Transportation Plan

2012 – 2037

Table of Contents

Acknowledgements

This plan was prepared by the Staff of the Columbus Area Metropolitan Planning Organization (CAMPO) in cooperation with the CAMPO Technical Advisory Committee for the CAMPO Policy Board. The Policy Board, Staff and Technical Advisory Committee would like to thank those citizens who provided their time and input to this plan.

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Forward

Why the need for a Transportation Plan?

The word "mobility" stems from the Latin word *mobilis,* which is defined as *moving or capable of being moved.* Mobility is as fundamental to the American concept of freedom as is freedom of speech. If mobility is a form of freedom, then a loss of mobility is a loss of freedom.

In most areas of life, it can also safely be said that failing to plan is planning to fail. Transportation is no different. Planning forces us to look at current circumstances, factors creating change, and make estimates of what trajectory the combination of the two is putting us on. From the basis of an understanding of where we are and where we are headed, we can then formulate goals in order to proactively make decisions today that take us to where we want to be tomorrow.

Our transportation infrastructure not only enables our freedom of movement so that we can go shopping, visit friends, see new places, and much more; it also is a plays a key role in the economic competitiveness of our nation. The ability of various industries to efficiently move people and a wide variety of goods from point to point enables them to compete on a worldwide basis. Bulk materials such as plastics, steel, wheat, chemicals, coal, etc. are often moved great distances by rail. On the opposite end of the spectrum are high dollar, light weight, and generally low volume items such as computer chips that are often moved by air freight. In between these two extremes are items that use multiple modes of transport as they make their way from manufacturer to consumer.

In the same manner that consumer goods and material inputs to industry have varying requirements for transportation, so do people. A traveling salesperson is often highly dependent upon automotive and air travel, a wheelchair bound person who cannot operate an automobile has very different needs.

In planning infrastructure, it is also important to remember that America continues to grow. The population of the United States reached 300 million in October of 2006. As of September 2011, it had exceeded 312 million. In addition to overall population growth, the characteristics of the American population are changing. The percentage of older American is increasing; diversity is on the increase, and obesity is trending upward. Transportation is energy intensive. Taking the changing picture of the world energy supply into account as well, then the need to proactively plan our transportation future becomes clear.

Introduction

The 2000 Census recorded a population of over 50,000 persons for the Columbus Urbanized Area for the first time. This triggered an automatic change in the transportation funding picture for the metropolitan area, which included the federal requirement to form a Metropolitan Planning Organization (MPO). The Columbus Area Metropolitan Planning Organization was formed in 2004.

The requirements of MPOs are anchored in Title 23 of the Code of Federal Regulations. These requirements include three key documents. The first is a published annual work program, the second is a Transportation Plan, and the final document is the Transportation Improvement Program (TIP) that shows the projects from the plan that are being implemented.

This document is updated on a five year cycle. The next update will be in 2015 in order to put the plan in a cycle where the years covered in the plan end in five or zero.

Eight Planning Factors

The current Transportation Bill of the United States is called the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA – LU). Under SAFETEA-LU eight planning factors must be taken into account during the planning process. These eight factors are:

1. *Support the economic vitality of the metropolitan planning area, especially by enabling global competitiveness, productivity, and efficiency.*

2. *Increase the safety of the transportation system for motorized and non-motorized users.*

3. *Increase the security of the transportation system for motorized and non-motorized users.*

4. *Increase the accessibility and mobility options available to people and for freight.*

5. *Protect and enhance the environment, promote energy conservation, and improve the quality of life.*

6. *Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.*

7. *Promote efficient system management and operation.*

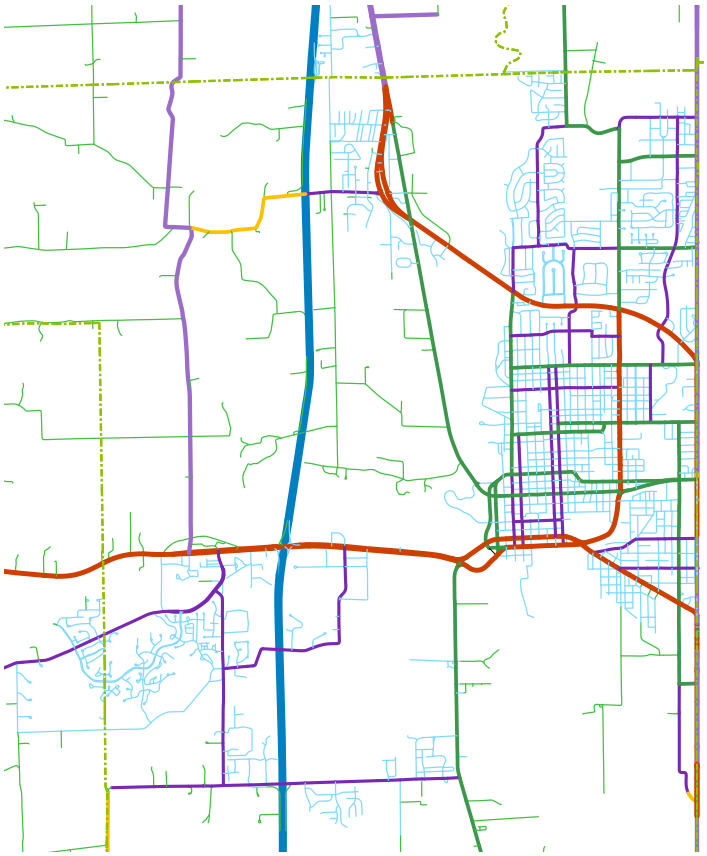
8. *Emphasize the efficient preservation of the existing transportation system.*

Goals and Objectives

The two major objectives of this Transportation Plans are derived from the eight planning factors. The first objective is to preserve the high degree of mobility that the citizens and businesses of the region have enjoyed thus far. The second is to add depth to the transportation infrastructure in order to provide a broader range of mobility options.

Mobility

In Columbus, "many paths lead to Rome." In other words, the City's network of arterial and collector streets provide multiple choices for both north/south as well as east/west movement throughout the city. This network of roads has given the citizens of Columbus a flexible road system with high capacity, which in turn has resulted in low levels of congestion. As noted during the City's Comprehensive Plan development process, low levels of congestion are directly associated by the citizenry with the small town feel of Columbus. Low levels of congestions also directly correlate to a high degree of automotive mobility.



City of Columbus road network

Within the last twenty years, urban development has reached beyond the traditional core of the city. Examples of this include the Tipton Lakes area and growth along City Street 200S. In these areas, it is not always the case that "many paths lead to Rome" and movements to and from these outlying areas are limited to a smaller number of roads. For example, residents who live along City Street 200 S can either travel north on Jonesville Rd (SR 11) or take Terrace Lake Rd to Carr Hill Rd to Jonathan Moore Pike (SR 46) in order to reach the central portion of Columbus. This lack of choices reflects in the higher level of congestion these residents face, in particular at peak travel periods along Jonesville Rd and Jonathan Moore Pike.

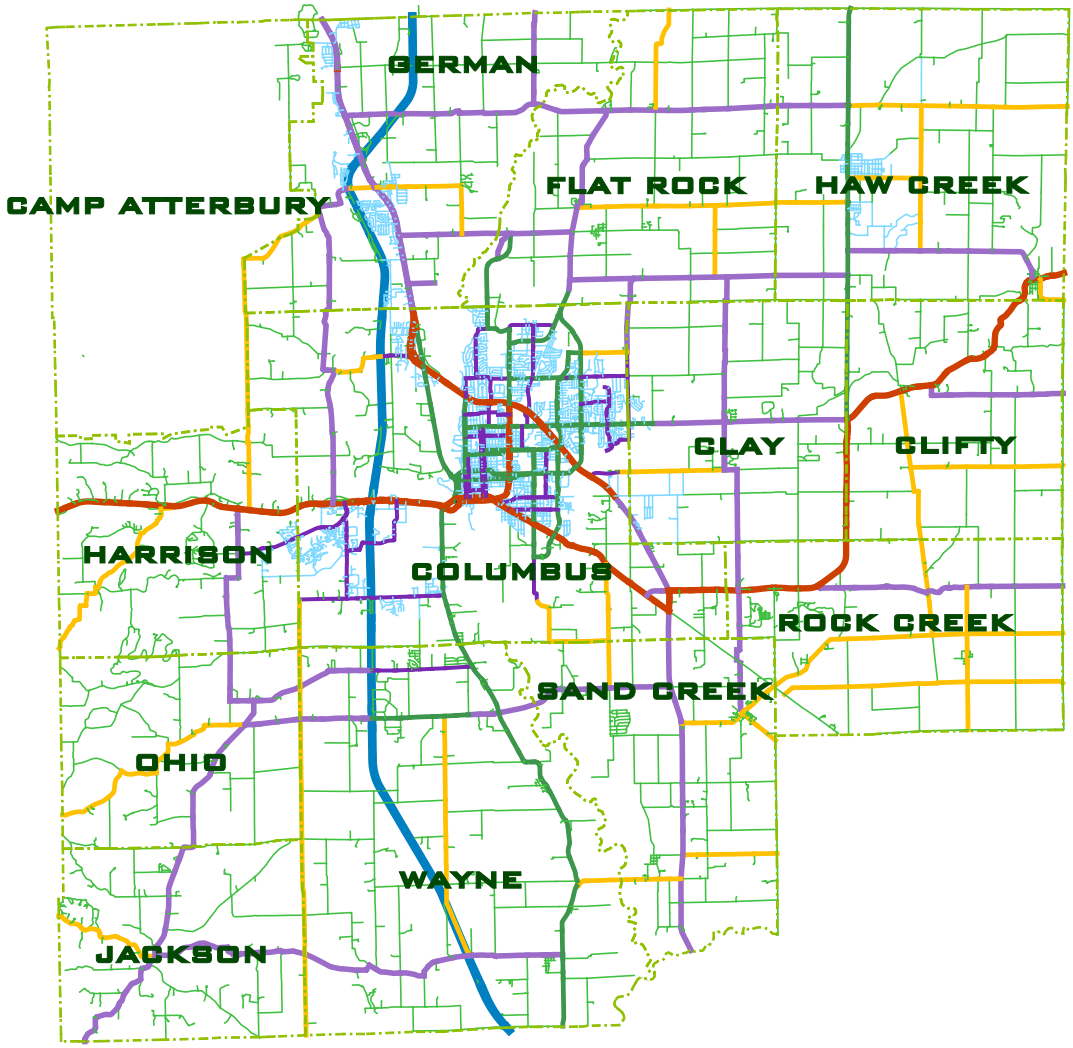
This weakness was noted in the 1975 Transportation Plan. This plan will discuss options for addressing these areas and outline the steps for evaluating proposed solutions.

Mobility Options

In the early 1900's when Clessie Lyle Cummins made his first crossing of the United States in a Cummins diesel powered Packard, the biggest obstacle he most likely faced was the nation's road network. At this point in history, the Interstate system had not been invented and our road network was still a work in progress. Expressed differently, the connectivity of the roads he traveled was an issue. Less than a century later, the initial portions of the Interstate System envisioned under President Eisenhower are complete providing coast to coast connectivity. The situation in Columbus mirrors the situation nationwide. Our road network is well developed with a high degree of connectivity and route choices, enabling the automotive public a high degree of mobility. It is generally easy to get from place to place in a car in Columbus. Our road network covers the mobility needs of approximately two thirds of our population. The other third, either because of age (too young or too old), physical condition, or socioeconomic status is unable to drive an automobile. The non-motorized participants in our transportation system in Columbus face a similar situation as Clessie Lyle Cummins faced in the 1930s, a lack of connectivity. We have trails, sidewalks, and bike lanes that end without logically connecting into similar facilities. Thus, the second objective of this plan is to add depth (via transportation choices) to our transportation infrastructure in order to provide connectivity (and thus mobility) for the remaining one-third. Further supporting this second objective are the uncertain future of energy costs, environmental pressures, health and weight trends, and an aging population.

Planning Area

The MPO planning area consists of Bartholomew County. In 2010 the planning area of the MPO was adjusted in order to give planning responsibility for the Jackson Township in Shelby County and Blue River Township in Johnson County to the Indianapolis MPO.



Planning Inputs

The primary reason for planning is to make decisions today that will take us to where we want to be tomorrow. Transportation planners must process information from multiple sources in order to provide actionable information to decision makers. The inputs used for transportation planning include projected data, such as future demographic data, as well as factual data, such as the location of flood plains and Census data. This section will discuss the data that supports this plan.

Planning and planning implementation is best accomplished at the lowest level possible, thus in an ideal world this Transportation Plan is a compilation of the plans of the member jurisdictions of the MPO. The MPO Transportation Plan further serves to ensure there are no conflicts in the goals and objectives of local plans.

Comprehensive Land Use Planning

The Columbus / Bartholomew Planning Department is responsible for comprehensive planning for the City of Columbus and Bartholomew County. The only exceptions to this are the towns of Hope, Elizabethtown, Jonesville, and Edinburgh.

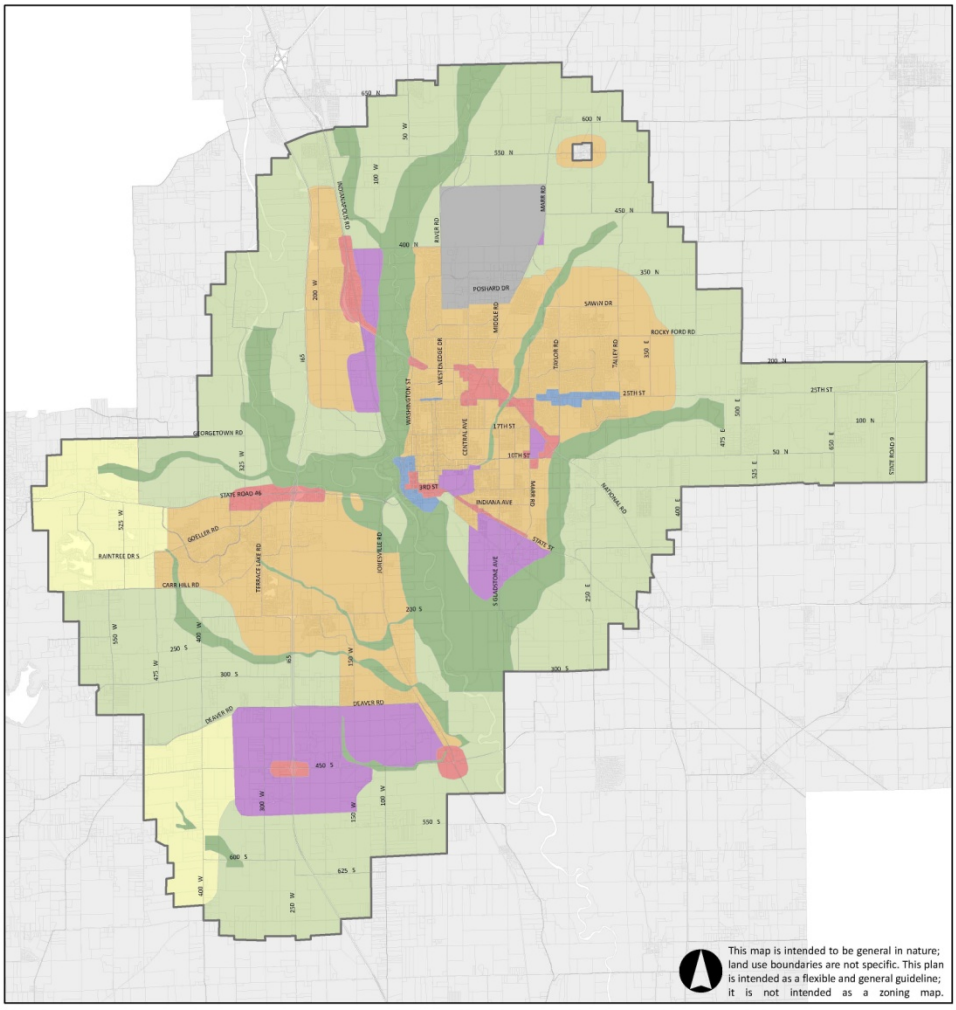
For several reasons, the Comprehensive Plans of the City of Columbus and of Bartholomew County serve as primary inputs to the CAMPO Transportation Plan. First is the public input process and planning history that underlies the two plans. The first Comprehensive Plan for the City of Columbus was adopted in 1953 and for Bartholomew County in 1958. Both plans have been through updates in the interceding years. Plan updates are subject to a robust public input process. This public input as well as a nearly fifty years of planning history results in a high degree of "buy-in" to the plans and lends legitimacy to the Goals and Policies expressed in the plans. Second is the guidance that the Comprehensive Plans provide regarding future growth patterns. Based upon the Goals and Policies sections of the two comprehensive plans as well as analysis of the geography of the county, maps of desired future land uses were made. The transportation projects in this plan are supportive and aligned with the future growth patterns of the area as shown in both comprehensive plans.

The Comprehensive Plans of the City of Columbus and Bartholomew County consist of different elements. For the City of Columbus, the primary elements of the Comprehensive Plan are:

- Goals and Policies Element
- Land Use Plan Element
- Thoroughfare Plan Element

- Bicycle and Pedestrian Element
- Downtown Plan Element

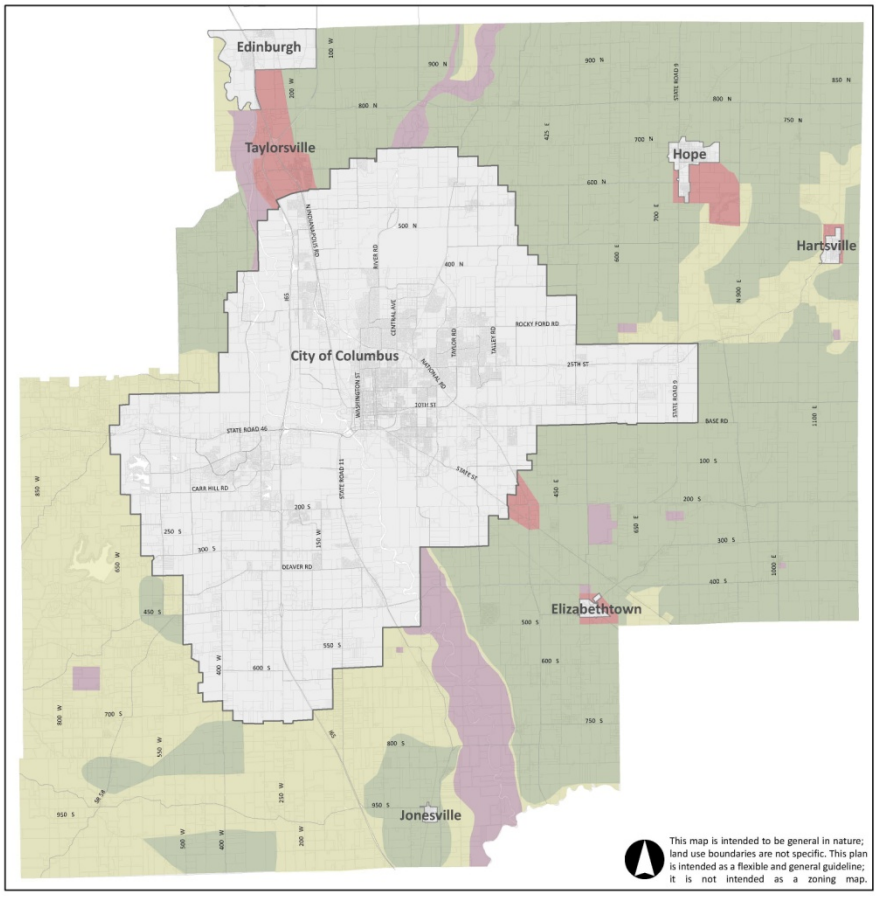
Working with the Office of the City Engineer and the Columbus Bartholomew Planning Department, the Thoroughfare Plan Element was updated over a two year period and adopted in 2009.



Future Land Use Map
City of Columbus Comprehensive Plan

- Agriculture
- Commercial
- Estate/Cluster Residential
- Floodway/Sensitive Area
- Industrial
- Mixed Use
- Residential
- Special Use
- Columbus Jurisdiction

Land use and transportation planning show few conflicts in the county. As a general rule, the desired future land uses of the Comprehensive Plans are supportive of the goals and objectives of this Transportation Plan and vice versa. One area of minor conflict that does exist is the US-31 corridor north of Columbus and south of Taylorsville. The comprehensive plans call for residential growth between I-65 and US-31. I-65 and US-31 are physical barriers to providing a supporting road network for residential growth in this area, which will eventually result in future subdivisions in this area connecting directly to US-31. As the amount of access provided to US-31 increases, the ability of US-31 to move traffic will decrease. The linear nature of the growth in this area results in a leapfrogging effect within the functional classification system; in this case streets classified as "local" feed directly onto a principal arterial, with no streets of supporting classifications such as collectors and minor arterials. Urban growth of a linear and isolated nature instead of concentrical and congruent generally results in conflicts with sound transportation planning practice.



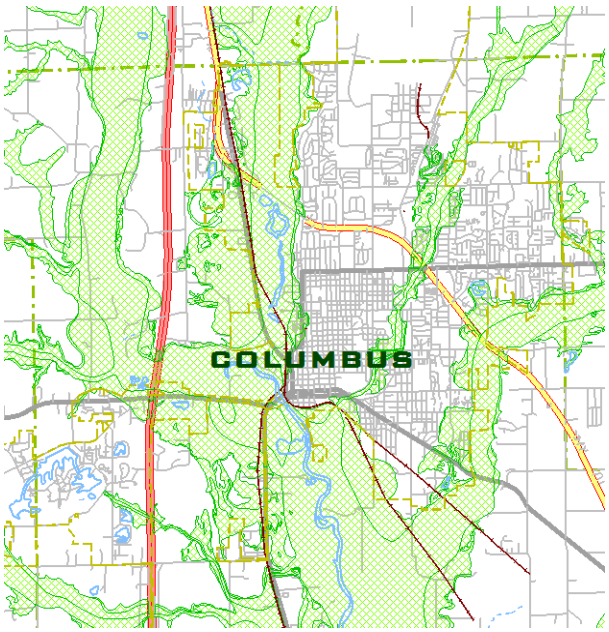
Future Land Use Map
Bartholomew County Comprehensive Plan

- Agricultural Preferred District
- Development District
- General Rural District
- Rural Preferred District
- Columbus Jurisdiction

Topography & Delivery of Urban Services

As stated in the Comprehensive Plans, the patterns of development within the planning area have been significantly influenced by the areas topography. The portion of Bartholomew County to the east of Columbus is relatively flat and consists of agricultural lands. This has been designated in both comprehensive plans as the agricultural reserve area with the goal of maintaining this area primarily for farming. The soils in this area are less conducive to the placement of septic fields and there is limited sewage service in this area.

The urban core of the city has been strongly influenced by the rivers and creeks running through and adjacent to it as well as by their associated flood plains and floodways. The Flatrock River, East Fork of the White River, Driftwood River and Clifty Creek have provided natural barriers to the urban growth of the city. This has resulted in the growth of the city to the Northeast as well as provided impetus for the non contiguous growth of the city in the Tipton Lakes and 200S areas. In this accompanying graphic, the DNR floodplains / floodways are the green shaded area.



The southwestern portion of the county consists of rolling hills which are not conducive to agricultural use. This has resulted in substantial residential development ranging from the planned development at Tipton Lakes to the subdivision of larger lots by individuals. The topography here and availability of sewage services will lead to continued development in the aforementioned patterns. The rolling hills of the southwest portion of the county have also affected the road network, which is not always in the traditional grid pattern.

Demographic Data & Trends

Demographic data gives transportation planners insights into the travel needs and characteristics of the public. It provides an indication of driving eligibility and capability as well as indications of the nature of travel. For example, an at-home parent taking care of the household has different driving patterns than a parent working an office job. The following data looks at Bartholomew County as a whole, to include the City of Columbus and the other towns within the borders of the county.

Bartholomew County had a population of 71,700 according to the 2000 Census and a population of 76,794 according to the 2010 Census. This represents an increase of 5,094 persons or approximately seven percent. In the same time period, the population of the United States as a whole grew just under ten percent. The population growth of Bartholomew County was three percentage points behind that of the nation. The population of the county is expected to grow by over 14,500 by the year 2040 to a total population of just over 91,006. This is slower population growth than was predicted for the county in the 2005 MPO Transportation Plan. In the 2005 Transportation Plan, the population of Bartholomew County was expected to reach 93,300 by 2030.

The growth in population between 2010 and 2040 will continue to be accompanied by shifts in the population distribution. The county, like the rest of the nation, has been experiencing growth in its senior citizen population. This growth is not just in absolute numbers but as a percentage of the population.

The chart below shows that the traditional working age population will grow by just approximately four thousand in the next thirty years while at the same time the over 65 years of age population will grow by approximately seven thousand persons, an increase of over sixty percent.

	2000		2010		2040	
Age 0 to 19	20,493	29%	20,921	27%	24,648	27%
Age 20 to 64	42,570	59%	44,307	58%	48,140	53%
Age 65 and over	8,674	12%	11,265	15%	18,218	20%
Total population	71,737	100%	76,493	100%	91,006	100%

Source: Woods and Poole Economic data

In considering the implications of this data, it is also important to remember the increasing tendency to delay retirement and work longer.

The decrease of the population between twenty and sixty-four years of age as a percentage of the overall population is a result of the baby boomer generation entering retirement as well as the increased life expectancy that advances in health care have brought. While this percentage shift has important implications for the transportation picture in 2030, relative to the rest of nation Bartholomew County is predicted to maintain a higher ratio of young to old people.

The ethnic makeup of the population in the county will also continue to shift. The Asian populations is predicted to quadruple by 2040, the Hispanic population is predicted to double in the same time period. The white population is estimated to shrink slightly in the next thirty years. The trends for Bartholomew County reflect the same trends taking place nationwide; the diversity of the nation continues to increase.

	2000		2010		2040	
White population	67.216	94%	68.314	89%	67.413	74%
Black population	1.401	2%	1.747	2%	3.432	4%
Native American population	0.111	0.2%	0.144	0.2%	0.15	0.2%
Asian/Pacific population	1.398	2%	2.749	4%	11.301	12%
Hispanic population	1.611	2%	3.539	5%	8.71	10%
Total population	71.737		76.493		91.006	

Source: Woods & Poole Economics [1]

The following chart shows that in the year 1970, Bartholomew County was ranked 87 of the 92 counties in the state for percentage of population over sixty-five years of age. By 2040 the county will be ranked number fourteen for this metric. The region also reverses the previous downward trend of the under eighteen years of age population, ranking fourteenth by 2040 for this population group. In the table below, the number next to the percentage represents the ranking of Bartholomew County among the 92 Indiana counties.

	1970		1990		2000		2040	
Percent of pop age 0 - 17	38%	9	25%	64	27%	35	24%	14
Percent of pop age 65 +	7%	87	12%	78	12%	69	20%	65

Source: Woods & Poole Economics [2]

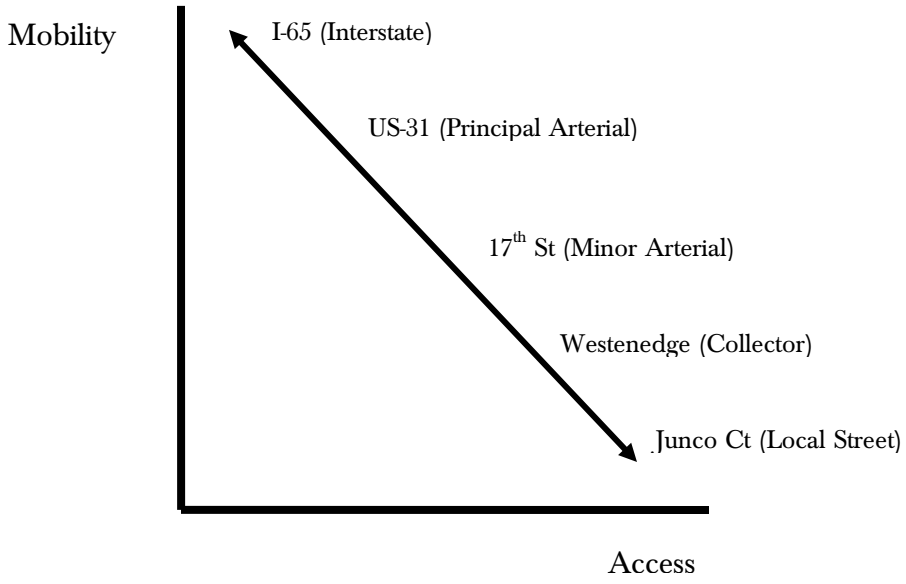
Employment Trends

In 1970 over 50% of all jobs in the Columbus area were in manufacturing. This percentage decreased to 43% in 1980, and stabilized at 33% percent through 2000. Woods & Poole, the commercial source for the demographic data in this plan, predicts a drop off to 20% by 2040. As of 2010, 9.27 ten percent of non-farming employment nationwide is in the manufacturing sector. In other words, as of 2010 more than three times the national average of employment in Bartholomew County is in the manufacturing sector and manufacturing will likely continue to play a prominent role in the future Bartholomew County employment picture.

As the percentage of employment nationally in the manufacturing sector declines, the remaining portions of manufacturing in the United States will likely consolidate into a smaller number of regions. This plan assumes that Bartholomew County will continue to be a manufacturing center of excellence and regional employment center far into the future, and thus will have similar commuting patterns with relation to the surrounding counties in the future as it does today.

Functional Classification System

Different roads serve different purposes. The Federal Highway Administration requires the classification of roads based upon their function. As we change from one functional classification to the next, we make tradeoffs between mobility and access. As the amount of access allowed to a road increases, mobility decreases, and vice versa. Closely associated with the concept of access versus mobility is also the concept of trip length. The less access provided the higher degree of mobility a facility can provide and in turn the longer trip lengths the facility can support. The following graph depicts the access versus mobility relationship.



The concept of access versus mobility can be better understood via example. Interstate 65 represents the highest degree of mobility in our region and the lowest degree of access. In other words you are very mobile due to the high speed and long distances you can travel while at the same time you cannot access the adjacent land from the Interstate except at the three interstate interchanges in our county. A street like Tipton Court (a cul-de-sac serving just a few homes) represents the lowest degree of mobility but the highest degree of access. On Tipton Court you can only travel a very short distance at a very low speed, with the only purpose of driving on the court is to access (i.e. get to) the residences located there.

Functional Class & Capacity

Every motorist understands the capacity reducing nature of access provision; what motorist can say that they have not been forced to reduce speed due to a vehicle entering the road in front of them? If you are traveling slower, your trip takes longer. Slower traveling vehicles result in fewer vehicles per day per lane; which is a loss of capacity. The more driveways (also called curb-cuts) a street has, the more interrupted the flow of vehicles on the street becomes.

Why do we need to classify our roads? We classify roads in order to provide road facilities of different functions to efficiently move vehicle trips of varying length. Additionally, the functional classification system helps us to decide "where to put places" and conversely to decide what kind of road facility to put next to existing places. Land use planning and transportation planning can only function effectively, when they work together. This makes sense. We expect cars to flow freely and very fast on an Interstate, but on Washington Street in downtown Columbus slow moving vehicles that often have to stop is appropriate.

Roads of different functional classifications serve to support one another, and should ideally feed into one another sequentially. For example, a local street usually connects and feeds into the next higher functional class, a collector. The collector in turn connects and feeds into the next higher functional class, a minor arterial, and so on. Skipping of functional classes does happen, but is not preferably. An example of skipping would be a local street connecting to a minor arterial. Skipping of functional classes is often a sign of conflicting transportation and land use planning.

Functional Class & Facility Design

The physical design of a transportation facility is directly linked to the roads functional classification and the adjacent land use. The functional classification is assigned in accordance with the desired function of the facility, which should fit within the larger picture of functional classification and regional land use. Higher classified facilities are generally designed to support trips of greater length than facilities of lower classifications. The surrounding context plays a key role in the design of a road. Is the road in an urban, suburban or rural area? What is the adjacent land use? Is it commercial or residential? Exact details of road physical design and its relation to the physical context are defined in the City Thoroughfare Plan for the City of Columbus.

The following table shows the nine different Federal Highway Administration functional classifications. The first seven of which comprise the system of roads eligible for federal funding of reconstruction, also known as federal aid.

	Rural	Urban	Examples
Interstate	X	X	I-65
Freeway / Expressway	X	X	na
Principal Arterial	X	X	SR 46 / US 31
Minor Arterial	X	X	25th St / Taylor Rd
Urban Collector		X	22nd St / McClure
Major Collector	X		CR 550 N
Minor Collector	X		CR 400 W
Local street		X	Pearl St
Local road	X		Church St in Clifford

In keeping with the second major objective of this plan (adding depth to the infrastructure), the link between classification and design has been extended to include not just automotive needs, but also transit and non-motorized forms of transportation. The City of Columbus Thoroughfare Plan uses the FHWA functional classification terminology and the functional classifications of each road in the Thoroughfare Plan was synchronized with the FHWA functional classification to the highest degree possible.

Individual Motorized Transportation

1975 Transportation Plan Projects

The 1975 City of Columbus Transportation Plan predicted travel demand out to the year 1995; identified weaknesses of the areas transportation network based upon the then current and expected future travel demand, evaluated and then proposed solutions to these weaknesses.

The 1975 Transportation Plan highlights the need for and positive outcomes of transportation planning. The 1975 Transportation Plan proposed and resulted in the building of many projects that serve the City very well currently. The following is a summary and status of the projects proposed under the 1975 Plan. All discussion uses the current street names and not those from 1975.

As the following review shows, the 1975 Transportation Plan served the citizens of Columbus and Bartholomew County very well. The degree to which it was implemented speaks for both the quality of the plan as well for the job well done by those who implemented it.

National Road (US-31)

Increase to four lanes from the Flatrock River to 10th Street, including intersection improvements for turning movements.

1975 Justification:	Anticipated 1995 traffic volumes due to employment growth at airport.
2005 Justification:	Current traffic volume due development of 31 corridor within city limits.
Status:	Under construction, scheduled for November 2011 completions, a Major Moves project.

10th Street

Reconstruction to four lanes between Central Avenue and US-31, to include constructing a second bridge over Haw Creek as an easterly extension of 8th Street.

1975 Justification:	Provide relief to east-west traffic on 25th Street.
Status:	Completed.

Central Avenue

Reconstruction of Central Avenue to a four-lane street from the Cummins Central Engine Plant (CEP) to Bakalar Airport with left turn lanes at major intersections.

1975 Justification: Accommodation of north-south traffic movements between employment centers located at either end of Central Avenue.

Status: Completed.

Gladstone Avenue

Construction of a forty foot wide urban arterial with limited upgrading of existing roadway between 11th and 17th Streets.

1975 Justification: Addition of continuity to the eastern city street system and provide accessibility from a new compass direction to the regional hospital.

Status: Completed.

Regency Drive

Two lane extension of Regency Drive west to Taylor Road.

1975 Justification: Provide local service to neighborhood south of 25th Street. Decrease of turning conflicts at the intersections of Taylor and Marr with 25th Street.

Status: Partially completed.

Note: Regency is currently built to urban collector standards in accordance with the 2003 Thoroughfare Plan standards. Stub streets are provided for eventual connection to 25th Street on its northeastern end as well as on its southwestern end for eventual extension to Taylor Rd.

Taylor Road

Southern extension from Sandy Hook Church connecting to US-31 and 10th Street. Northern extension from Rocky Ford Rd to Marr Road.

1975 Justification: Provision of north-south travel capacity in the eastern portion of Columbus.

Status: Completed.

Bakalar Road

Two lane extension of an existing east-west Bakalar Airport Road to Marr Road.

1975 Justification: Provision of accessibility to the airport from the north and east. Diversion of traffic from Middle and Rocky Ford Roads to eliminate congestion on each street.

Status: Completed along different alignment.

Southern Parkway

A recommended four lane limited access arterial connecting State Road 46 (at Jonesville Rd intersection) and State Street at Indiana Avenue. The parkway would have been located south of the current sewage treatment facility behind City Hall.

1975 Justification: Provides necessary and additional capacity to bridge crossings of the White River.

Status: A second crossing was added with the building of the Second Street Bridge. The parkway concept was not implemented.

Road 400N

Upgrading of Road 400N to a wider two lane arterial road in concert with improvements to north Central Avenue.

1975 Justification: Provide immediate relief to congestion on National Road, accessibility to Bakalar Airport. Eliminates three miles of travel for those traveling from the northwestern part of Bartholomew County.

Status: River Road was extended to CR 550N instead, with provision of lighted signals at the intersection of 550N and US-31.

Indianapolis Road

Improvement of Indianapolis Road to four lanes north and south of Columbus.

1975 Justification: Anticipated industrial development northwest of Columbus.

Status: Indianapolis Road leading north from downtown connecting into US-31 (former US-31A) has been relinquished by INDOT to the City. Passing blisters have been added to the road by the entrances to the industrial parks.

US-31 south of Columbus has been improved, but not to four lanes.

State Street

Widening to four lanes from 10th Street to Gladstone to Road 525E

1975 Justification: Projected growth of nonresident Bartholomew County travelers on State Road 46 and residential development immediately southeast of Columbus.

Status: State Street has been widened from Central Avenue to just east of Marr Road. Major residential development has not taken place to the southeast of Marr Road.

State Road 46

Improvement to four lanes from Road 590W to I-65.

1975 Justification: The now Tipton Lakes area was projected in 1975 to be the fastest growing area of Columbus between 1975 and 1995. This was road capacity required to handle the growth.

Status: State Road 46 has been improved to four lanes from 325W to I-65.

Road 100S

Improvement and new road addition from Jonesville Road to Carr Hill Road.

1975 Justification: Added capacity to accommodate anticipated growth southwest of I-65 and State Road 46.

Status: Not completed.

Road 200S

Extension of Road 200S west from Road 400W to Road 475W. Extension of Road 200S east from Jonesville Road across the White River to the intersection of Gladstone and Marr Road in East Columbus.

1975 *Justification*: White River crossing capacity to accommodate the growth southwest of Columbus.

Status: Not completed.

Road 475W

Two lane extension from Road 100S to State Road 46.

1975 Justification:	Accessibility improvement to the "southwestern" growth area from the north and west.
Status:	Not completed. Terrace Lake Road was improved from 200S to Goeller Road.

Interstate 65 Interchange

Construction of a diamond interchange at I-65 and 200S.

1975 Justification:	Diversion of inter-county trips from Jonesville Road.
Status:	Not completed.
Note:	Based upon current information and transportation planning practice, this project would not be a recommended project to pursue. Maintaining a large spacing between Interstate interchanges is important to keeping local traffic from using the Interstate for local trips.

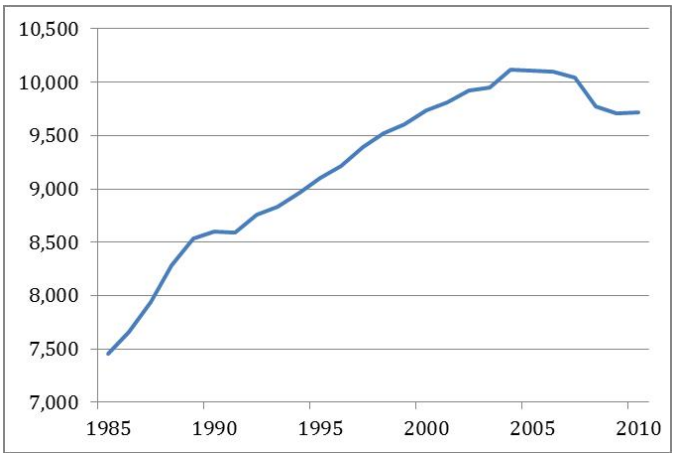
1975 Transportation Plan Review

The majority of proposed projects in the 1975 plan were implemented. The high degree of connectivity and mobility within central Columbus today is a result of this. Two major themes of the 1975 plan were not implemented. The first is the issue of connectivity for the growth areas southwest of the central city as well as connectivity from Central Avenue to the northwestern portion of the county. Connectivity to the southwestern portion of the City still remains a challenge today, as noted in this plan also.

The 1975 Transportation Plan was uni-modal in nature. Neither transit nor non-motorized transportation was addressed in the plan. The 1975 Transportation Plan was well planned, written, and subsequently executed.

Vehicle Miles Traveled Trends

From 1985 to 2005 the average annual vehicle miles traveled per licensed driver grew from approximately 7,500 miles per year to approximately 10,000 miles per year. Starting in 2005, per capita VMT has not only leveled off but has fallen. In other words, on a per capita basis, the demand for automobile travel has peaked. But does this mean less traffic in the future on our roads? No it does not because even though the per capita amount of driving is decreasing, the total number of drivers continues to increase as the population of the United States grows larger. In other words, future increases in the amount of traffic on our roads will most likely be the result of population growth and not as a result of the growth in per capita automobile travel[3].



Per capita vehicle miles traveled by year (FHWA & Census Bureau)

So why has the per capita vehicle miles traveled decreased? The cost of traveling has two components. The first is what we actually pay (out of pocket dollar costs) and the second is the opportunity cost related to travel time. The lower travel costs brought to the public by increased reliability and comfort, as well as decreased purchasing costs relative to income associated with the automobile appear to have leveled off. The second element of travel cost is time. Many experts note that the American public has have reached the maximum level of time they want to spend in their vehicles.

Current indications from the Legislative Branch in Washington D.C. point towards a future with limited capacity additions to our nation's road network. Yet the population of our nation is growing. According to estimates of the United States Census Bureau, the population of the United States is expected to increase from the current 312 million people as of September, 2011 to over 390 million by 2050. Taking all of this into account implies that at a minimal, the time opportunity costs associated with driving due to increased congestion will increase. In that most Americans do not want to spend more time behind the wheel of their car, this implies that the demand for other forms of transportation will grow. People will spend a larger portion of their transportation time budget elsewhere, if it is not well spent in the automobile.

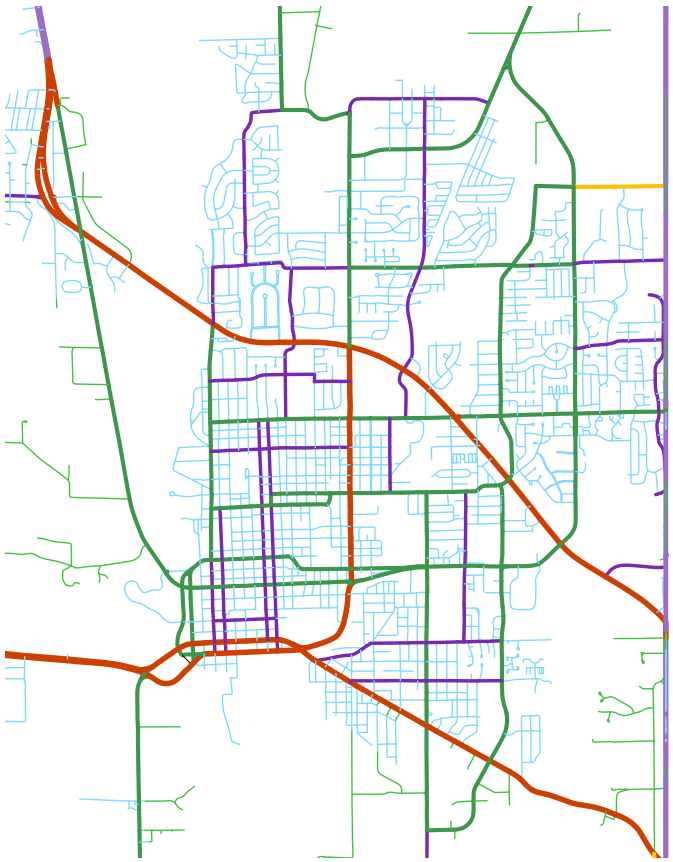
Since the inception of CAMPO in 2004, energy prices have increased dramatically and also had a major influence on both vehicle miles traveled as well as vehicle choice. As of the writing of this plan in September 2011, small car sales have resurged and vehicle miles traveled has shown its first decline both on a per capita basis and as a whole since VMT tracking started. Vehicle miles traveled declined nationwide for the first time beginning around 2007. Additional factors that have possibly contributed to VMT trends decreasing are the market saturation of vehicle ownership and a peak in women entering the workforce.

Future Urban Growth

The Columbus MSA is expected to add nearly 22,000 persons to its population between 2012 and 2037. This equates to 9,166 households at the current average household density of 2.4 persons per household. Using current distribution percentages, 54% of these additional households will be added to the City of Columbus, while the remaining 46% will be within the towns and unincorporated portions of the county. Using the current density of 2.35 persons per acre within the city limits, this means an addition of 5,055 acres of urbanized area to the current 17,923 acres that the city currently encompasses. The density factor used accounts for housing and all related services. The southwest portion of Columbus (Tipton Lakes and 200S areas) will accommodate the majority of the city's growth and continue to be the fastest growing areas of the city.

Characteristics of Current Network

The road network of the Columbus Area is highly developed, offering a high degree of connectivity and capacity. The grid system of the county roads is mirrored on a micro level within the City of Columbus by the principal arterials, minor arterials, and collectors. (In the graphic on the next page, principle arterial streets are red, minor arterial streets are green, collector streets are purple, and local streets are light blue.) The principal arterials, minor arterials as well as urban collectors are generally oriented on north – south as well as east – west axis. The spacing and placement of these enables all residences and businesses to be within a short drive on local streets to a collector or arterial.



City of Columbus Road network

Reinforcing the strength of the grid system is the round urban form of the core portion of the City of Columbus. Travel within Columbus is not dependent upon any single arterial or collector. In other words, the greatest strength of the City's road network is that "many paths lead to Rome." This provides not only a large capacity but leads to a natural dispersion of the traffic, which in turn has resulted in a high level of service and relatively stress free driving conditions.

The urban core of the city has reached a size where growth in outlying areas has become an attractive and necessary alternative. Examples of this include the development around 200S such as Shadow Creek Farms and the Tipton Lakes area farther to the west. These outlying areas currently do not have the same degree of connectivity and duplicity of routes as the central portions of Columbus, i.e. many paths do not lead to Rome. This is due to natural and man-made barriers. The East Fork of the White River runs to the east of Jonesville Rd, which has created a natural barrier to the connections of the county road grid system. Currently all residents of these two growing outlying areas either have to drive over the Second Street Bridge or the river crossing at 450S in order to reach to city core.

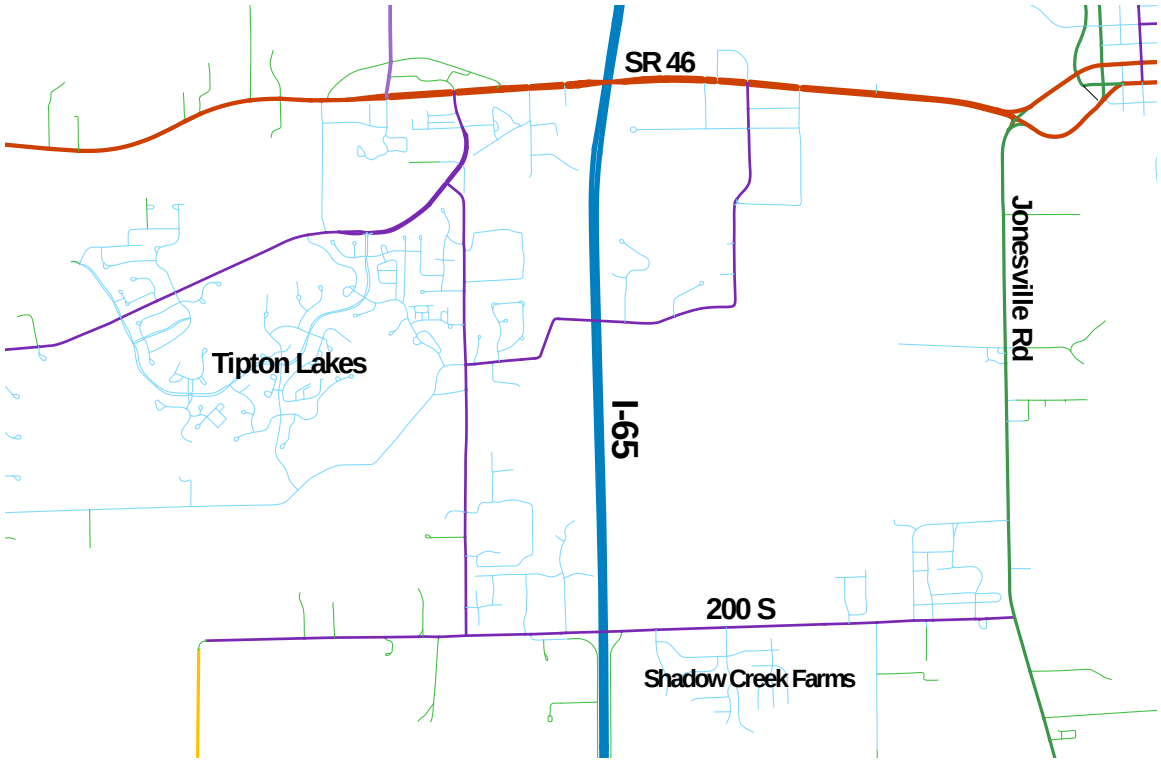
North – South movements from the 200S residential areas are also limited to Jonesville Rd, Carr Hill Rd and Terrace Lake Rd. The use of Jonesville Rd by the above mentioned newer residential development further exasperates the already poor connectivity of the Walesboro Industrial area via this road.

Northeast Residential Growth

In accordance with the Land Use Element of the Comprehensive Plan of the City of Columbus, continued residential growth in the northeast portion of the City is allowable and desired. This includes the areas east of Talley Road and north of 25th Street, as well as north of Rocky Ford to approximately the 350N level. During the update of the Thoroughfare Plan Element of the Comprehensive Plan, the farmers of this area stated that they have no intention of intensely subdividing in this area in the near future. Based upon this input, this plan will assume slow residential growth in this area and thus a smaller need for improvements than was anticipated in the previous MPO Transportation Plan.

200 S and Tipton Lakes Residential Growth

The topography of the Tipton Lakes area is reflected in its road network. It does not follow the traditional grid pattern to the same degree as the rest of the Columbus urbanized area, which consists of relatively straight roads oriented north / south and east / west. The roads in the southwest portion of Bartholomew County tend to instead follow the hilly terrain of this area. This is because road building used to be predominately based upon the path of least resistance. The land in this area is not conducive to agricultural uses and thus has been subdivided for residential use. Much of the area outside of the Tipton Lakes subdivisions has been subdivided by individuals and not by developers, resulting in a lower density of development.



The continued growth in these areas, in particular in the 200S area, is going to put additional strain on the already sparse road network serving this area. For example, residents of Shadow Creek Farms have two options when traveling to downtown Columbus. The first is Jonesville Road and the second is taking 200S west one mile to Terrace Lake Road and then taking Carr Hill Road to Jonathan Moore Pike.

The Second and Third Street Bridges are projected to be at service level F by 2030 according to travel demand modeling conducted by INDOT.

Road Projects – Group II STP Funded

The average federally funded road project takes five years to development, measuring from the date the decision to proceed with the project is made to the point of bidding the project's construction. Because of this, the MPO maintains several projects active at the same time. In other words, a pipeline of projects is maintained to ensure a constant completion of projects. The current active projects being funded by the MPO are:

Rocky Ford Rd – Taylor to Talley

The road will be fully reconstructed, a center-left turn lane, sidewalks, bike lanes, and pedestrian crossings will be added. The additional right of way required to build this has been acquired. Final design work will be completed in 2012 and the project will be ready for bidding by the end of 2012.

Indiana Ave – State St to Marr Rd

The road will be fully reconstructed in order to add a storm water collection system, curbs and gutter, bike lanes, and sidewalks. As of September 2011, all required right of way for this project had been acquired. In order to be ready to bid this project, one permit from IDEM was still required.

Westenedge – US31 to Rocky Ford Rd

This project involves installation of a storm water drainage system, curb, gutter, sidewalks and bike lanes. The design of this road accommodates all of the above within the existing fifty foot right of way. As of September 2011, the design work is complete and the project is ready to bid.

Carr Hill Rd – I-65 to Terrace Lake Rd

This project involves realigning the sharp turns in order to create an s-curve. Bicycle lanes and sidewalks will also be added. This project will also be ready to bid in 2012.

Taylor Rd – 25th St to Rocky Ford Rd

This segment of Taylor Rd connects the extensions of Taylor Rd both on the north and south sides of this project. This project includes the addition of a center left turn lane, bike lanes and sidewalks. The next step for this project is the purchase of the additional right-of-way (property) required to build this road. Right-of-way acquisition will start in 2012.

Transportation Enhancement Projects

A small portion of the Surface Transportation Program is dedicated to Transportation Enhancement, TE for short. TE is used for projects that are considered enhancements. These include things such as People Trail projects. The current TE funded projects in the City are:

Bridge 26 relocation

Bridge 26 is a historic bridge located in Newbern. This bridge is no longer adequate for carrying day to day traffic due to its age. As one of five selected historic bridges in the county, it is being restored and moved to the Columbus People Trail System where it will serve as a bicycle and pedestrian bridge. This project is expected to be completed in 2013.

Fourth Street flex-street Project

Fourth Street between Franklin and Jackson Streets is part of the designated downtown entertainment district as outlined in the Vision 2020 strategic development plan for downtown Columbus. This project will reconstruct this two block portion in order to create a street atmosphere appropriate to the entertainment district.

Project Selection – Next Steps

The current pipeline of projects will require another approximately seven years of MPO funding at current STP authorization levels to complete. With a desired pipeline of five years of projects, the next major project(s) will need to be selected in approximately 2013.

Input from the Thoroughfare Plan development process, subdivision trends of the last ten years, and projected population and industrial growth of the City point towards addressing road capacity to and from the 200S residential areas as a logical next step.

The Second and Third Street bridges remain the primary river crossing capabilities for traffic to and from the 200S and Tipton Lakes residential areas. It is also important to understand that these two bridges are a part of SR 46 and thus support traffic traveling through our community to Greensburg and Bloomington. INDOT travel demand modeling shows river crossing capacity becoming an issue by 2030. Jonesville Rd from 200S north to SR 46 is currently very congested.

Using travel demand modeling software, the MPO will be able to provide estimates of how much travel time savings a new river crossing at 200S would produce, which in turn will provide decision makers with a strong basis for deciding for or against extending 200S from the County Fairgrounds across the river to Marr Rd & Gladstone. Travel time savings multiplied by the average local wage rate will enable a calculation of return on investment.

An alternative or addition to the 200S extension is extending 150W from 200S connecting into Morgan Willow Trace. This project would provide relief to traffic conditions on Jonesville Rd; however would not provide relief to the Second and Third St bridges.

System Preservation & Maintenance

The expenditure of the Group II STP funds has been divided between preservation, preservation & capacity, and capacity projects. For the purposes of this plan, the following definitions apply.

Preservation Projects

The majority of streets within the MPO planning area do not currently meet modern design standards. Included within preservation projects are those additional design elements required to bring the facility up to current standards. Preservation projects do not involve green field activities or capacity additions, with the exception of adding width to those lanes that are currently too narrow to meet current standards.

Capacity Projects

Capacity projects involve the addition of capacity changing elements to an existing facility. These projects can include things such as additional travel lanes and turning lanes. Widening of existing lanes will not put a project in this category.

Green Field Projects

These projects are those that involve new additions of capacity to the existing system along new rights of way. In other words, the building of a road where one does not currently exist.

Funding Allocation

All of the current active MPO funded projects are preservation and capacity projects. None involve green field road development.

Maintenance

Maintenance activities include but are not limited to activities such as crack sealing, slurry sealing, pot hole filling and overlay. These activities are funded mainly via the Local Road and Street Fund and partially through a portion of the Thoroughfare Fund. In addition both the city and the county have been using a portion of the EDIT tax for paving since the LOHUT (wheel tax) was rejected when proposed two years ago. The source of funds for the Local Road and Street Fund is the state gas tax, a portion of which the city receives. The Thoroughfare Fund is funded by a portion of local property taxes.

The tables on the next page show the requirements for paving and crack sealing versus the funds available to accomplish this. It is important to understand that the financial requirements fluctuate with the price of asphalt which in turn is tied to the price of oil.

Bartholomew County		
Miles of county roads		695
Chip sealing interval (years)		7
Overlay interval (years)		25
USD / mile for chip sealing	$	7,000
USD / mile for overlay	$	58,080
Annual maintenance budget required	$	2,309,624
County Engineer overlay and crack sealing expenditures 2011	$	1,500,000
Approx county asphalt maintenance annual shortfall	$	809,624
City of Columbus		
Miles of paved city streets		247
Crack sealing interval (years)		5
Overlay interval (years)		15
USD / mile for crack sealing	$	4,224
USD / mile for milling & overlay	$	67,936
USD / mile for patching	$	33,968
Estimated annual maintenance budget reqd	$	1,886,685
City Engineer overlay and crack sealing expenditures 2011	$	870,000
Approx city asphalt maintenance annual shortfall	$	1,016,685
Estimated city and county annual shortfall	$	1,826,309
Notes:		
- centerline mile calculation, lane mile to follow		
- strictly overlay numbers only		
- does not include curb / gutter repair		
- 2" overlay in county with no milling		
- 1" to 2" overlay in city with milling (FC dependent)		
- does not include the pothole patrol costs		
- $65 per ton for asphalt		

Road Projects – Group IV STP Funded

Group IV funds of the Surface Transportation Program are for rural towns with a population under 5,000 and for use in the rural areas of counties, regardless of population. The MPO does not receive an annual allocation of these funds such as is received with Group II funds. Group IV funds are controlled by the central office of the Indiana Department of Transportation. These funds must be applied for under a competitive process.

Bartholomew County has been working to rebuild CR 600 N in multiple phases. The final phase of CR 600 N has yet to be completed. This project is the highest priority for the County in the medium term and the county has applied multiple times for Group IV funds in order to complete this last phase.

Road Projects – INDOT

The following INDOT projects have been completed in the MPO area during the last six years.

Rt	DES#	Project Description
I 65	0101101	Interchange reconstruction to add capacity, at I-65 & SR 58
US-31	9700230	3.94 miles of added travel lanes from Washington St to 10th St
SR 46	9902930	Median construction from Marr Rd to Mapleton

These were very important projects for the area and were made possible by the Major Moves Program which was financed via the lease of the Tollway in Northern Indiana. Under the current scenario of a continued federal fuel tax of eighteen cents per gallon, no major road projects of the scale above are scheduled in Bartholomew County in the next quarter century.

Of particular concern is the fact that additional lanes on Interstate 65 have been moved outside of the current long range planning horizon (25 years) due to a lack of funding capacity.

Financial Resources Forecast

Group II Surface Transportation Program Funds

The Columbus Area Metropolitan Planning Organization receives an annual allocation of Group II Surface Transportation Program (STP) funds from the Indiana Department of Transportation. These are funds provided by the federal government to the states under the federal transportation bill, which are then in turn partially allocated to the MPOs in accordance with the INDOT/Local Federal Aid Sharing Agreement. Group II STP funds are for use within the urbanized area of the MPO.

The following tables show estimated funding available over the life of this transportation plan versus commitments made thus far.

Estimated Funding Available

Fiscal Year	Federal	Local Match	Total Funds
pre-2012	5,056,076	1,264,019	6,320,095
2012	1,588,049	397,012	1,985,061
2013	1,588,049	397,012	1,985,061
2014	1,588,049	397,012	1,985,061
2015	1,588,049	397,012	1,985,061
2016	1,588,049	397,012	1,985,061
2017	1,588,049	397,012	1,985,061
2018	1,588,049	397,012	1,985,061
2019 - 2037	30,172,931	7,543,233	37,716,164
Summ	46,345,350	11,586,338	57,931,688

Estimated Funding Required

Project	Federal	Local Match	Total Funds
Road 200 S	1,140,000	285,000	1,425,000
Carr Hill Rd	1,840,000	460,000	2,300,000
Taylor Rd	3,772,000	943,000	4,715,000
Indiana Ave	5,203,200	1,300,800	6,504,000
Westenedge Dr	1,629,600	407,400	2,037,000
Bridge 26	400,000	100,000	500,000
Fourth St	280,000	70,000	350,000
	14,264,800	3,566,200	17,831,000

Fiscal Constraint

The financials shown on the previous page show that 58 million dollars of funding are available to cover commitments of just under 18 million. This financial forecast includes the assumption of flat federal funding for the next quarter century, i.e. revenue increases are equal to inflation. Therefore all numbers are in constant dollars.

Where the level of federal funding will really end up, is very uncertain as of the time of writing of this plan. The Senate is pursuing a much larger transportation program; whereas the House of Representatives is discussing cuts of up to one third.

Once the next federal Transportation Bill has been adopted by Congress, CAMPO will be able to better decide what the exact next steps regarding project development for the region should be.

Non-Motorized Transportation

The last MPO Transportation Plan included an extensive section on non-motorized transportation. This Plan will scale this section back because of the adoption and beginning implementation of the City of Columbus Bicycle and Pedestrian Plan. This is not to de-emphasize the issue, but with a strong local plan in place a smaller discussion is logical. Non-motorized travel for the purposes of this plan includes bicyclists, pedestrians and people confined to wheel chairs.

Base Conditions

Though many improvements to the non-motorized transportation infrastructure in Columbus are needed, the base conditions represent a solid foundation upon which to build. These base conditions are:

- Topography: The city is flat for the most part (lack of big hills)
- Urban form: The city is round, which minimizes point to point distances
- Growth: The city is relatively densely and contiguously developed
- Services (such as shopping) are dispersed throughout the city

These base conditions apply to the central part of the city. These conditions apply to a lesser extent to areas such as Tipton Lakes, growth along US-31, or growth in the area of 200 S.

Demographic Trends

Between 2010 and 2040 the number of non-motorized citizens will continue to grow both in absolute numbers and as a percentage of the population. The percentage of the MSA that is 65 and over will increase from fifteen percent to twenty percent of the population. In absolute numbers this is growth from 11,265 to 18,218 persons. This population group should be encouraged to live in areas where the appropriate transportation infrastructure is and will be available.

The percentage of population between the ages of zero and nineteen years of age will remain constant between 2010 and 2040, at approximately 27%; however in absolute numbers will grow from 20,921 to 24,648. This is represents a 18% increase.

Trends in physical health

It is widely known that the percentage of Americans overweight or obese has increased. An examination of the numbers shows just how rapid the rate of change has been and how large the problem has become. The following tables are data from the Center for Disease Control and Prevention of the United States Department of Health and Human Services.

Prevalence of obesity and overweight in adults age 20 to 74

	Overweight or obese (BMI 25+)	Obese (BMI 30+)
1976 to 1980	47%	15%
1988 to 1994	56%	23%
1999 to 2002	65%	31%

Obesity in Children (BMI 95th Percentile)

	(Ages 6 to 11)	(Ages 12 to 19)
1976 to 1980	7%	5%
1988 to 1994	11%	11%
1999 to 2002	15%	15%

The incidence of obesity amongst adults has doubled since the 1970 and tripled for adolescents. The American Obesity Association lists genes, environment and behavior as being the three main causes of obesity. Under the term environment both the American Obesity Association and the Centers for Disease Control list transportation as a contributing factor. In particular the rise in car ownership and an increase in driving of shorter distances are sighted.

Data from the 1995 National Personal Transportation Survey conducted by the FHWA reveals the numbers behind these short distance trips. One quarter of all trips made are one mile or less, forty percent are two miles or less, half are three miles or less and two-thirds are five miles or less.[4] Among children the trend towards fewer trips made by foot or bicycle are similar. In 1969, 48 percent of students walked or biked to school; today less than 16 percent of students between the ages of five and fifteen walked or biked to school.[5]

One key to reversing these trends is providing an infrastructure that supports and does not discourage non-motorized travel.

Freight Transportation

The freight transportation picture consists of multiple components ranging from the delivery of bulk commodities per railcar to the overnight guaranteed on-time delivery of documents. The Columbus MSA is well situated with respect to freight transportation infrastructure, providing a wide range of transportation connectivity options for industry.

Truck

The location of the Columbus MSA along Interstate 65 makes the area easily accessible for trucking. An hour to the North, Interstate 65 connects to I-74, I-69, and I-70 providing alternative north – south as well as east – west connections. One hour south of Columbus, I-65 connects to I-64 and I-71. Within the Columbus MSA there are three Interstate interchanges. Exit 76 at Taylorsville which also serves as a prominent location for less than truckload (LTL) provider facilities such as those of Con-Way Express. Exit 68 is west of downtown Columbus and is the primary exit for trucks serving the South Mapleton Industrial Park. Exit 64 is the third exit and serves Walesboro Industrial Park.

The presence of several major manufacturing facilities in Columbus has brought with it a large offering of trucking service providers. Several of the nation's major (LTL) service providers maintain an office with cross-docking facilities in the Columbus Area. In addition to this there is an offering of local (non-national) trucking and warehousing service providers. The presence of I-65 and its accompanying large volume of freight traffic make the arrangement of truckload services uncomplicated as well.

Freight Rail

The delivery and pick-up of bulk commodities via railcar is provided to the Columbus Area by the Louisville and Indiana Railroad Company. The L&I is a short line railroad operating approximately 106 miles of line that runs north / south between Indianapolis and Louisville. The L&I connects to two Class I railroads, the Norfolk Southern in Louisville and CSX in Indianapolis. This connection to Class I railroads is positive for rail dependent industries seeking to avoid dependency upon one Class I railroad. The portion of the L&I line running from Indianapolis to Camp Atterbury has been designated by the Department of Defense as a part of the Strategic Rail Corridor Network (STRACNET).

The L&I moves 33,000 carloads annually, the equivalent of over 100,000 truckloads. 95 percent of the L&I's track exceeds FRA Class 2 track standards which allows for a maximum speed of 25 miles per hour for freight trains. Within the Columbus MSA significant areas of activity for the L&I include the industrial area north of the Outlet

Mall in Taylorsville, the rail yard to the west of Commerce Park, South Mapleton Industrial Park and Camp Atterbury.

In the fall of 2011, the L&I announced a partnership with CSX Transportation, Inc. In exchange for allowing CSX the rights to use the L&I rail line, CSX is going to invest in new rail ties, rail, and in multiple bridges along the L&I line. This multi-million dollar investment will result in the line being able to carry the industry standard weights of 286,000 gross weight on rail (GWR). Many short line railroads like the L&I have struggled with capital funding issues. This partnership represents a giant leap forward in the capability of the L&I.

Intermodal

Intermodal freight refers to the movement of freight by multiple means within a transport chain. While there are multiple forms of intermodal traffic, most prevalent in the Columbus area is the movement of sea containers and truck trailers by rail and then truck. As a general rule, sea containers that have to be moved a distance greater than 500 miles from their port of entry are moved by rail. The sea containers are then transferred to trucks and delivered to their final destination. In the Columbus Area, there are multiple manufacturers that use imported products (in particular from Asia) as a part of their production strategy. Therefore the significance of intermodal traffic to the area is relatively high.

Columbus is located near three different intermodal rail yards. CSX maintains the Avon yard near Indianapolis (one of 48 within their system), Norfolk Southern in Louisville, and both of these carriers have intermodal yards in Cincinnati. In addition to these intermodal yards, the multiple yards surrounding Chicago often serve as the transfer point to truck for cargo movements from the West Coast. This occurs because the U.S. rail network is divided into a western half and an eastern half, each dominated by two Class I railroads. Chicago is a bottleneck in the current rail network, and the short distance from Chicago to Columbus are two factors that encourage the movement of shipments from Chicago via truck and not rail.

Weaknesses

Since the last MPO Transportation Plan, two key freight transportation weaknesses have been addressed.

The first is the I-65 interchange at SR-58, which predominately serves the industrial activities of Walesboro and Woodside Industrial Parks. The interchange was rebuilt in 2010 and 2011 in order to address a shortage of traffic carrying capacity.

The inability of the Louisville and Indiana Railroad to carry 286,000 pounds gross weight on rail is being addressed by its partnership with CSX Transportation, Inc. This capital infusion will guarantee the viability of the L&I line for many years into the future and increase the attractiveness of the Columbus area for industry.

The following weaknesses of the freight transportation network within the MPO planning area remain unresolved:

- A lack of rail served industrial sites, in particular no rail spur in Walesboro Industrial Park from the adjacent Louisville and Indiana main line.
- A lack of internal circulation patterns at the current industrial sites.
- No additional lanes for Interstate 65 in the near future.

Mass Transportation

Bus Transit

ColumBUS Transit provides both fixed-route and demand response service. Fixed route service is provided on four routes within the central city. This provides 203,000 annual revenue miles of service for approximately 200,000 boardings. The system has five 30' Gillig buses for fixed route and four Turtle Top buses for demand response. The fixed route service does the extreme majority of the heavy lifting, carrying over ninety percent of the boardings.

Transit Facilities

Since the last MPO Transportation Plan, one of the key weaknesses of the transit system has been addressed. Using funds from the American Recovery and Reinvestment Act (ARRA), a new and more importantly permanent location for ColumBUS Transit was built in downtown Columbus. This facility is collocated with the new Mill Race Center in the northwest corner of downtown Columbus. Being located along Lindsey St, it is easily accessible from both Indianapolis Rd and SR 46, which is convenient for intercity bus traffic. It is also located next to the Louisville & Indiana main rail line and could serve as a rail station, should passenger rail ever return to Columbus.

ColumBUS Transit is currently using Target on the north side of Columbus as their second transfer point. Should Target ever decide to not let the buses stop on their property, ColumBUS Transit would face a big challenge. A permanent location should be secured in the near future for transit.

Capital Funding

The current fleet of transit buses was purchased with a large amount of financial support from the MPO in 2006. In approximately 2021, when the current fleet of fixed route buses is nearing the end of their service life, the MPO will most likely not be in the position to provide as much aid. Working with the MPO, ColumBUS Transit has created a capital spending program that staggers capital purchases. Under this plan, ColumBUS Transit needs approximately 100,000 federal dollars per year in order to maintain the current fleet of fixed route and demand response buses.

Information Technology and Transit

Routing and scheduling software systems for transit systems have improved drastically in the last five years and have also come down in price. As a next step, ColumBUS Transit will install a routing software in order to more efficiently route demand response vehicles as well as to track in real time the location of both demand response and fixed route vehicles. This will also enable the next step of providing real time data to passengers regarding bus locations.

Following the installation of routing software, ColumBUS Transit will be able to move to an electronic fair card system in order to track boarding and deboarding data. This data will enable further improvements to the route structures.

As of the writing of this plan, routing software has reached a level where it is affordable for ColumBUS Transit. Electronic fair card systems still are very expensive.

Interstate Bus Service

Working with funds provided by the Federal Transit Administration via the Indiana Department of Transportation, Miller Trailways is providing intercity bus service in Indiana currently. This service has attracted a very low number of riders thus far and it is anticipated that this service will be discontinued in the future as the federal budget tightens.

Passenger Rail

Currently there is no passenger rail service for Columbus. In the recent past, Amtrak provided service between Louisville and Chicago under the name Kentucky Cardinal; however this service has been discontinued. This was a logical decision considering the rail line is limited to 30 mph service in accordance with its current FRA classification.

The Midwestern Regional Rail Initiative is a collaborative effort of nine Midwestern State Departments of Transportation to install high speed rail service to the Midwest in a hub and spoke format centering on Chicago. Under the plan, 3,000 miles of existing right of way would be upgraded to 110 mph service, the fastest allowed by the FRA without total grade separation.

The segment Louisville – Indianapolis was added to the study in 2004. As a part of the study, Columbus is included as the one stop between Louisville and Indianapolis for express trains due to it being approximately midway between the two cities and sharp curvature of the rail line within the city limits of Columbus that would force all trains to slow anyway.

INDY-Connect

Indy-Connect is a joint plan of the Indianapolis MPO, Indy-Go (Public Transit of Indianapolis), and the Central Indiana Regional Transportation Authority (CIRTA). Under their Indy Connect plan, rail service would extend to Franklin. Were this to happen, it would be a logical idea to extend this service a few more miles to Columbus. More information on Indy Connect is available at www.indyconnect.org.

Safety

The current transportation bill (SAFETEA-LU) was signed into law on August 10, 2005. SAFETEA-LU has eight planning factors, an increase of one from seven planning factors of the law preceding SAFETEA-LU. Safety and security used to be one factor; however have been made into two separate factors.

The safety of the citizens using all forms of transportation in the planning area of the MPO is the highest priority. Safety is best achieved via two approaches. The first is the microscopic approach of studying accident data to find out where and why accidents are taking place, which in turn enables transportation planners working with engineers to program projects to physically correct dangerous situations. An example of this would be the reconstruction of a dangerous street intersection. The second approach to safety in transportation planning is the macro approach, which involves providing an infrastructure system that minimizes safety related issues.

Crash Data Driven safety Approach

Every year the Office of the City Engineer assembles his annual Crash Report in cooperation with the Columbus Police Department. This focuses on mapping the crashes from the previous year in order to find any areas of the City that might require infrastructure improvements or increased law enforcement in order to reduce the accident rate. This is done annually, which provides trending data in addition to frequency related data.

Systematic Infrastructure Driven Safety Approach

In addition to the study of crash data, it is important for transportation planners to ensure that a big picture approach to safety is taken. Within the City of Columbus, safety of the citizens is further reinforced via the following measures:

- Sidewalks are a requirement of the subdivision control ordinance, ensuring that pedestrians are not forced to walk in the streets.
- Sidewalks and bike lanes are included in all MPO funded reconstruction projects, ensuring both pedestrians and bicyclists are integrated safely into traffic.
- The spacing of collector, minor and principal arterial facilities in accordance with FHWA standards has been maintained to the highest degree possible, ensuring adequate road capacity which in turn results in a low level of driver frustration.
- Traffic calming (in particular in the form of street widths) is now allowed under the new City of Columbus Thoroughfare Plan adopted in 2010.

Environmental Mitigation

The mitigation of the impacts of transportation projects on the environment is achieved through multiple means. The primary means is via the City of Columbus and Bartholomew County comprehensive plan and planning process.

Comprehensive Planning Goals

The Comprehensive Plans of both the City and the County include the following goals and policies relevant to environmental mitigation:

City of Columbus Comprehensive Plan

- Goal A-4: Promote wise and efficient use of limited resources and nonrenewable resources, including but not limited to capital and land
- Goal B-1: Maintain excellent water, air & land quality and protect the natural environment
- Goal B-2: Enhance open space to create sustainable recreational environment and wildlife environments and wildlife habitats
- Goal B-3: Develop a comprehensive network of natural areas to enhance and protect our fragile environment
- Goal D-1: Develop new housing where adequate public services can be provided economically
- Goal D-2: Encourage development of a sufficient supply of diverse housing types, sizes, and price ranges in the community

Bartholomew County Comprehensive Plan

- Goal 1: Preserve productive farmland and maintain the productive capacity for a strong county agricultural industry.
- Goal 2: Protect open space such as woodlands, flood plains, and wetlands for environmental, recreational, scenic, and life-style benefits
- Goal 3: Maintain rural neighborhoods, establish appropriate new neighborhoods, and revitalize rural towns and villages
- Goal 6: Ensure wise and efficient use of limited and non-renewable resources including but not limited to capital and land
- Goal 7: Maintain and enhance the quality of the water, air and land
- Goal 10: Reduce flooding and flood damage
- Policy 10-A: Encourage building to take place outside of the flood plain
- Policy 10-C: Prevent filling within the floodway
- Goal 11: Reduce soil erosion
- Goal 12: Improve water quality and ensure an ample supply of potable water
- Goal 14: Ensure the safe disposal of sewage
- Goal 15: Ensure a safe, abundant supply of water

These goals and policies as well as the influence of the physical geography of the county are reflected in the future land use maps of both comprehensive plans. The zoning of the City and County are then derived from these maps. Thus environmentally sensitive areas such as floodplains and floodways are appropriate accounted for in current and future land use.

Geographic Information Systems

Via the Geographic Information Systems implementation plan of the Bartholomew County GIS working group, which the MPO is an active member of, further layers of data related to environmental mitigation will be incorporated into the GIS. For example, this will include the addition of a layer related to historic preservation.

Multi-Modal Planning Approach

The most important issue relevant to environmental mitigation that can be directly influenced by the activities of the MPO is the type and variety of infrastructure funded by the MPO. Relevant to mitigation, the MPO has:

- Funded and actively planned for transit
- Funded and actively planned for bicycle and pedestrian infrastructure
- Cooperatively works with the other entities regarding the coordinated provision of infrastructure to guide growth

Air Quality

The Metropolitan Planning Area (MPA) for the Columbus Area Metropolitan Planning Organization includes all of Bartholomew County and used to include the Blue River Township in Johnson County and the Jackson Township of Shelby County. Both Johnson County and Shelby County are part of the 9-County Central Indiana non-attainment area for the eight hour ozone standard. The Indianapolis MPO has added the Blue River and Jackson Townships to their planning area. This ensures that the line of responsibility for air quality planning in Johnson and Shelby counties is not divided among two MPOs.

Plan Adoption Resolution

Resolution 2011 – 5

RESOLUTION FOR ADOPTING THE TRANSPORTATION PLAN FOR THE METROPOLITAN PLANNING AREA OF THE COLUMBUS AREA METROPOLITAN PLANNING ORGANIZATION FOR YEARS 2012 – 2037

WHEREAS, the Columbus Area Metropolitan Planning Organization is the designated Metropolitan Planning Organization and responsible for transportation planning in the City of Columbus and Bartholomew County, and

WHEREAS, the development of a transportation plan, which includes major local and state projects during the next twenty-five (25) years is a requirement and part of the comprehensive planning process, and

WHEREAS, the Transportation Plan 2012 - 2037 was developed by the staff of the Metropolitan Planning Organization and recommended for approval by the Technical Advisory Committee, and

WHEREAS, the representation on the Technical Advisory Committee consists of those agencies initiating the recommended projects and have the authority to execute them, and

WHEREAS, the representation on the Policy Board consists of local elected and appointed officials representing over seventy-five (75) percent of the population within the Metropolitan Planning Area.

NOW, THEREFORE BE IT RESOLVED by the Policy Board of the Columbus Area Metropolitan Planning Organization that the presented Transportation Plan 2012 – 2037 is hereby accepted and adopted.

Approved this 18th day of November, 2011

Zack Ellison, President

Fred Armstrong, Secretary

Endnotes

[1] Woods and Poole Economics, Inc., Columbus, IN MSA 2010 Data Pamphlet
[2] Woods and Poole Economics, Inc., Columbus, IN MSA 2010 Data Pamphlet
[3] Statistics and trend analysis of this paragraph is from the Victoria Transportation Policy Institute, "The Future isn't What It Used to be" by Todd Litman, 24 Jan 05
[4] Turner Fairbank Highway Research Center Website, http://www.tfhrc.gov/pubrds/fall94/p94au28.htm
[5] International Walk to School Website, www.iwalktoschool.org