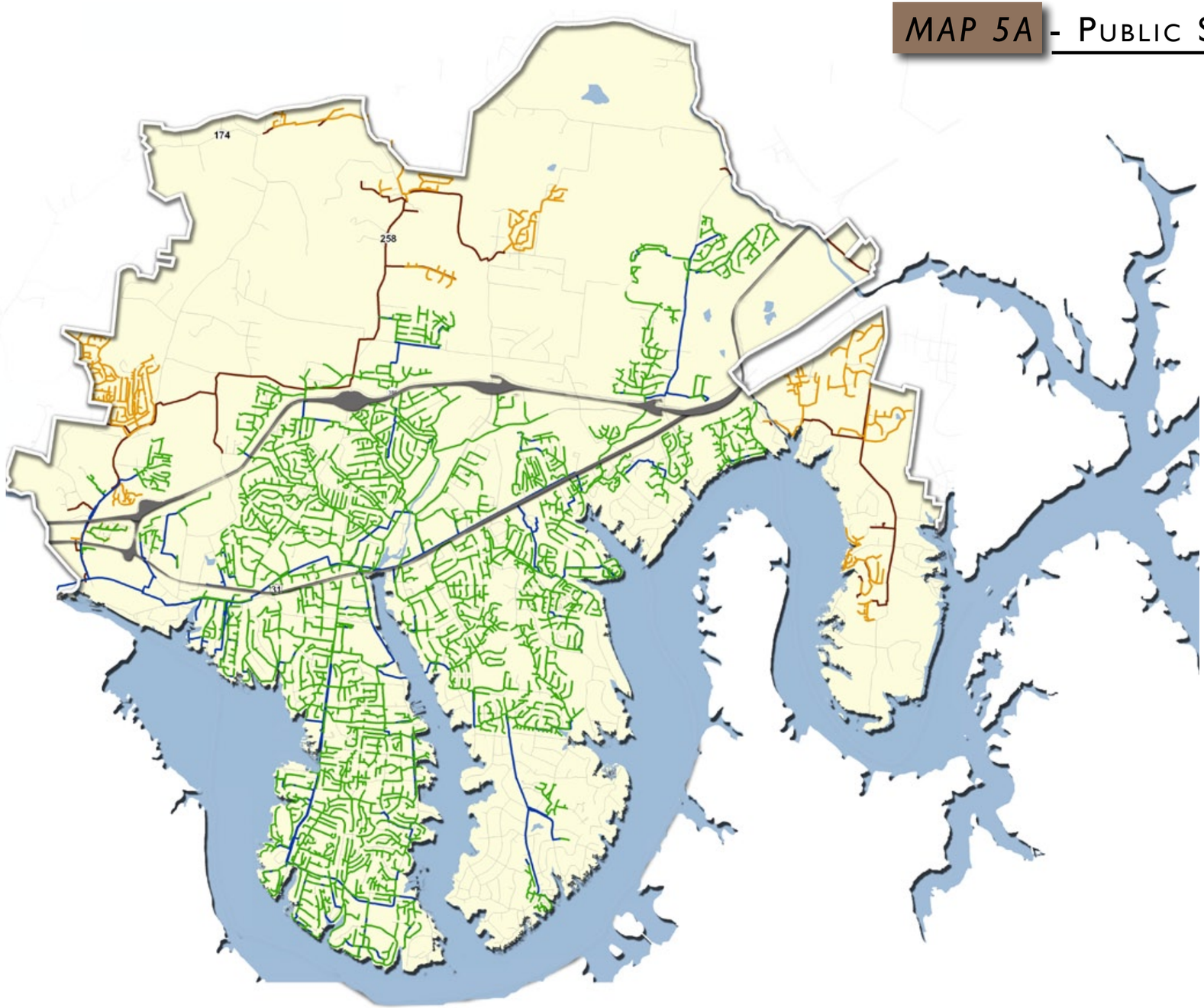
- Streets
- Study Area
- Water Bodies

White House Utility District

- Gravity Main Sewer
- Pressurized Main Sewer

Hendersonville Utility District

- Gravity Main Sewer
- Pressurized Main Sewer



MAP 5B - Public Water Lines

Legend

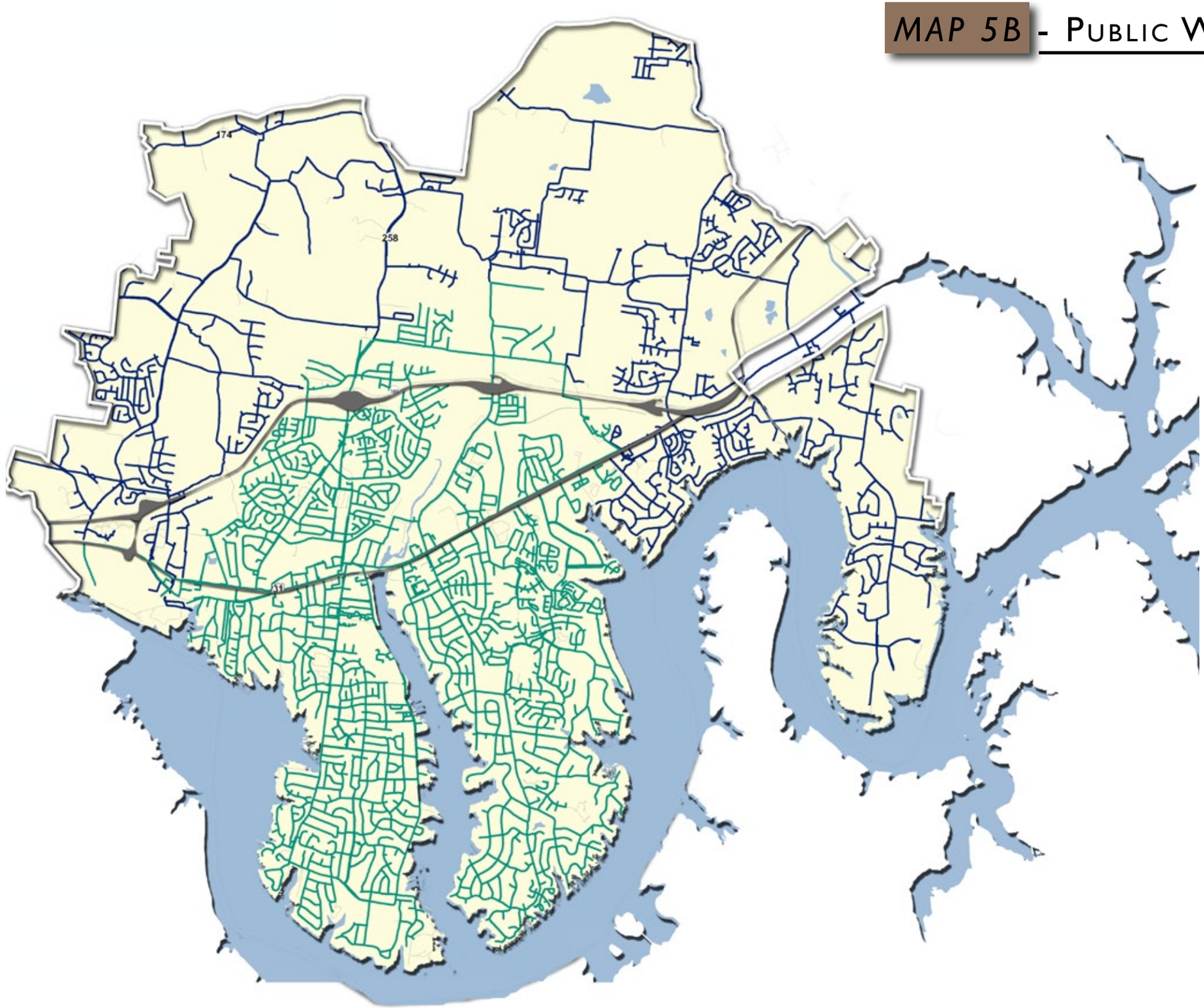
- Streets
- Study Area
- Water Bodies

White House Utility District

- Water Main

Hendersonville Utility District

- Water Main

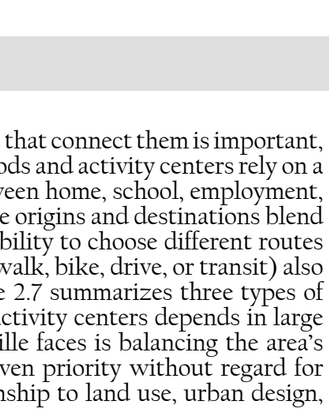


The interaction between activity centers and the transportation corridors that connect them is important, as are the mobility choices provided within the center. Often neighborhoods and activity centers rely on a small number of transportation corridors to provide essential links between home, school, employment, shopping, social, and recreational destinations. The extent to which these origins and destinations blend into multi-purpose activity centers has a dramatic effect on a person's ability to choose different routes or modes for their trip. In many cases, the range of trip alternatives (i.e.,walk, bike, drive, or transit) also can influence the overall perception of a community. Table 2-3 on page 2.7 summarizes three types of activity centers. The level of success for corridors within and between activity centers depends in large part on the intended function of the street. One challenge Hendersonville faces is balancing the area's mobility needs with other priorities. Often traffic mobility has been given priority without regard for other considerations such as the function of the street, corridor relationship to land use, urban design, and the promotion of alternate modes.

A unique challenge in creating a successful transportation system for the study area is blending connectivity and access functions with preservation of natural features and the unique character of Hendersonville. Neighborhoods and centers of activity throughout the study area have different needs and priorities. The northern reaches of the study area have very different needs than the peninsulas. While recognizing these differences, it is important not to lose focus of the practical concept of overall connectivity. This concept is particularly relevant as it relates to people's desires to make safe and efficient trips, not only by driving, but by walking, bicycling, or using public transportation. The Transportation chapter (Chapter 5) outlines a cost-effective approach to balancing the mobility and access functions of its network of roadways.

Functional Classification

The classification of streets into several "functional" categories aids in communication among policymakers, planners, engineers, and citizens for expanding the transportation system. The functional classification system groups streets according to the character area served (or to be served) and provides a general designation of the type of traffic each street is intended to serve. The street functional classification system primarily defines the street in terms of roadway design and character as well as operational features for the movement of vehicles.



Two major considerations for distinguishing arterials from neighborhood streets are access and mobility. The primary function of local or neighborhood streets is to provide access. These streets are intended to serve localized areas or neighborhoods, including local commercial land uses and mixed-use areas (i.e., low speeds, low volumes, and short distances). Local streets are not intended for use by through traffic. One of the primary functions of arterials is transportation mobility. Limiting access points (intersections and driveways) on arterials enhances mobility. However, too much mobility at high speeds limits access by pedestrians and bicyclists. The arterial is designed with the intent to carry more traffic than is generated within its corridor (i.e., higher speeds, higher volumes, and longer distances).

Classifying the street system in the vicinity of the study area required close examination of roles that each street performs in the overall transportation system. Transportation planners review quantitative and qualitative classification criteria to develop the hierarchy of streets. The existing public street network in the study area was divided into several functional classifications, including arterials, collectors, and locals.

Arterials

Arterials provide high mobility, operate at higher speeds, provide significant roadway capacity, have a great degree of access control, and serve longer distance travel. Arterials can be subdivided into categories that include facilities with full access control such as freeways and expressways, as well as major and minor arterials. Arterials usually connect to one another or to collector streets. Very few arterials connect to local streets.

Expressways and Freeways

Expressways and freeways provide the most mobility and least access (since access is only available at interchanges). Expressway/freeway facilities typically serve longer distance travel and support regional mobility. The Tennessee Department of Transportation (TDOT) typically funds roadway improvements and maintenance on these facilities. Vietnam Veterans Boulevard (SR 386) is the only freeway in the study area.

Principal Arterials

Principal arterials ideally have tightly controlled access and few, if any, individual site driveways. These facilities serve medium to longer distance travel and typically connect minor arterials and collector streets to freeways and other higher type roadway facilities. Generally, roadway improvements and maintenance on principal arterials are funded by the state. Though in its existing state Main Street provides an abundance of access and includes many individual site driveways, it is classified as principal arterial. This designation speaks to its intended function of regional mobility prior to the completion of SR 386 to the City of Gallatin.

Minor Arterials

Minor arterials primarily serve a mobility function but often have more closely spaced intersections, some individual site driveways, and generally lower design and posted speeds compared to other arterials. The minor arterial network primarily serves local traffic and connects to other minor arterials, principal arterials, and collector streets. Minor arterials provide a higher level of access to adjacent land uses than principal arterials and typically have lower traffic volumes.

Most minor arterials in the study area have a two-lane undivided cross section with little or no paved shoulders and an occasional left-turn lane at intersections and major driveways. Some segments have two-way left-turn lanes to provide optimal access to surrounding land uses. Posted speed limits range from 35 mph to 45 mph. According to the MPO, New Shackle Island Road, Center Point Road, and Long Hollow Pike are classified as minor arterials.

Collectors

Collectors typically provide less overall mobility, operate at lower speeds (i.e., 35 mph or less), have more frequent and greater land use access flexibility, and serve shorter distance travel than arterials. Collectors provide critical connections in the roadway network by bridging the gap between arterials and locals. Thus, the majority of collector streets connect with one another, with local streets, and with non-expressway/freeway arterials. These streets provide ample facilities for pedestrians and bicyclists and are designed to limit excessive speeds and traffic.

The primary purpose of the collector street system is to collect traffic from neighborhoods and distribute it to the system of major and minor arterials throughout an area. In general, collector streets have two lanes and often have exclusive left-turn lanes at intersections with major and minor arterials and less frequently at intersections with other collector streets. Collector streets are rarely constructed and funded by the state. Responsibility for collector streets usually falls to the local government and the development community for funding, design, construction, and maintenance.

Within the study area, collector streets have a wide range of physical characteristics, some of which are attributable to the neighborhoods in which they exist. One commonality between collector streets is that they provide good connectivity. Examples of collector streets in the study area include Walton Ferry Road, Sanders Ferry Road, and Indian Lake Road.

Locals

Local facilities provide greater access and the least amount of mobility. These facilities typically connect to one another or to collector streets and provide a high level of access to adjacent land uses/development (i.e., frequent driveways). Local facilities serve short distance travel and have low posted speed limits (i.e., 20 mph to 35 mph). Most roadways within the study area are classified as local streets.

Corridor Operations

Regional Mobility

Regional mobility through the study area is provided by SR 386 (Vietnam Veterans Boulevard). This access-controlled east-west route connects the cities of Gallatin and Hendersonville to the freeway network surrounding Nashville. Just to the west of the study area, Interstate 65 provides a north-south route. Within this study area, north-south mobility is limited to lower-level arterials.

Congested Corridors

Congested corridors result from several factors (often because of bottlenecks located primarily at intersections) along the corridor. Aside from individual bottleneck locations in corridors, congestion frequently results from too many people trying to use a route that is already at or over capacity. Congestion is generally a direct result of a lack of alternatives.

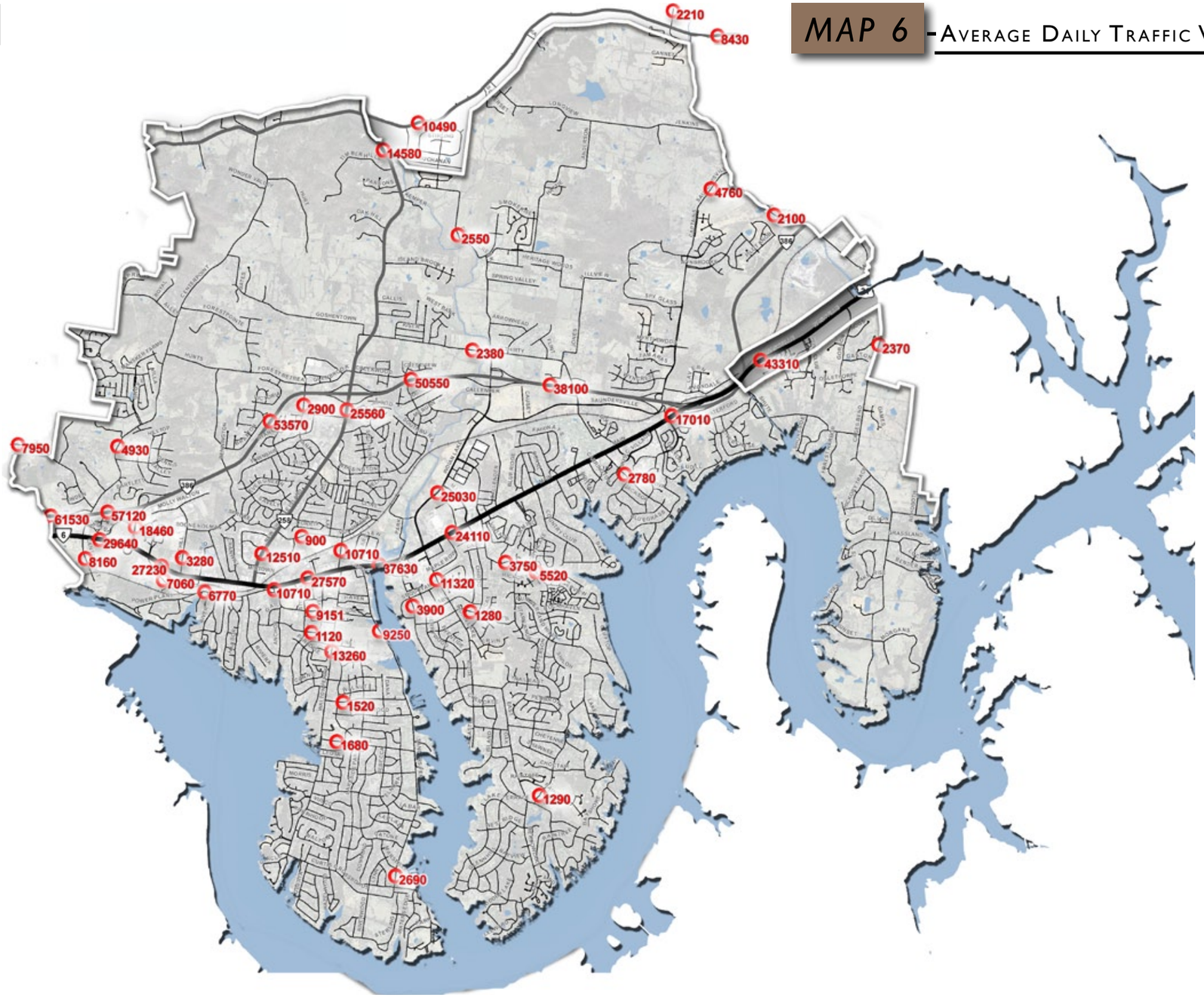
Average daily traffic volumes represent the total number of vehicles traveling along a roadway segment on an average day. Map 6 on page 2.12 illustrates 2007 average annual daily traffic (AADT) volumes provided by the Tennessee Department of Transportation for roadways in Hendersonville. The region's highest traffic volumes occur along SR 386 west of New Shackle Island Road. These volumes range from 53,570 near New Shackle Island Road to 61,530 west of Center Point Road. The highest traffic on Main Street occurs at Drakes Creek where 37,630 vehicles per day travel. Other streets with notably high volumes include New Shackle Island Road south of the SR 386 interchange (25,550), Walton Ferry Road near Paradise Drive (13,250), and Indian Lake Road near Sequoyah Drive (11,320).

However, traffic volumes alone should not be used to determine congested corridors because this measurement does not take into account different functional classifications and roadway capacities. A better measurement for this comparison is volume-to-capacity (V/C) ratios. V/C ratios are calculated by dividing the traffic volume of a roadway segment by the theoretical capacity of the roadway. The result is a universal measurement.

MAP 6 - Average Daily Traffic Volumes (2007)

Legend

- Study Area Boundary
- Water Bodies
- Count Location



These ratios can be compared to roadway Level of Service (LOS), which places roadways into six letter grade levels of the quality of service to a typical traveler on a facility. An "A" describes the highest level (least congestion) and level "F" describes the lowest level (most congestion). The level of service analysis for this plan was corridor based. As a result, the mid-block congestion shown does not fully represent congestion that may be occurring at intersections and ramp merges. Likewise the congested corridors illustrated in Map 7 on page 2.14 represent the best available data gathered from the Nashville MPO's currently adopted travel demand model. It should be noted that the MPO is in the process of updating their travel demand model at the time this Plan was created. A new model will be available for future updates to the Plan. Because of the difficulty such models face in applying regional travel demand to a localized area such as Hendersonville, the resulting congestion analysis was supplemented with feedback gathered during the public design charrette. The Levels of Service (and V/C ratios) shown in the figure are grouped into one of the following categories.

- LOS A or B — Well Below Capacity (V/C = less than 0.8) — Roadways operating with a V/C ratios less than 0.8 operate at optimal efficiency with no congestion during peak travel periods. These corridors are not shown in the congested corridors map due to the relative ease of travel during most time periods.
- LOS C — Approaching Capacity (V/C = 0.8 to 1.0) — As the V/C nears 1.0, the roadway becomes more congested. A roadway approaching capacity may operate effectively during non-peak hours, but may be congested during morning and evening peak travel periods.
- LOS D or E — Slightly Over Capacity (V/C = 1.0 to 1.2) — Roadways operating at capacity are somewhat congested during non-peak periods, with congestion building during peak periods. A change in capacity due to incidents impacts the travel flow on corridors operating within this V/C range. On the upper end of this category, corridors experience heavy congestion during peak periods and moderate congestion during non-peak periods. Changes in capacity can have major impacts on corridors and may create gridlock conditions.
- LOS F — Well Over Capacity (V/C = greater than 1.2) — Roadways in this category represent the most congested corridors in the study area. These roadways are congested during non-peak hours and most likely operate in stop-and-go gridlock conditions during the morning and evening peak travel periods.

Growth in Hendersonville has made it difficult for the community to keep up with increased transportation needs. Likewise, the limited options for east-west travel and the limited options for residents on the two peninsulas make Vietnam Veterans Boulevard and Main Street susceptible to major congestion during peak hours when incidents occur. The data shown in the congested corridor map (Map 7) represents an average of the peak-hour conditions throughout the year and does not account for congestion resulting from such incidents.

Traffic Safety and Crash History

Traffic safety is a key component to any successful transportation plan, and a thorough examination of crash history and traffic patterns usually can predict key locations where an improvement in traffic safety will benefit motorists and the community as a whole.

Due to limitations in crash and severity data, the crash analysis for this Plan focused on the top ten crash frequency intersections within the study area. As detailed in Table 2-4 and illustrated in Map 8 on page 2.15, the ten worst-case crash locations considered for safety improvement occurred on Main Street and at interchanges along SR 386. The summary of crash data shown in the table represents reported crashes from January 2006 through December 2008.

Contributing factors to a location's high crash frequency include intersection design, access considerations, and traffic congestion. Many of the locations identified with high crash frequency were also locations where congestion often exists. A direct relationship exists between traffic congestion and crash frequency, which justifies the ongoing efforts to provide adequate funding for transportation projects that improve safety and minimize traffic congestion. Driveway access in proximity to intersections also can contribute to crash frequency by increasing unexpected conflict points within an intersection's defined area of influence.

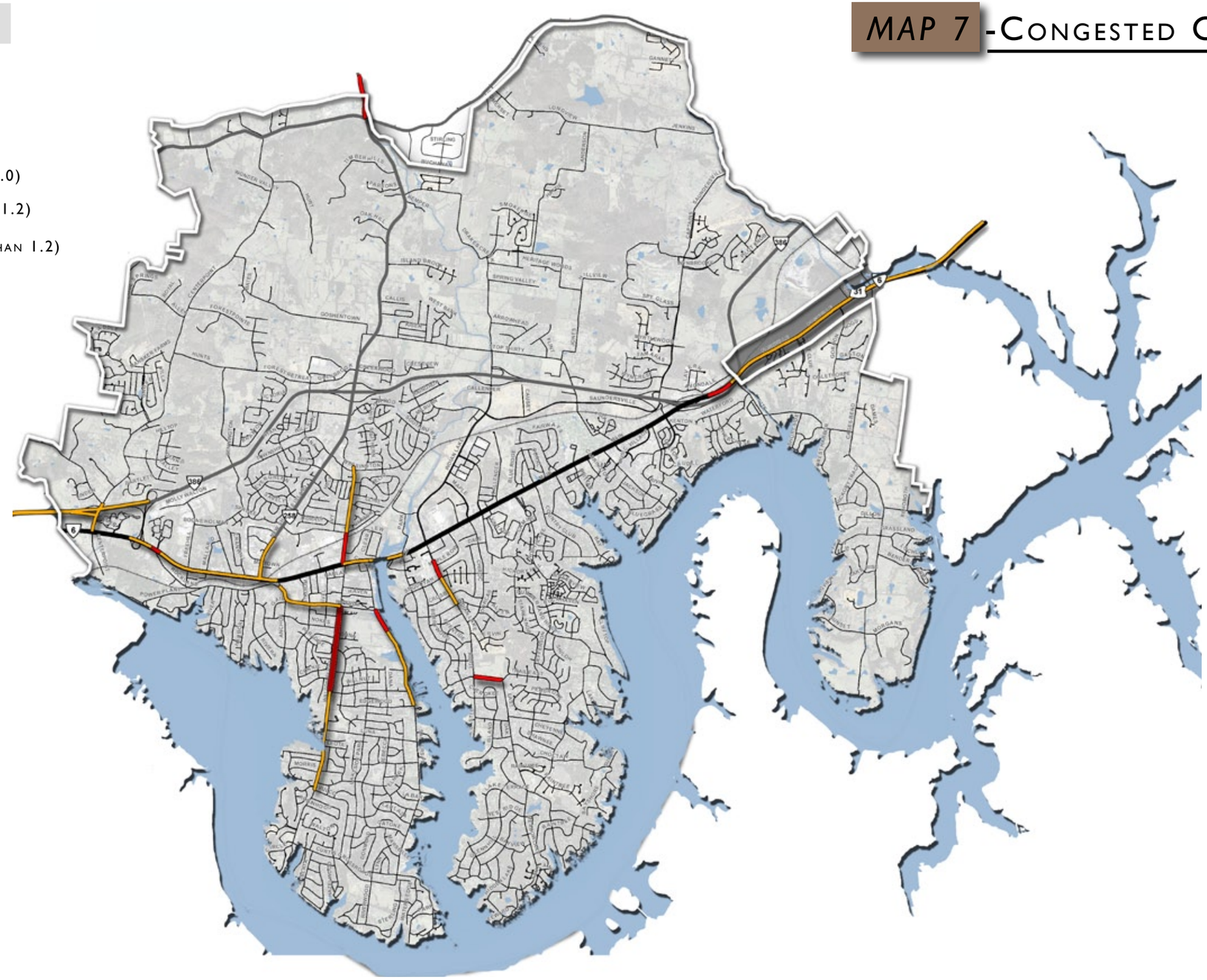
Table 2-4 - Crash Study Intersections (January 2006 to December 2008)

Rank	On Street	At Cross Street	Total Crashes
1	Vietnam Veterans Boulevard	New Shackle Island Road	228
2	West Main Street	Walton Ferry Road	86
3	Vietnam Veterans Boulevard	Exit 3 (Business Loop to US 31 E)	79
4	West Main Street	Sanders Ferry Road	77
5	East Main Street	Indian Lake Road	72
6	Vietnam Veterans Boulevard	Indian Lake Boulevard	71
7	East Main Street	Cherokee Road	59
8	West Main Street	Center Point Road	54
9	West Main Street	Old Shackle Island Road	53
10	West Main Street	Rockland Road	51

MAP 7 -CONGESTED CORRIDORS

LEGEND

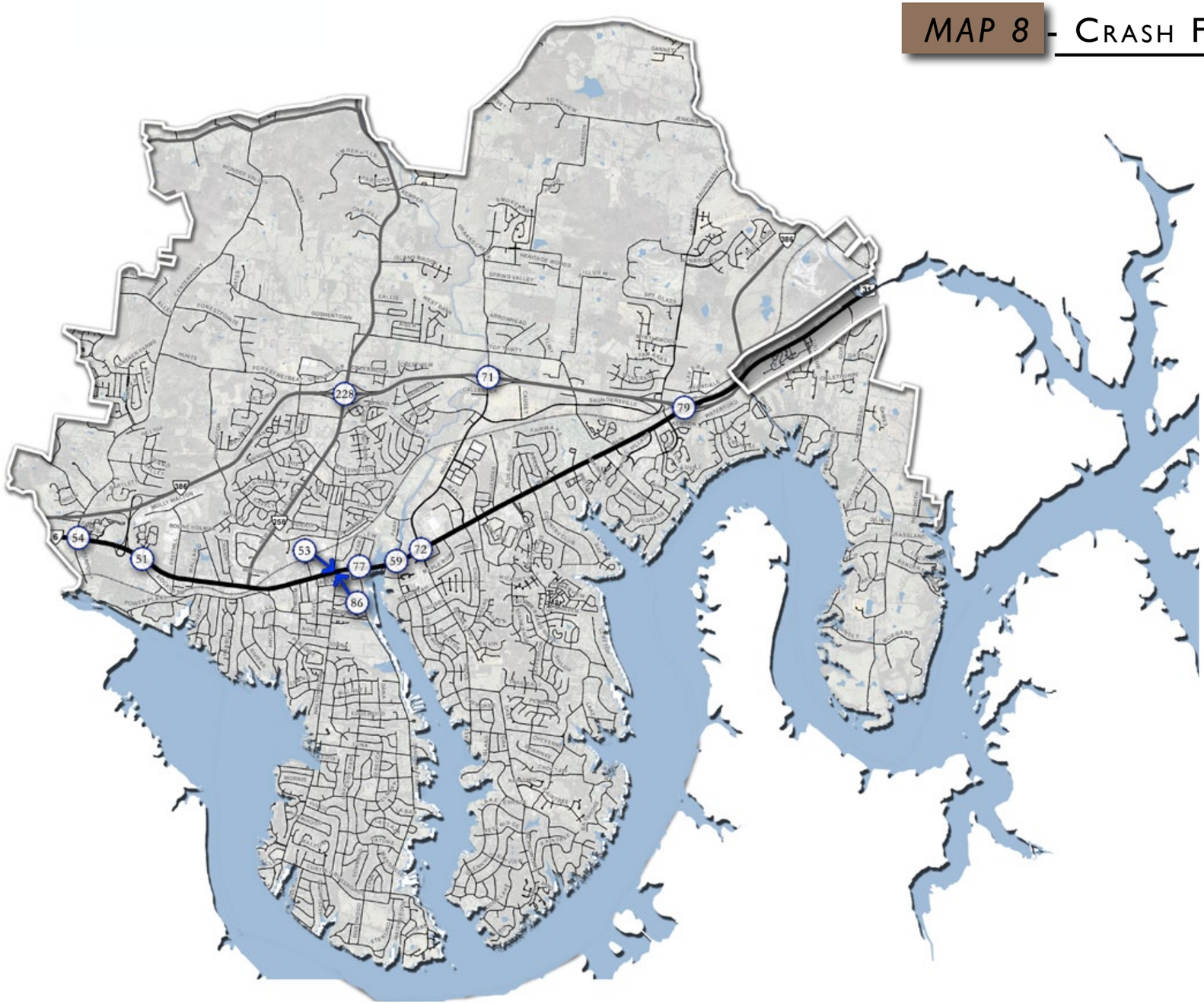
- APPROACHING CAPACITY (V/C=0.8 TO 1.0)
- SLIGHTLY OVER CAPACITY (V/C=1.0 TO 1.2)
- WELL OVER CAPACITY (V/C=GREATER THAN 1.2)
- STUDY AREA BOUNDARY
- WATER BODIES



MAP 8 - CRASH FREQUENCY

LEGEND

- HIGH CRASH LOCATIONS
- STUDY AREA BOUNDARY
- WATER BODIES



Planned and Committed Transportation Projects

The assessment of existing conditions also should consider projects that appear in local, regional, and state plans. These projects include a wish list of potential projects found in long-range transportation plans as well as committed projects with funding allocated for their implementation through the MPO's Transportation Improvement Program (TIP). The planned and committed projects within the study area are shown on page 2.17 (Map 9).

The Nashville MPO developed the 2030 Long Range Transportation Plan to outline projects and programs to meet the existing and anticipated demands on the transportation system for the five-county area surrounding Nashville. Table 2-5 details the projects proposed for Hendersonville. These projects mainly involve widening existing roadways to 3 or 5 lanes, though a few new roadways are recommended.

A portion of the projects listed in Table 2-5 have received designated funding through the Transportation Improvement Program. The TIP provides a four-year plan (currently fiscal years 2008/2009 to 2011/2012) that identifies funded transportation projects, including roadway, transit, and bicycle/pedestrian enhancements. TIP projects illustrated on Map 9 include:

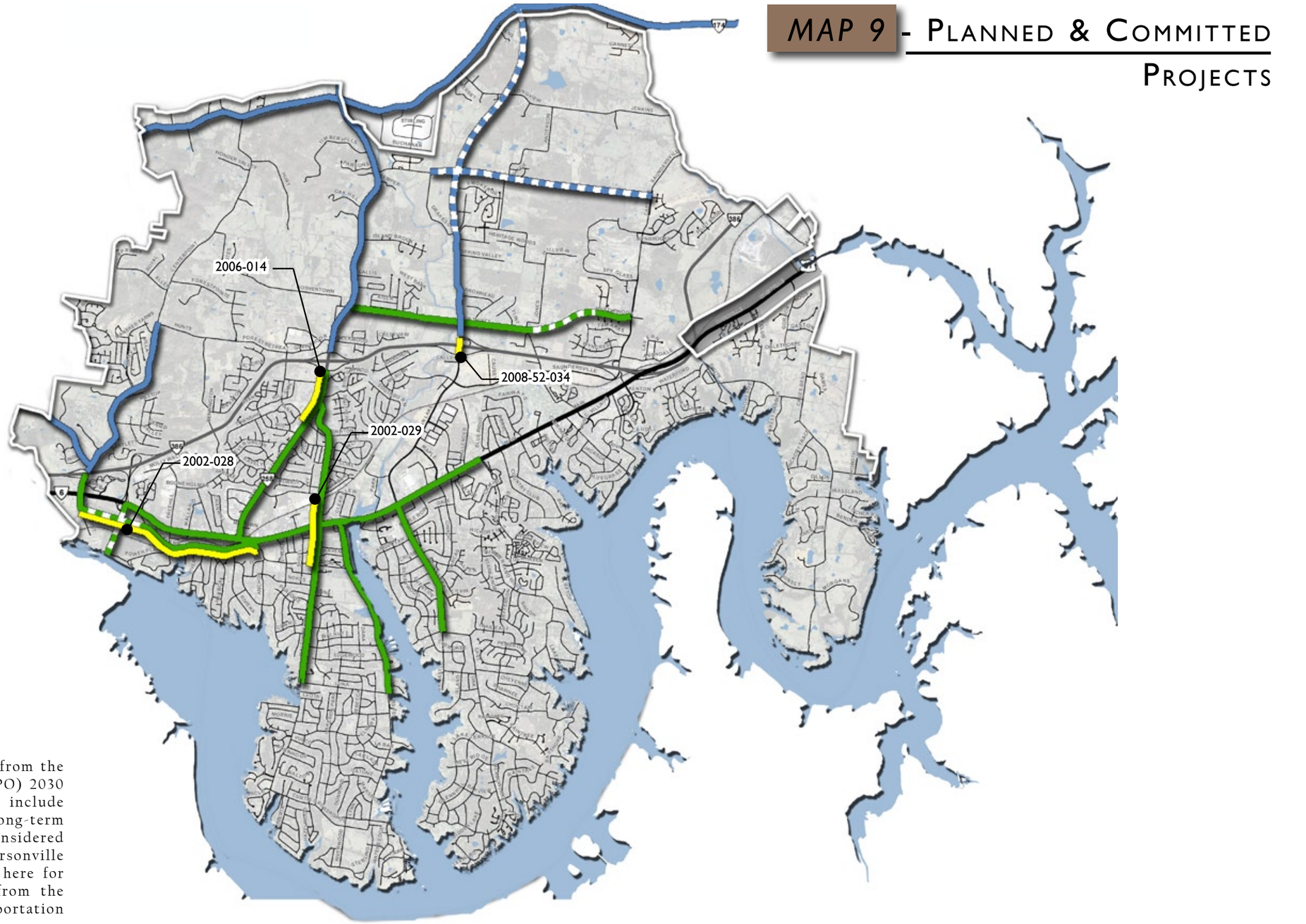
- **Indian Lake Boulevard** — Widen from 2 to 5 lanes at SR 386; modify ramps and add traffic signals.
- **New Shackle Island Road** — Widen from 3 to 5 lanes between SR 386 and Iris Drive.
- **Rockland Road / Imperial Boulevard** — Widen and extend Rockland Road to 3 lanes; extend New Shackle Island Road south to Rockland Road; move bridge at Freehill Road and realign Freehill Road.
- **Walton Ferry Road / Old Shackle Island Road** — Realign offset intersection at Main Street; widen to 3 lanes from Volunteer Drive to Imperial Boulevard.
- **Closed Loop and Signal Upgrade** — Upgrade existing closed loop signal coordination system with a system of Closed-Circuit Television (CCTV) monitors at various signalized intersections along Main Street and New Shackle Island Road.

The FY 2008/2009-2011/2012 TIP also includes projects that have already been constructed, including the construction of Indian Lake Boulevard as well as greenways near Wessington Elementary and Nannie Berry Elementary School. The LRTP and TIP projects were evaluated during the public design charrette for consideration as part of the Land Use & Transportation Plan. Modifications were made to the LRTP projects to meet the needs of the future transportation system.

Table 2-5 - 2030 Long Range Transportation Plan Projects

Time Frame	Project No.	Project Location	End Points	Length (mi.)	Existing Lanes	Future Lanes	Year	Cost	Improvement	Project Description
Committed	18	Indian Lake Blvd Ext	Existing Indian Lake Rd to SR 386	1.70	0	5	2006		New Roadway	Construct new 5 lane roadway including center turn lane
Committed	31	Rockland Rd/Imperial Blvd Ext	Center Point Rd to Imperial Blvd	1.30	0	3	2016		New Roadway	Construct new 3 lane roadway
Committed	36	Walton Ferry / Old Shackle Island	Luna Ln to New Shackle Island Rd	3.10	2	3	2016		Widening	Widen to Walton Ferry, Old Shackle Island to 3 lane w/ bike lanes; Realign intersection
Committed	60	Anderson Lane Ext	E Main St (US 31) to Indian Lake Blvd Ext		0	2	2006		New Roadway	Build new 2 lane roadway
Committed	61	Imperial Blvd Ext	Walton Ferry Rd to Sanders Ferry Rd	0.90	0	3	2006		New Roadway	Build new 3 lane roadway
Short-Term	5006	Vietnam Veterans Blvd (SR 386)	Forest Retreat Rd		0	0	2016	$3,360,000	Intersection	Construct new interchange
Short-Term	5008	Indian Lake Rd	E Main St (US 31) to East Dr	1.50	2	3/5	2016	$6,365,000	Widening	Widen from 2 to 3 lanes (Sequoia to East); widen from 2 to 5 lanes (Gallatin to Sequoia)
Short-Term	5009	New Shackle Island Rd (SR 258)	W Main St (US 31) to Vietnam Veterans Blvd (SR 386)	2.20	3	5	2016	$7,426,000	Widening	Widen from 2/3 to 5 lanes
Short-Term	5010	Old Shackle Island Rd	Railroad north to SR 258	1.40	2	3	2016	$2,611,000	Widening	Widen existing 2-lane roadway to provide a center turn lane
Short-Term	5011	Sanders Ferry Rd	W Main St (US 31) to Luna Ln	1.00	2	3	2016	$4,244,000	Widening	Widen existing 2-lane roadway to provide a center turn lane
Short-Term	5012	Walton Ferry Rd	Luna Ln to north of Imperial Blvd	1.40	2	3	2016	$3,754,000	Widening	Widen from 2 to 3 lanes (Gallatin to Imperial); widen from 2 to 5 lanes (Imperial to Luna)
Short-Term	5013	Hadley Bend Connector	SR 45 to Vietnam Veterans Blvd (SR 386)	4.40	0	4	2016	$57,000,000	New Roadway	Construct new roadway/bridge over the Cumberland River
Short-Term	5014	Center Point Rd	Rockland Rd Ext to Vietnam Veterans Blvd (SR 386)	0.60	2	5	2016	$1,772,000	Widening	Widen from 2 to 5 lanes from SR 386 to south of SR 6; 3 lanes to Rockland Rd
Short-Term	5015	Stop 30 Rd	New Shackle Island Rd to existing curve	3.00	2	3	2016	$8,933,000	Reconstruction	Add center turn lane and reconstruct
Short-Term	5016	Hendersonville Signal System	Main St (US 31) - City-wide	0.00	0	0	2016	$1,500,000	ITS	Signal system - city-wide (Hendersonville) on Gallatin Pike
Short-Term	5034	Main St (US 31)	Vietnam Veterans Blvd (SR 386) Connector to Bonita Pkwy	3.00	5	7	2016	$10,267,500	Widening	Widen from 5 to 7 lanes - Includes cost for adding bike lanes
Long-Term	5007	Caldwell Ln	Long Hollow Pk to Center Point Rd	2.33	2	3	2025	$7,800,000	Widening	Widen existing 2-lane roadway to provide a center turn lane
Long-Term	5033	Center Point Rd	SR 386 to Hunts Ln	2.10	2	5	2025	$7,014,500	Widening	Widen from 2 to 5 lanes, including center turn lane
Long-Term	5035	Goshentown Rd	Center Point Rd to New Shackle Island Rd (SR 258)	1.80	2	3	2025	$4,590,000	Reconstruction	Realign, widen to 3 lanes / Safety Related
Long-Term	5037	Drakes Creek / Anderson Ln	Vietnam Veterans Blvd (SR 386) to Long Hollow Pk (SR 174)	4.33	2	3	2025	$11,037,000	Widening	Realign, widen to 3 lanes and extend to SR 174
Long-Term	5038	New Shackle Island Rd (SR 258)	Vietnam Veterans Blvd (SR 386) to north of Long Hollow Pk (SR 174)	2.86	2	5	2025	$8,308,000	Widening	Widen from 2 to 5 lanes, including center turn lane
Long-Term	5040	Long Hollow Pk (SR 174)	Willis Branch to Vietnam Veterans Blvd (SR 386)	12.00	2	3	2025	$13,800,000	Widening	Widen existing 2-lane roadway to provide a center turn lane
Long-Term	5041	New Roadway	New Shackle Island Rd (SR 258) to Saundersville Rd	3.01	0	3	2030	$8,171,000	New Roadway	Construct new 3-lane collector road, including center turn lane

MAP 9 - Planned & Committed Projects



2008-2011 Transportation Improvement Program

- Widen Road

2030 LRTP Short-Term Projects

- Widen Road
- New Road on New Location

2030 LRTP Long-Term Projects

- Widen Roaad
- New Road on New Location

- TIP Project Numbers
- Study Area Boundary
- Water Bodies

Note: The planned projects shown on Map 9 are from the Nashville Metropolitan Planning Organization (MPO) 2030 Long Range Transportation Plan. These projects include short-term projects (horizon year 2015) and long-term projects (horizon year 2030). These projects were considered when devloping the recommendations for the Hendersonville Land Use & Transportation Plan and are shown here for reference. The committed projects shown are from the Nashville MPO fiscal year 2008/09-2011/12 Transportation Improvement Program.

Bicycle and Pedestrian Characteristics

Transportation plans once focused solely on roadway solutions, with planners and local officials concentrating on commuter traffic and travel patterns. Today, it is understood that community travel is not limited to morning and afternoon rush hours, and each trip does not begin and end in the driver's seat. In fact, every trip begins and ends with a pedestrian trip. For improved quality of life, citizens now strive for livable communities that balance travel between modes. A common theme of any sustainable community is how well it accommodates pedestrians and bicyclists, for both recreational and more utilitarian trips.

The value of walking and bicycling has numerous benefits, including:

- Personal benefits — Cardiovascular fitness and cost savings
- Societal benefits — Reduced vehicle miles of travel, improved public health through a cleaner environment and healthier citizens, and improved mobility for those without access to private automobiles
- Social benefits — Walkable communities tend to result in places where individuals know and interact more with nearby neighbors
- Environmental benefits — Reduced air and noise pollution and fewer parking lots/spaces/structures

The existing bicycle and pedestrian network is limited. Results from the questionnaire conducted during the development of the Land Use & Transportation Plan show residents recognize the short-comings of the existing multi-modal network. More than 81% of respondents rated the bicycle paths/lanes and greenways as "fair" or "poor" and 67% rated sidewalks/crosswalks as "fair" or "poor". A passionate group of bicycle and pedestrian enthusiasts joined the project team in cataloging existing conditions and helping plan the improved network. In addition, for a community "on the lake," getting to this amenity by any other mode than automobile is challenging, if not impossible.

Bikeways

Hendersonville has a limited network of bicycle facilities and routes. Roads in the urbanized portion of the study area are characterized by many driveways and curb-cuts, heavy traffic, and high speeds. The rural portion of the study area includes roads with narrow lanes and little, if any, shoulder areas. The only dedicated on-street facility is a bike lane on Wessington Place. Several roadways, particularly on the peninsulas, are marked with "Share the Road" signs, though no additional on-street improvements have been made.

Despite these limitations, an active group of cyclists take to the roads of Hendersonville for recreational purposes. For these advanced and more experienced recreational cyclists, the network of roads north of Vietnam Veterans Boulevard with comparatively lower traffic volumes and moderate traffic speeds provides opportunities for bicycles to mix with vehicular traffic. These roads include New Shackle Island Road, Lower Station Camp Creek Road, and Drakes Creek Road.

The lack of existing facilities is not due to a lack of planning. The Bicycle and Pedestrian Element of the Tennessee Long-Range Transportation Plan aims to make the state a leader in bicycling and walking for the next 25 years by emphasizing the continuous development of a multi-modal transportation system. In its presentation of existing conditions, the plan identifies Main Street through Hendersonville as a major gap in the state's bicycle network. The Plan acknowledges the need for an east-west route through the City, connecting Nashville to the cities of Hendersonville and Gallatin.

The City of Hendersonville in cooperation with the Nashville MPO completed a Bicycle and Pedestrian Master Plan in July 2000. The plan takes the standard approach of indexing existing facilities and generators and attractors before recommending a series of on- and off-street facilities. The Plan focuses on providing access to schools and parks and constructing facilities in accordance with current guidelines. The 20-year plan includes 22 miles of multi-use paths, 15 miles of bike lanes, and 29 miles of bike routes. It estimates construction costs at $9.8 million (in year 2000 dollars).

The Bicycle and Pedestrian Master Plan identifies constraints within the City that pose problems for implementing a coordinated network. These include barriers like Vietnam Veterans Boulevard (SR 386), the CSX railroad, and Main Street. At the Bicycle and Pedestrian Focus Group meeting for the Land Use & Transportation Plan, participants also listed these facilities as constraints and added the narrow bridge on Old Shackle Island Road just south of Cole Drive.

Sidewalks

Understanding the benefits of a coordinated, interconnected pedestrian network, Hendersonville includes pedestrian provisions within new developments as part of their subdivision regulations. The regulation (Section 3-103) requires sidewalks along both sides of all streets and completely around all cul-de-sacs for new streets and along the frontage of existing public streets. Sidewalk widths are required to be 5 or 6 feet depending on the scale of the street. The subdivision regulation also allows the Planning Commission to require pedestrian access to schools, parks, playgrounds, etc. In areas where sidewalks may not be warranted – such as industrial parks – developers can make payments in lieu of construction to be used for sidewalks in more desirable areas or actually construct the sidewalks elsewhere.

Current regulations for sidewalk construction are an improvement to the regulations 10 years ago. In fact, the 2000 Bicycle and Pedestrian Master Plan recommended several revisions that have been incorporated. These provisions have improved pedestrian access in newly developed areas of the City. However, like most other growing communities, gaps exist throughout the sidewalk network between new development and existing neighborhoods, retail centers, and offices. Also, sidewalks become less frequent and gaps more prevalent as development transitions from higher to relatively lower intensities.

Greenways

The abundant natural resources in Hendersonville noted on the natural features map provides an excellent framework for the City's greenway system. Greenway facilities, also called 'multi-use paths', generally are independent of the road network. When running parallel to existing streets, the paths are different from sidewalks not only in their width and intended user group but also because they typically do not share right-of-way with streets. Greenways can be paved but generally are designed to be environmentally sensitive and aesthetically pleasing. Throughout Tennessee, greenways have been designed along creeks, through utility easements, and as part of 'rails-to-trails' conversions. Greenways have been an important strategy for expanding the bicycle and pedestrian network in Hendersonville. Past plans, including the 2000 Bicycle and Pedestrian Master Plan and the Hendersonville Tomorrow report, identify general policies and specific locations for future greenways.

Existing facilities include multi-use paths within Drakes Creek Park, Memorial Park, and Sanders Ferry Park. Greenways will also soon extend north from Friendship Island / Drakes Creek Park to George A Whitten Elementary School. A multi-use path also parallels the CSX railroad south of Saundersville Road, currently terminating at the Hendersonville Library.

Transit

Travel by private vehicle is — and will continue to be — the predominant mode of transportation for the majority of Hendersonville residents. As a result, it will remain a primary focus of this Plan. Still, transportation plans also must consider pedestrians, bicycles, and public transportation in setting the course of transportation in a community in the years to come.

General discussions of public transportation traditionally center on services similar to those provided by the Nashville Metropolitan Transit Authority (MTA), namely fixed-route bus and dial-a-ride services. For Hendersonville residents, the only traditional transit service is a new commuter bus service provided through the Regional Transportation Authority (RTA). The service allows residents from Gallatin and Hendersonville to commute by bus into downtown Nashville. Hendersonville residents can park in a park-and-ride lot at the Kohl's in the Glenbrook shopping center. The weekday service provides service to Nashville in the morning, with two return trips in the evening. Regular fare is $3.50 for patrons over the age of five and some discounts are available. The Relax-and-Ride service is an important component of the larger public transportation network that also includes taxis and intercity bus travel.

State and regional leaders have recognized the need for a long-term strategy for the heavily traveled corridor from Nashville to Hendersonville to Gallatin. As a result, a detailed study of the 30-mile corridor was initiated by the Nashville MPO to analyze existing land use, economics, urban design, and transportation for potential transportation projects. The Northeast Corridor Mobility Study was initiated in Spring 2008.

Current Studies

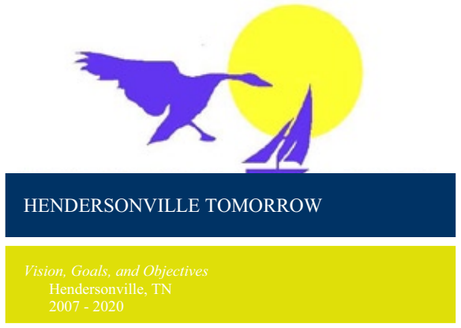
The City of Hendersonville's Land Use & Transportation Plan should be closely coordinated with other state, regional, county, and local plans and/or policies that impact planning efforts within the City. This section summarizes City staff's review of local plans prepared by authoritative agencies within the region and highlights issues, policies, or directives that may influence reasonable implementation of the Land Use & Transportation Plan. Materials reviewed for development of this Plan include the following:

Long Range General Development Plan

In 1995, the City of Hendersonville adopted the Long Range General Development Plan for the City and its Planning Region. The Plan quantified/evaluated demographic trends, infrastructure capacity, neighborhood characteristics, and land use patterns. The Plan made land use policy recommendations for the study area to guide growth in the future. The document laid the ground work for the General Development Plan Map for the City and its Planning Region, adopted by the Mayor and Board of Aldermen.

Hendersonville Tomorrow

In 2004, the Hendersonville Tomorrow Committee began developing a vision, goals, and objectives for the City that culminated in the 2006 Hendersonville Tomorrow plan. The Committee researched city infrastructure, economic development, city appearance, character and culture, community services, planning and growth management, education, and Old Hickory Lake policy issues. Hendersonville Tomorrow laid the groundwork for the Land Use & Transportation Plan and will be included as an integral part of the forthcoming City of Hendersonville Comprehensive Plan.



Urban Growth Boundary Land Use Plan

In 2008, the Sumner County Planning Commission adopted a Land Use Plan for the Hendersonville Urban Growth Boundary. The plan identified the basic development constraints and conditions (i.e., infrastructure, soils, and slope) in the Hendersonville UGB. The document recommended low density residential development and thoroughfare improvements in this area. This policy document is used by the Sumner County Planning Commission on decisions affecting growth in the Urban Growth Boundary.

Shoreline Management Plan

Prior to and since the impoundment of the Cumberland River to form Old Hickory Lake in 1956 the Army Corps of Engineers devised plans to manage the land along the Lake. Over the years there have been several updates to the Plan, each update becoming increasingly responsive to environmental and recreational concerns by limiting new docks on the shoreline and restricting mowing areas. In the most recent plan, 2008, the Army Corps of Engineers eliminated any sites in the study area from the list of potential new marina sites.

Subdivision Regulations, Zoning Ordinance & Flood Ordinance

New development in the City of Hendersonville and the Planning Region is regulated by the Hendersonville Zoning Ordinance and the Hendersonville Subdivision Regulations. The current version of the Subdivision Regulations was adopted in 2004. The current zoning ordinance was adopted in 1985, subsequent updates have been adopted. In 2007, the City adopted a new Floodplain Ordinance to regulate development in FEMA designated floodplains. Land is subdivided and platted through mechanisms allowed by the Hendersonville Subdivision Regulations. The Zoning Ordinance pertains to parking lot, landscaping, signage, and bulk area standards for residential, commercial, and industrial uses. Permitted, conditional, and non-permitted uses and activity types are designated by zoning district. A degree of compatibility to surrounding parcels and districts is required by these regulations.

Design Review Manual

The City adopted the Design Review Manual in 1988. The manual graphically identifies materials, parking lot standards, landscaping, site elements, and other design elements recommended for improving of standards for development in the city and the planning region.

Town Center Redevelopment Plan & Design Guidelines

The Town Center Redevelopment Plan was adopted in 2006. The plan recommended extensive road network, urban design, and public facility improvements. The Town Center Design Guidelines accompanied the Town Center Redevelopment Plan. The guidelines identified architectural elements appropriate for new and infill development in the Town Center. Additionally, the Zoning Ordinance was revised to include two additional zoning districts in response to the adoption of the Town Center Redevelopment Plan.

River Road Area Neighborhood Plan

In 2007, the Planning Commission made recommendations for redeveloping the River Road area in the River Road Neighborhood Plan. The Plan described the strategies and development types appropriate for redeveloping this area by the lake.

Long Hollow Pike Corridor Plan

The cities of Gallatin, Goodlettsville, and Hendersonville, along with the Sumner County Planning Commission, adopted a plan for the Long Hollow Pike Corridor (State Route 174) in 2003. The land use plan protects rural characteristics and addresses transportation demands within 2,000 feet of Long Hollow Pike Corridor.

West Main Street Beautification Plan

The West Main Street Beautification Plan, completed in March 2003, details streetscape improvements along West Main Street. These improvements included the addition of a bike lane, additional landscaped areas, and improvement areas recommended for funding.

Street Light Banner Program

In 2009, the Beautiful Hendersonville Committee, in conjunction with the City, will install banners on select/certain light poles on Main Street, Indian Lake Boulevard, Saundersville Road, and New Shackle Island Road.

Major Thoroughfare Plan

In 1998, the City adopted a Major Thoroughfare Plan for the Urban Growth Boundary. The Plan recommended improvements to the City's surface street network. The recommendations included lane and right-of-way width requirements as determined from the MPO's regional Travel Demand Modeling. The recommendations were limited to those that would improve conditions for the automobile. This plan was updated and subsequently adopted in 2007.

Bike and Pedestrian Plan

The Hendersonville Bike and Pedestrian Plan was adopted in 2000. The plan identifies routes for bicycle and pedestrian trips to, from, and through area recreational facilities and educational institutions. Multi-use pathways and bike lanes were designated on the recommended system map. The routes would tie into other plans in Sumner County. The primary use of these facilities is recreational.

HUD 10-Year Capital Improvements Plan

The Hendersonville Utility District (HUD) adopted its first Capital Improvements Plan in 1998, with subsequent updates in 2003 and 2007. This plan illustrates expansion plans and improvements to their water and sewer systems over a 10-year time period.

Transportation Improvement Program (through MPO)

The City of Hendersonville has secured funding for improvements to New Shackle Island Road. The improvements include widening, curb and gutter and sidewalks. In addition, funds have been allocated to align Old Shackle Island Road and Walton Ferry Road at Main Street. Rockland Road will be improved from Imperial Drive/Gail Drive to Free Hill Road. This section also includes a connector over the railroad tracts to New Shackle Island Road. Rockland Road will then be extended westward to Center Point Road. The current intersection to Main Street will remain.

Tax Increment Financing (TIF) Improvements

Tax Increment Financing (TIF) is a public financing method used for redevelopment and community improvement projects. TIF has become a financing mechanism for municipalities as federal and state sources become less available. Two roadway projects underway in Hendersonville are being funding through the implementation of a TIF program between the City and the developer of Indian Lake Village (Saundersville Road and Wessington Road.) Saundersville Road will be extended and realigned from Indian Lake Blvd to the current location of Saundersville Road near the interchange with State Route 386. A Wessington Road connector (including a bridge over Drakes Creek) will be extended west from Indian Lake Boulevard to Wessington Road near Whitten Elementary School.