

CHAPTER V

TRANSPORTATION PLAN

Introduction

The Transportation Plan Element describes the existing transportation system in Shelby County and proposes improvements to the system. The relationship between the transportation and land use elements is critical to the coordination and timing of development in any community. A transportation improvement may be necessitated by growth in any area but may in turn stimulate further growth. On the other hand, the deterioration of roads in an area with little traffic may further limit development in an area and any new development occurring on these deteriorated roads may necessitate a change in the priorities of a government in planning road improvements.

This chapter emphasizes transportation analysis of Shelby County and Shelbyville. The transportation recommendations for Simpsonville are contained in the Land Use Plan chapter.

EXISTING TRANSPORTATION FACILITIES

Shelby County Highway System

The analysis of the highway system Shelby County has been a matter of study for tens of years by the Kentucky Transportation Cabinet. The Cabinet has classified all roads in Shelby County, has conducted traffic counts, and has scheduled improvements to operation of highways as well as the construction of new highways. The Cabinet, in conjunction with the Fiscal Court established a bridge replacement program wherein all inadequate or insufficient bridges will be improved or replaced. Shelby County Fiscal Court has completed widening narrow bridges throughout the County. Approximately one third have been widened. This program began in 1990 and addresses all major bridge deficiencies in the County.

The Kentucky Transportation Cabinet has prepared a functional classification of highways based on the type of service they provide. All roads have been classified into the following categories:

1. Arterial Highway Facilities:
 - Interstate Highways
 - Principal Arterial Highways
 - Minor Arterial Highways
2. Collector Highway Facilities:
 - Major Collector Highways
 - Minor Collector Highways
3. Local Roads and Streets

Arterial highways are designed to provide major travel through and within an urban area. They generally carry the highest volume of traffic and travel desires with the longest trip length. The

concept of service to abutting land should be subordinate to the provision of service to major traffic movements. The concept of service is easily visible on the interstate highways and on bypass routes. It should be more apparent along principal arterials, and also a factor on principal arterials and major collector streets.

The only interstate highway in Shelby County is Interstate 64 (I-64) which crosses the County from east to west about two miles south of Shelbyville and US 60. Average Daily Traffic (ADT) in 2003 on I-64 between KY 55 and KY 53 was 46,300 vehicles per day (Kentucky Transportation Cabinet, Planning Division, 2003). The 1996 ADT at the same location was 34,111. There has been a 35.7 percent increase over the 7-year period. The *Comprehensive Plan for Shelby County* (1991) had a 2010 projection of 39,700 ADT. It is easy to conclude that the traffic volume projections for 2010 in the 1991 Plan for I-64 were underestimated. The large percentage increase impacts land values at interchanges and increases the needs for services at or near interchanges. As long as Shelby County continues to be an attractive place to live and work these numbers can be expected to increase.

There are no rural principal arterial highways in Shelby County, but US 60 including Main Street and Washington Street in downtown Shelbyville, US 60 west to KY 55, and KY 55 south to old Brunerstown Road, KY 53 from the interchange north to US 60, and KY 43 and KY 55 from Washington Street north to the Colony subdivision are classified as urban principal arterials. Minor arterials include portions of US 60, KY 53, KY 55 near Shelbyville and KY 55 north to Henry County. Map 5-1 on the following page presents the functional classification of highways in Shelby County.

Major highways serving Shelbyville are Interstate 64, US 60, and KY 53 and KY 55. All are "AAA" - rated (80,000 - pound gross load limit) trucking highways.

Interstate 64, a major east-west route, serves Shelbyville with two interchanges, an interchange of Interstate 64 is located three miles southeast of downtown Shelbyville via KY 53, another interchange is located four miles southwest of the downtown area via KY 55.

Interstate 64 provides direct access to Louisville, 31 miles west, where it connects with Interstates 65 and 71. Interstate 64 also provides direct access to Lexington, 50 miles east of Shelbyville, where it connects with Interstate 75.

Traffic Counts

Traffic has increased considerably in Shelbyville since the early to mid 1990's. Data from the Kentucky Transportation Cabinet (KTC) for average daily traffic (ADT) counts for that time period are compared to the most recent counts from the KTC in Table 5-1 below.

Table 5-1 – Average Daily Traffic Counts in Shelby County

Location	Past Count (YR)	Recent Count (YR)	Percent Increase
1. I-64 between KY 55 and KY 53	34,111 (1996)	46,300 (2003)	35.7
2. I-64 One mile east of KY 53	31,952 (1996)	39,200 (2002)	22.7
3. US 60 west of High School	9,032 (1994)	11,600 (2000)	28.4
4. KY 53 @ RR Tracks	13,218 (1997)	15,300 (2002)	15.8
5. Washington St. between 1 st and 2 nd St.	12,457 (1992)	13,000 (2002)	4.4
6. Main St. @ Clear Creek Bridge	10,116 (1992)	12,100 (2002)	19.6
7. Washington St. between Alton/Adair	13,865 (1992)	15,400 (2002)	11.1
8. Main St. between Alton and Adair	15,457 (1992)	14,800 (2002)	-4.4
9. US 60 ½ mile east of McWalters Road	30,575 (1994)	25,500 (2002)	-19.9
10. US 60 @ Robin Road	22,936 (1992)	24,100 (2000)	5.1
11. KY 55 ½ mile north of I-64	12,528 (1992)	18,700 (2002)	49.3

Source: Kentucky Transportation Cabinet

US 60, KY 55 and I-64 have seen the greatest increases in traffic volumes. Due to some data being slightly outdated, it is expected that some of the counts have increased, perhaps considerably since the last year of ADT counts, i.e., 2000.

I-64 has surpassed its 2010 projected volume (from an earlier Comprehensive Plan) of 39,000 vehicles per day (VPD) with the 2003 count of 46,300. This is most likely due to commuting traffic between Frankfort, Lexington and Louisville and the growth in the Shelby County area making it a traffic origin and destination in its own right.

Rail

Shelbyville and Shelby County are more than adequately served by rail facilities. Rail service is provided to various parts of the community by CSX Transportation and the Norfolk Southern Corporation. Intermodal facilities are available in Louisville, 31 miles west of Shelbyville.

Air

Air service to the Shelby County area is provided by facilities located in nearby communities. In terms of small air craft operations, the Capital City Airport located in Frankfort approximately 20 miles east of Shelbyville and Bowman Field in Louisville; approximately 26 miles west of Shelbyville provide service with runs up to 5,000 feet in length. In terms of scheduled passenger service, Shelby County is strategically located between two major facilities, Louisville's International Airport, 35 miles west of Shelbyville and Bluegrass Airport in Lexington, 44 miles east of Shelbyville. Both airports provide air cargo facilities and service.

PROPOSED/PLANNED TRANSPORTATION IMPROVEMENTS AND POLICIES

Committed Transportation Projects

The Kentucky Transportation Cabinet (KTC) develops a *Six Year Highway Plan* for improvements of transportation facilities throughout the Commonwealth. This plan is approved for funding by the legislature and the Governor. In the 2000 - 2006 *Six-Year Highway Plan*, major Shelby County projects are listed below in Table 5-2.

Location/Phase	Scope	Year	Amount
1. US 60 Design	Improve/widen to 4-lanes; KY 53 to Shelby Co. H.S.	2006	\$3,000,000
2. Northern By-Pass Utilities/Construction	Northern By-Pass of Shelbyville; US 60 to KY 55	2005-2007	\$35,000,000
3. KY 1848 Design/ROW/Utilities	Widen to 5-lane from I-64 to US 60	2005-2007	\$5,000,000
4. US 60 Construction	Replace Bridge and approaches at CSX Railroad	2005	\$1,320,000
5. KY 714 Design/Construction	Replace Bridge and approaches at Wolf Run	2005-2007	\$350,000

Source: Kentucky Transportation Cabinet *Six-Year Highway Plan* (2000)

These projects, as committed, will dramatically increase the traffic capacity and safety along the roadways that are being improved but will also impact the transportation network in Shelby County as a whole. These projects were considered in the drafting of recommended improvements and policies related to transportation as reflected in this chapter. In addition these improvements were considered in the drafting of the recommended land use plan as contained

herein.

SUMMARY OF RECOMMENDATIONS FOR OPERATIONAL TRAFFIC IMPROVEMENTS IN SHELBYVILLE

The purpose of the *Shelbyville Urban Area Transportation Study* (KTC, 1988) was to identify transportation needs and develop a plan of improvements for meeting those needs. These needs will be recommended for implementation between now and the study's target year of 2010. However, it should be understood that generally a period of several years will be required before major improvements can be funded and constructed. Therefore, low-capital, spot improvements, which can generally be implemented more quickly, are needed to help alleviate several existing problems. Operational improvements are normally recommended in cases of capacity deficiency at isolated locations or at specific locations exhibiting safety problems. The improvements recommended in this plan are based on both the need for immediate improvement and the potential for making the improvement.

Operational Improvements Recommendations

1. 3-way stop at Old Finchville Road and Village Lane;
2. Eliminate street parking on Kentucky Street near 10th;
3. Install sidewalk along Mack Walters Road;
4. Install sidewalk/bike path along Smithfield Road (KY 53) north of Washington Street;
5. Remove barricade between Medical Avenue and Cherrywood Drive;
6. Install traffic signals at intersections of KY 1790 and KY 2258 with KY 53;
7. Install traffic signal at the intersection of KY 53 with Harrington Mill Road and Brassfield Blvd.;
8. Improve to 4-lane KY 53 from I-64 to US 60;
9. Improve to 4-lane US 60 from Shelby County High School to the existing 4-lane section in Shelbyville; and
10. Install traffic signal on KY 53 at West Middle School.

The above recommendations were made by the Shelbyville City Engineer and the Triple S Planning Commission in 2003. All recommendations are based on safety considerations along with other factors.

Major traffic improvements are listed in the KTC *Six Year Plan* discussed previously in this chapter and are either in the planning phase or the construction phase.

Shelbyville By-Pass Corridor as a Transportation and Land Use Issue

The planned by-pass north and west of Shelbyville is scheduled for completion in 2005 and will be located primarily outside the city limits of Shelbyville, however, inside the Urban Service Area. The land use plan map element depicts the northern area of the corridor as primarily residential in nature. The four-lane limited access highway will be approximately 3.5 miles long and will relieve congestion on US 60 and KY 55. This Plan recognizes that this roadway will dramatically alter the traffic flow in the area and for the community and will open new lands up

for potential development. These trends should be monitored and if needed a Corridor Management Plan drafted to specifically manage future land uses along the corridor. This Corridor Management Plan could be adopted as an element of this Comprehensive Plan. It could address the need to preserve the rural areas in the northern corridor that the new highway will traverse, and provide for sound growth management in the area. Land use and zoning regulation tools can be used and implemented per Kentucky Revised Statute, Chapter 110.187(5), contents of comprehensive plan.

Transportation Element Policies

During the development of this *Comprehensive Plan Update*, the Triple S Planning Commission has identified several policy guidelines for the Transportation Plan Element. These Policies are drawn from the Goals and Objectives of the Comprehensive Plan in Chapter I as authorized under KRS 100.187 (1)(2)(3)(5). These guidelines are to assist the Planning Commission in evaluating zone change requests and act as a clear set of criteria and recommendations to form a standard measure for the determination of findings of fact. Among these are the following:

Policies

Access Management: In many areas of Shelby County, Shelbyville and Simpsonville, particularly along older commercial corridors, haphazard and ill-defined access to main roadways has created a situation where through traffic must be inordinately aware of traffic accessing or exiting the roadways by unsafe movements. This creates a situation where traffic speeds are slower and accident rates are higher. To remedy this situation it is recommended that new developments be required to clearly define points of ingress and egress. Additionally it is recommended that new development along collector and arterial roadways carrying through traffic be required to connect with neighboring parcels so that traffic has alternate routes to access properties in the busiest areas of the community.

In developed areas where existing developments have ill-defined access points the redevelopment process should be used to rectify problems. It is recommended that, as properties, especially along existing commercial corridors, are required, as they redevelop, to provide defined access points, and where possible, access to adjoining properties. By redevelopment this plan means substantive changes to buildings and/or parking areas that yield opportunities for access definition.

Access needs to be defined. At the time of right-of-way purchase, access points should be defined and limited to avoid the problems that have new routes or roadways are planned and constructed in the community, historically occurred. As properties develop along these limited access routes, the pre-established rules and requirements for ingress and egress should be observed.

Additionally as areas are developed creating busy points of ingress/egress and/or new roadways are developed as major routes or constructed to intersect with major routes, consideration should be given to the signalization of those major intersections or points of ingress/egress. Developers should be made to pay proportionately their part of the cost of such improvements.

Interconnectivity: Interconnected roadways provide for more efficient flow of traffic and the cost-effective provision of public services. As the Shelby County community grows local government should look for opportunities to make logical connections of existing roads to better serve the public, or to facilitate the making of such connections by private concerns. As new properties are developed they should provide for proper connections with other properties adjacent. The appropriate regulations, more than likely subdivision regulations, should be amended to require such connections. The desired result of these regulations and the policy of interconnecting development is a roadway pattern approximating a grid. This promotes not only good circulation between developments and within the community but also with the development itself.

Sidewalks/Bicycle Paths: Sidewalks and bicycle paths are not only recreational elements in a community. In the appropriate locations and situations they are an important part of the transportation system. New development should be required to provide for new sidewalks unless it can be proven that there is no necessity for their installation in a particular circumstance. As new automobile routes are planned consideration should be given to the inclusion of bicycle path facilities.

Right-of Way Dedication: As development occurs deficiencies in the amount of right-of-way for existing roadways should be addressed. Currently the Subdivision Regulations for Shelby County require that additional right-of-way be dedicated. This system and its requirements should be reviewed in light of this plan and particularly in light of the land use recommendations made in order to insure that sufficient right-of-way will be dedicated. Additionally, the community should consider instituting a program or requirement by which development that is occurring in the path of recommended improvements, in particular street connections, develops in a manner that accommodates the particular improvement.

Off-Street Parking and Loading Requirements: Existing parking and off-street loading space requirements, currently contained in the community's Zoning Regulations, should be reexamined in order to insure that they are best serving the community. The proper supply of parking should be required on site particularly for commercial development without there being parking areas going unutilized. Parking requirements should be particular to Shelby County. This can be achieved by examining parking trends for existing uses and using that information as the basis for new requirements. Parking should not be designed for infrequent peak demand occurrences (for example, in the case of commercial uses the day after Thanksgiving or the day after Christmas) but rather for normal demand. Off-street loading facilities should be designed and located to shield from public view the loading facilities while providing for the separation of commercial and everyday traffic.

Transportation Studies: Two studies relating to transportation are recommended by this Comprehensive Plan. First a study of the land use pattern, access points and recommended traffic pattern for the area along the new Northern Bypass is recommended. Although mostly focused on land use issues this study should also address the transportation ramifications of the recommended land use pattern and best ways to accommodate the traffic demand generated while preserving the Bypass' role as a thoroughfare. The second study recommended by this Comprehensive Plan is an overall detailed transportation study of the entire community. Such a

study should focus on future needs and desires relating to the transportation network and ways and means for funding recommended improvements.

KY 53 Widening: Development should be limited on KY 53 north and south until such time as, the northern By-Pass is constructed and the section between I-64 and US 60 is improved to four (4) or five (5) lanes.

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