

Summary

Land development creates a demand for transportation, while increases in transportation capacity often generate further development. When the interactions between land use and transportation are not managed well, unintended results can be dispersed development, loss of farmland, costly infrastructure, traffic congestion, environmental degradation, and community disinvestment. Integrating transportation and land-use planning can help avoid these impacts. This approach requires state, regional, and local governments, planning groups, and citizens to work together using a state and regional vision for growth. Sandusky County can facilitate joint planning by using models that integrate land use and transportation, issuing guidelines for development that decrease vehicle miles traveled, and collaborating with local governments to understand state and regional transportation implications of land use.

Infrastructure investments have followed growth and development outside of urban fringes, sometimes at the expense of existing communities. By focusing infrastructure investments in existing cities and villages, and suburbs, the county can guard against sprawl, decrease development pressures on farmland and other open space, and conserve limited funds by relying on past infrastructure investments. Sandusky County can help ensure that transportation investments do not spur sprawl by creating oversight bodies; targeting transportation funds to existing urban areas or to new areas designated for future growth; and encouraging impact fee systems that reflect real government costs.

Planning Issues

The Sandusky County Engineer's office is responsible for ensuring that the county's thoroughfare network and roughly 266 bridges are in good working order to facilitate the flow of residents and goods throughout the county. Because of the direct link between transportation and land use, it is very important that the Sandusky County Engineer's office, the Sandusky County Regional Planning Commission, and other related agencies work in unison to promote growth and encourage the conservation of land resources.

The Engineer's office annually reviews and updates its capital improvement plan to upgrade the county's roads and bridges (please see **Map: Road and Bridge Improvements, 2003-2006**). It is important that this plan consider future growth areas highlighted in the Land Use Chapter as well as areas highlighted in the Infrastructure chapter as future sanitary and water service areas. Like transportation, the provision of water and sanitary sewer services are also directly linked to future land use, and often assist in promoting residential, commercial, and industrial growth. Other important transportation planning issues in the future could include:

- ✓ The possible development of an access management plan and thoroughfare plan;
- ✓ The necessity of looking for additional funding sources for transportation-related improvements
- ✓ The encouragement of the development of "Gateways" to welcome residents and travelers to the county and its several communities;
- ✓ The continued development of recreational trails, similar to the North Coast Trail, within the county.

Goals and Objectives

Transportation Goal: To facilitate the safe, efficient, and expeditious movement of people and goods throughout Sandusky County, by addressing the following objectives:

Objectives:

1. Utilize access management techniques to accommodate traffic flows and ensure safe pedestrian usage.
2. Implement congestion management techniques at key intersections through redesign, additional traffic lanes, and improved signalization.
3. Promote effective use of public rural transit offered through TRIPS, the county's rural public transit system.
4. Encourage the usage of safe and "walkable" streetscape design and signage standards within municipalities and across the County.
5. Develop "gateways" or attractive signage that physically mark the entrance to Sandusky County.
6. Continuing to repair County bridges and monitor and correct unsafe roadway segments, intersections and railroad crossings.
7. Continuing routine maintenance of pavements and culverts.
8. Promote alternate means of transportation that meet the above Transportation Goal, such as aviation, railroads, and bicycle transportation.

Trends and Characteristics

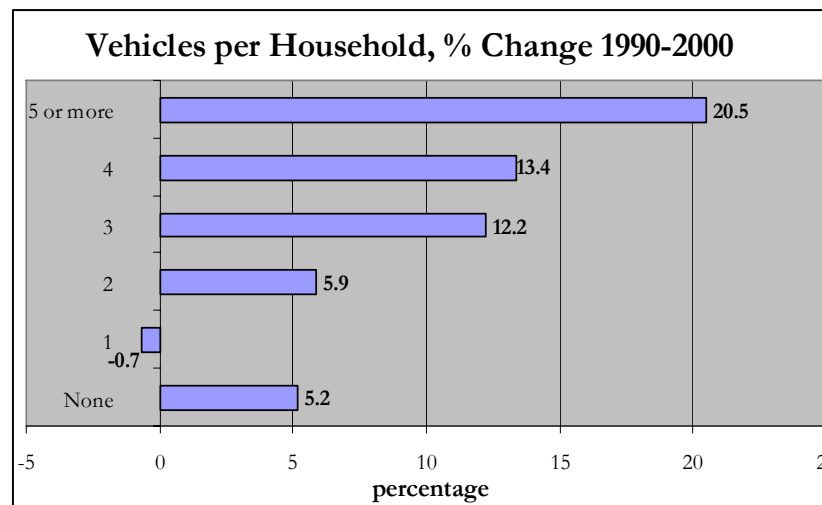
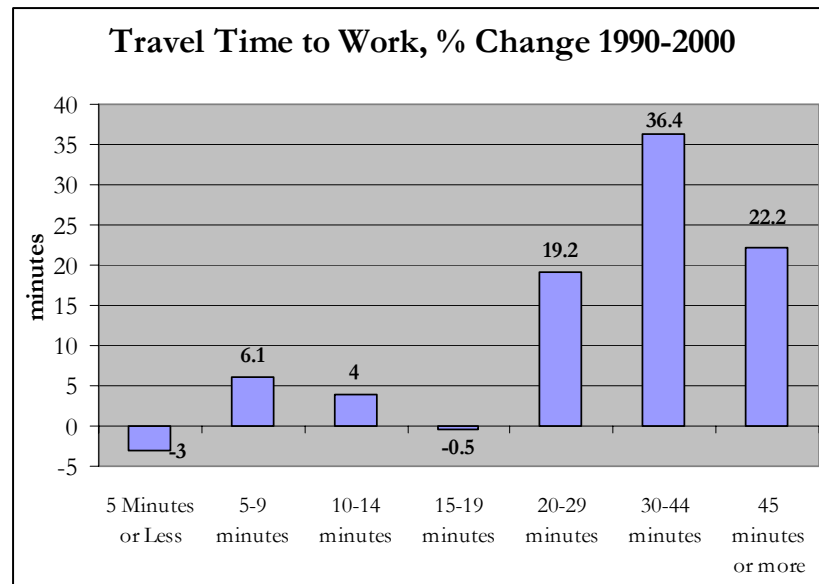
Over the last decade, Sandusky County residents either drove further distances to their places of employment or spent more time in their vehicles due to traffic congestion or other reasons. Between 1990-2000, residents traveling 30 minutes or more to work increased by 59%. Other transportation-related trends include:

- ✓ Household sizes are decreasing; however, the number of vehicles per household is increasing. There was a 12% increase in households with three vehicles; 13% increase in households with four vehicles; and 20% increase of households having 5 cars or more.
- ✓ An increase of Sandusky County residents leaving for work during the early morning hours (12:00 a.m. to 4:59 a.m.). Although only 3.7% of all residents noted working early morning shifts, this group increased 58.2% since 1990. Over 54% reported leaving for work during the 5:00 a.m. to 8:00am time period, 24% noted leaving for work between 11:00 p.m. and midnight.

Crash statistics from the Ohio Department of Public Safety indicates that the number of crashes on Sandusky County’s roads have increased slightly over time. In 2001, the number of crashes in Sandusky County was 36.85 crashes per 1000 residents, compared to 36.21 crashes per 1000 residents in 1994. State average in 2001 was 34.09 crashes per 1000 residents.

Crash numbers within the County’s population centers have also increased over since 1994, with the exception to Clyde, which has had the number of accidents decrease 3 per 1000 residents in 2001. 2001 Crash numbers in other locations include:

- ✓ Fremont: 43.17 crashes per 1000 residents, compared to 36.68 in 1994
- ✓ Bellevue: 24.41 crashes per 1000 residents, compared to 23.82



in 1994.

- ✓ Burgoon: 5.03 crashes per 1000 residents
- ✓ Gibsonburg: 17.56 crashes per 1000 residents
- ✓ Green Springs: 7.22 crashes per 1000 residents
- ✓ Helena: 4.24 crashes per 1000 residents
- ✓ Lindsey: 5.95 crashes per 1000 residents
- ✓ Woodville: 23.27 crashes per 1000 residents

Functional Classification System

In 1974, the Federal Highway Administration published a manual entitled, Highway Functional Classification-Concepts, Criteria, and Procedures. The manual still today remains the definitive guide to the functional classification process and how transportation funding gets allocated to political subdivisions. A functional classification system and map are also primarily components of an access management plan.

Functional classification is divided into rural and urban systems. The urban functional classification system covers all streets, roads, and highways located within urban boundaries designated by the U.S. Census Bureau.

The Bureau defines two types of urban areas based on population. Small urban areas are urban placed with a population of 5,000 or more and not located within any urbanized area. An urbanized area is an area with a population of 50,000 or more. The rural functional classification system covers all other streets, roads, and highways not located within the boundaries of small urban or urbanized areas. The same general functional concepts apply to both systems, as streets and roads are both ranked according to their purpose or function in meeting the demands for mobility and land access. The principal difference between the two systems is the length of trips in both time and distance.

Rural Functional Classification Systems

The rural functional classification system consists of all highways located outside urban and urbanized area boundaries. There are four classes of highways in rural systems: principal arterials, minor arterials, major and minor collectors, and locals. The characteristics of each class are as follows:

Class	Characteristic
1. Rural Principal Arterial	a. Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel;

- b. Connect all or nearly all urban areas with a population of 50,000 or more, and a majority of urban areas with a population of 25,000 or more;
 - c. Provide an integrated network of continuous routes.
- 2. Rural Minor Arterial
 - a. Connect cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and intercounty service;
 - b. Spaced at intervals so that all developed areas are within a reasonable distance of an arterial;
 - c. Provide service to corridors with trip lengths and travel density greater than those served by rural collected and local roads and with relatively high travel speeds and minimum interference to through movement.
- 3. Rural Collectors
 - a. Serve primarily intracounty rather than statewide travel;
 - b. Serve more moderate travel speeds and distances than those on arterial routes.
- A. Rural Major Collectors
 - 1. Provide service to any county seat, larger towns, and other county destinations such as consolidated schools, parks, or important mining and agricultural area not served by an arterial;
 - 2. Connect these places with nearby larger towns and cities or with arterial routes;
 - 3. Serve the most important intracounty travel corridors.
- B. Rural Minor Collectors
 - 1. Are spaced at intervals to collect traffic from local roads and bring all developed areas within reasonable distance of a collector;
 - 2. Provide service to smaller communities not served by a higher class facility;
 - 3. Connect locally important traffic generators with rural hinterlands.
- 4. Rural Locals
 - a. Provide access to adjacent land
 - b. Serve travel over relatively short distances

Urban Functional Classification System

The urban functional classification system consists of all roads, streets, and highways located side the urban/urbanized area boundary. There are four classes of highway in the urban system: urban principal arterials, urban minor arterials, collector streets, and local streets. Because of the greater concentration of population, more intense land use, and higher traffic volumes in the urban area compared to rural, some characteristics of urban classes differ slightly from their rural counterparts.

Class	Characteristic
1. Urban Principal Arterial ¹	<ul style="list-style-type: none"> a. Serve major activity centers, highest volume corridors, and longest trip demands; b. Carry high proportion of total urban travel on minimum of mileage; c. Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area; d. Serve demand for intra-area travel as between the central business district and outlying residential areas.
2. Urban Minor Arterials	<ul style="list-style-type: none"> a. Interconnect with and augment the principal arterials; b. Serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials; c. Distribute traffic to smaller geographic areas than those served by principal arterials; d. Provide more land access than principal arterials without penetrating identifiable neighborhoods; e. Provide urban connections for rural collectors.
3. Urban Collectors	<ul style="list-style-type: none"> a. Serve both land access and traffic circulation in residential, commercial, and industrial areas; b. Penetrate residential neighborhoods; c. Distribute and channel trips between local streets and arterials.
4. Urban Locals	<ul style="list-style-type: none"> a. Provide direct access to adjacent land; b. Provide access to higher systems; c. Carry no through traffic movement.

¹ The urban principal arterial system is further divided into the following subclasses: (a) Urban Interstate, consisting of principal arterials designated as part of the Interstate system; (b) Urban Other Freeways/Expressways, consisting of non-Interstate principal arterials with controlled access; and (c) Urban Other Principal Arterials without controlled access.

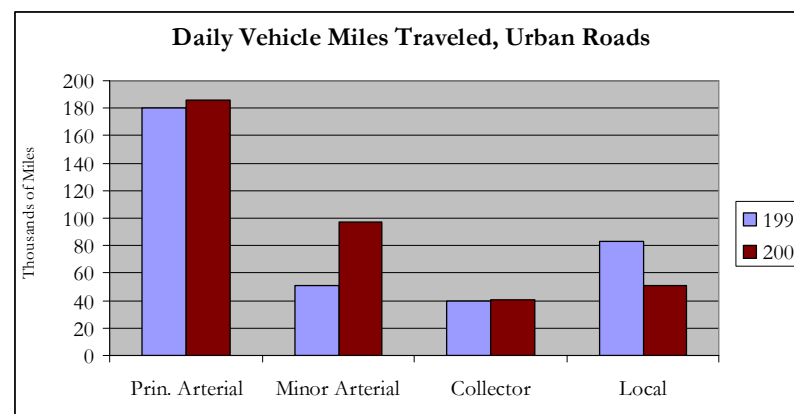
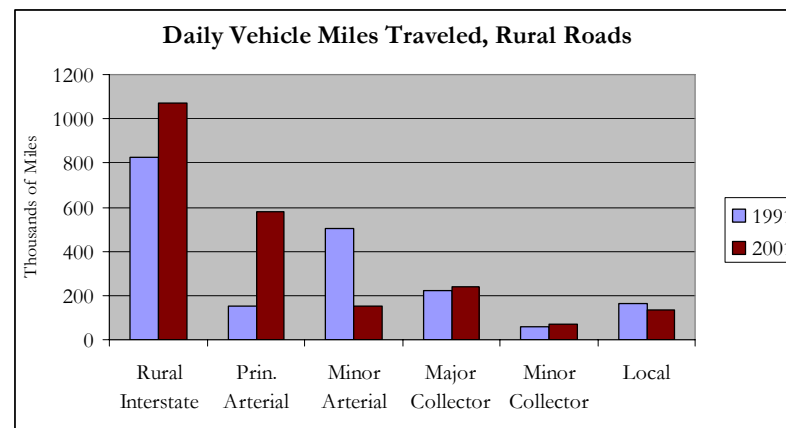
Access Management

The Sandusky County Engineer's Office currently does not utilize an access management plan, although it has been indicated by the Engineer that this endeavor is expected in the near future. The purpose of access management is to establish uniform and equitable standards and procedures. An access management plan, when administered properly, can help to prolong the service life of the county's roads and reduce public maintenance costs. Most importantly, access management also assists in promoting orderly development while preserving traffic mobility. Some of the reasons to utilize a policy of access management are:

- ✓ Poor access management can reduce highway capacity up to 20% of its design
- ✓ Travel delay is as much as 74% greater on highways with access management than on those utilizing access techniques
- ✓ Nearly 52% of all accidents are driveway related
- ✓ Studies have shown as much as a 50% decrease in accidents on access-managed roads
- ✓ A typical 4-lane with high access management can handle 10,000 more vehicles per day
- ✓ Travel speed increased an average of 42% on access-managed roads

Over a ten-year study period between 1991 and 2001, the County's thoroughfare network has witnessed an increase in vehicular traffic. The increase in usage since 1991 is primarily due to additional interstate traffic on US 80/90 and US 6, 20, and 23. The additional usage of these routes has also impacted upon the several principal and minor arterials located throughout Sandusky County, as commercial and non-commercial users are traveling to decentralized locations within the County and region.

Total vehicular traffic on the County's rural roads increased 16.5%, from 1,927,230 vehicle miles traveled (VMT) in 1991 to 2,245,300 VMT during 2001. Total vehicular traffic on urban roads increased 12.3% since 1991, from 358,450 VMT to 402,210 VMT in 2001. Overall vehicular traffic in Sandusky County has increased 15.8% since ODOT's 1991 study. This trend is expected to continue as



destinations become more decentralized and as households continue to acquire more vehicles for use by family members. This additional usage of County roads will place additional constraints, budgetary and otherwise, on the County Engineer and localities as more improvements and upgrades to the road infrastructure will become necessary.

Strategies and Recommendations

Encourage the Development of Streets and Roadways Characteristic to Traditional Neighborhood Design²

Meets Transportation Objectives: 2,4.

A Traditional Neighborhood Development (TND) is a human scale, walkable community with moderate to high residential densities and a mixed use core. When compared with conventional suburban developments, TNDs have a higher potential to increase modal split by encouraging and accommodating alternate transportation modes. TNDs also have a higher potential for capturing internal trips, thus reducing vehicle miles traveled.

A dense network of narrow streets with reduced curb radii is fundamental to TND design. This network serves to both slow and disperse vehicular traffic and provide a pedestrian friendly atmosphere. Such alternate guidelines could be encouraged when the overall design ensures that non-vehicular travel is to be afforded every practical accommodation that does not adversely affect safety considerations. The overall function, comfort and safety of a multipurpose or “shared” street are more important than its vehicular efficiency alone.

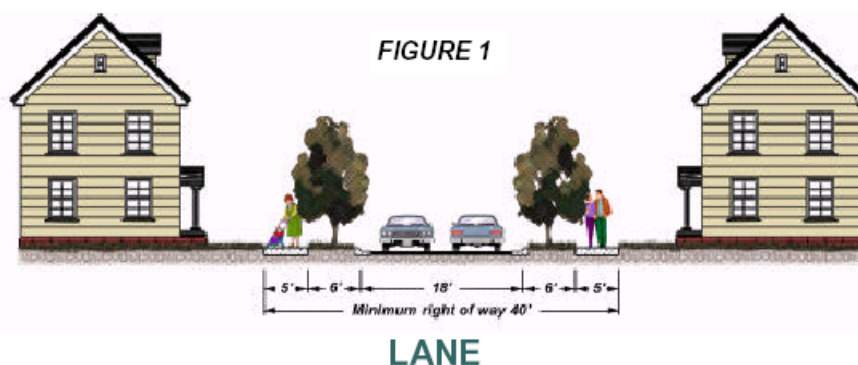
TNDs have a high proportion of interconnected streets, sidewalks and paths. Streets and rights of ways are shared between vehicles (moving and parked), bicycles and pedestrians. The dense network of TND streets functions in an interdependent manner, providing continuous routes that enhance non-vehicular travel. Most TND streets are designed to minimize through traffic by the design of the street and the location of land uses. Streets are designed to only be as wide as needed to accommodate the usual vehicular mix for that street while providing adequate access for moving vans, garbage trucks, fire engines and school buses.

TND Single-Family Lane Design

Purpose: Provides access to single-family homes.

Features

- ✓ A minimum street width 18' with curb and gutter and informal parking designated on street
- ✓ Planting strips 6'
- ✓ Sidewalks 4-5' on each side
- ✓ Design speed 20 mph
- ✓ Posted speed 20 mph



² The specific elements of TND, as highlighted, could require modification to conform to the subdivision regulations. The subdivision regulations could also be modified to include innovative elements reflective of TND.

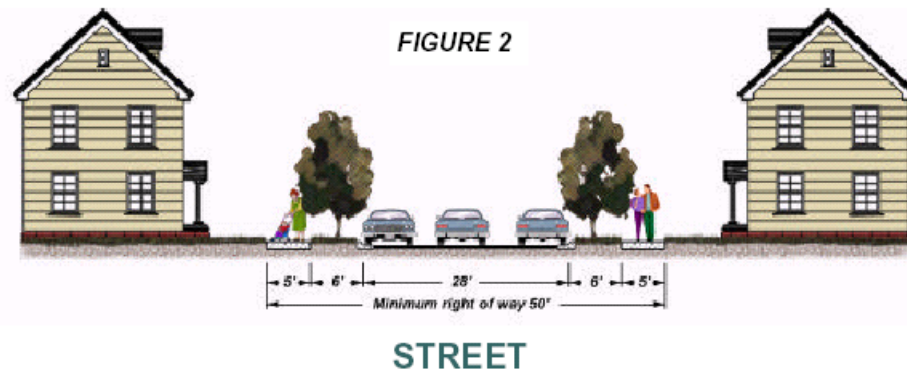
- ✓ Requires a 40' right of way
- ✓ Drainage - curb and gutter
- ✓ Generally two to six blocks long

TND Access Street Design

Purpose: Provides access to housing of various types.

Features

- ✓ Street width 28' with curb and gutter and informal parking
- ✓ Planting strips 6'
- ✓ Sidewalks 4-5' on each side
- ✓ Design speed 20 mph
- ✓ Posted speed 20 mph
- ✓ Requires a 50' right of way
- ✓ Drainage - curb and gutter
- ✓ Generally two to six blocks long

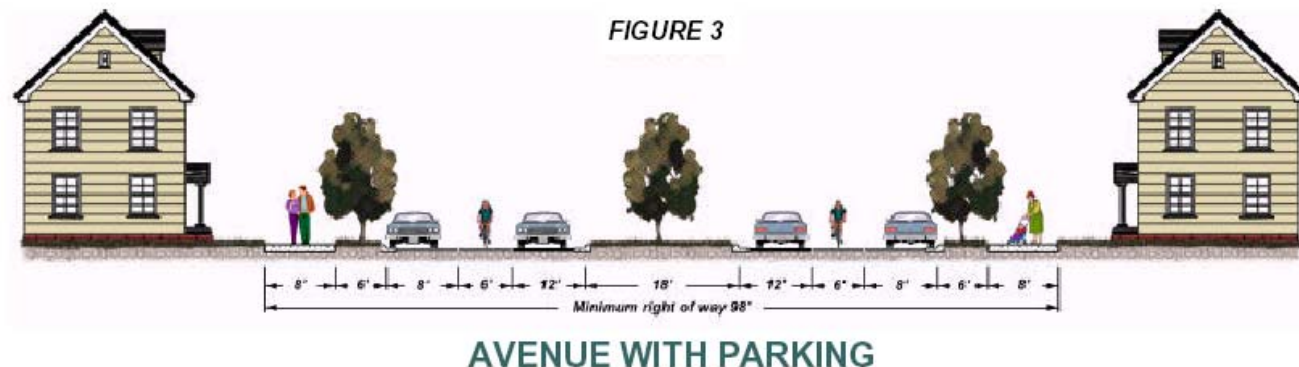


TND Avenue Design

Purpose: Avenues are short distance, medium speed connectors between neighborhoods and core areas. As such, they are used in both residential and commercial areas, often terminating at prominent buildings or plazas. Avenues may also circulate around squares or neighborhood parks.

Features

- ✓ Street width 26'-28' on both sides of median with on-street parking, 18'-22' if no parking or curb and gutter
- ✓ Median width 18' (minimum)
- ✓ Travel lanes 12'



- ✓ Maximum 2 travel lanes
- ✓ Bike lanes and planting strips 6'
- ✓ Sidewalks 5'-8' on each side
- ✓ Design speed 30 mph (maximum)
- ✓ Posted speed 25 - 30 mph
- ✓ Requires a 98' right of way
- ✓ Drainage - curb and gutter

Develop Access Management Regulations and continually update the Thoroughfare Plan

Meets Transportation Objectives: 1,2,4

As growth continues to occur within the county and region, Sandusky County's existing network of roads will encounter more congestion and additional demands. This congestion and traffic flow problems will be amplified by poorly located driveways, inadequate setbacks, and poor signalization. As growth occurs along key arterials in selected portions of the county, it is important that proper land use controls that address traffic impacts, setbacks, and driveway locations be in place in order to maintain roadway capacity and safety.

The primary purpose of access management is to preserve traffic flow in terms of safety, capacity and speed by managing the location, design and operation of driveways, median openings and street connections to a roadway. Proper access management improves subdivision layouts, discourages poor development patterns, improves on-site circulation systems, reduces accidents and improves a community's ability to manage the overall transportation system.

However, access management should not be viewed as substitute for growth management. It is not intended to govern the type or intensity of development that occurs; it is only intended to manage the way in which that development accesses the local street system.

Sandusky County taxpayers will benefit from such a program as access-managed highways are more efficient. Roadway capacity, the volume of traffic a road can carry, can be safely improved by 25% to 35%. This means almost 10,000 more cars per day on a four-lane road with good access controls than on a four-lane road with poor controls. Getting more out of the roads we have means fewer tax dollars spent trying to keep up with traffic demands. In addition, motorists experience fewer accidents, less congestion, and improved travel time on roads with good access controls. Studies over several decades have shown that access management can reduce accidents as much as 50% while safely increasing travel speeds by as much as 40%.

The recent passage of H.B. 366 allows boards of county commissioners and boards of township trustees to adopt access management regulations for the purposes of promoting traffic safety and efficiency and maintaining proper traffic capacity and traffic flow. It is recommended that Sandusky County pursue this endeavor during 2003.

County access management regulations will apply to both county and township roads in the unincorporated area of the county. In addition, the same regulations that apply to county roads must also apply to township roads. Township access management regulations apply only to township roads in the unincorporated area of the township. Given the fact that both counties and townships are given the same basic enabling authority under the act, the legislation includes special provisions to assure that either county or township regulations will apply, not both.

The legislation includes different provisions that are applicable to urban townships and other townships, which we will refer to as non-urban townships. Once access management regulations are adopted, a county or township may regulate any construction, reconstruction, use, or maintenance of any point of access from public or private property onto those roads. Generally, the regulations cannot affect any access point that exists or on which construction has begun before the regulations become effective. However, once adopted, those regulations can affect the reconstruction or relocation of access points and can apply when land use is changed in a way that significantly increases the types of traffic or traffic volume on a street or highway. (ORC5552.02 (A) and (B) and 5552.11(A) and (B)).

Access management regulations may require the issuance of permits, including interim and temporary permits. If county commissioners or township trustees adopt regulations that require permits, the regulations must include standards that will be used for the approval or denial of a permit. Any regulations regarding the approval or denial, and must specify a reasonable period of time for the approval or denial of a permit, and must provide that a failure to approve or deny, in whole or in part, any permit, license, or other approval sought within that period constitutes a granting of approval for the permit, license, or other approval (ORC 5552.02(A) and (B), and 5552.08.).

County access management regulations must, to the extent possible, be consistent with county zoning regulations and must be coordinated with any existing township zoning regulations. Township access management regulations must, to the extent possible, be consistent with any county or township zoning regulations that are in effect in the township (ORC 5552.03(E)).

Access management regulations also must designate a board to do the following: (1) to hear appeals from any administrative officials order or other action in their enforcement; and (2) to grant variances from the regulations due to special conditions, if the variances are not contrary to the public interest. Violation of the regulations will result in a fine of not more than \$500 for each offense, and each day of violation is a separate offense (ORC5552.07 and 5552.99.).

As was previously stated, county and township access management regulations apply only to county or township roads in the unincorporated area of the county or township. The act specifically provides that the county or township access management regulations or amendments to the regulations do not apply to:

1. The state highway system. In addition, such regulations do not modify any access management standards or procedures of ODOT under ORC Sections 5501.31 and 5515.01 (ORC 5552.11(C)).

2. To any streets, highways or other roadways located in a municipal corporation (ORC 5552.11(D)).

The application of county or township access management regulations are governed by the following provisions of the new law:

1. Access management regulations do not apply to subdivisions that are subject to plat approval under ORC Sections 711.05 or 711.10. Under this provision, platted major subdivisions are not subject to the new regulations. The statute also provides that nothing in ORC Chapter 5552 limits the authority granted in the subdivision law to provide for the proper arrangement of streets or other highways in relation to existing or planned streets or highways or to the county or regional plan (ORC 5552.03(A)).
2. Access management regulations do apply to subdivisions subject to approval without a plat under ORC Section 711.131. Under this provision, minor subdivisions or lot splits are subject to access management regulations. In addition, the act amends ORC Section 711.131 to specifically require the designated representative of a county or regional planning commission to assure that the lot split is not contrary to access management regulations as a part of the minor subdivision approval process (ORC 5552.03(B) and 711.131). The law also specifies that if the regulations apply to a minor subdivision and an access management permit request is filed pertaining to it, the access management permit must be approved or disapproved within the 7 day approval period for a minor subdivisions under ORC 711.131 (ORC 5552.10).
3. Access management regulations do apply to any parcel of property that is not subject to regulations adopted under ORC Chapter 711. Under this provision of the act, the regulations apply to parcels of land that are not defined as subdivisions under ORC Section 711.001, which generally means parcels over five acres in area.

Because both counties and township are granted the same general enabling authority to adopt access management regulations, the new law includes special provisions to guarantee that either county or township regulations apply to county and township roads, not both. In addition, the act includes different provisions as it relates to urban townships. An urban township is a township that has a population in the unincorporated area of the township of at least 15,000 and has adopted a limited home rule government under ORC Section 504.02.

Following is a summary of the special provisions as they relate to non-urban townships in Sandusky County:

Non-Urban Townships

Non-urban townships may not adopt township access management regulations if the county has adopted county access management regulations. Essentially, county regulations take precedence over non-urban township access management regulations. A non-urban township may initiate the process to adopt township access management regulations if the county has not taken action to initiate the process of adopting county access management regulations before October 24, 2003. In addition, if a county initiates the process to adopt county access management regulations before October 24, 2003, but does not actually adopt the regulations within one year of that date, a

non-urban township may then proceed to initiate the process to adopt township access management regulations (ORC 5552.02 (A) and (C)).

In addition, if a non-urban township adopts township access management regulations in the absence of county regulations and the county subsequently adopts regulations, the township's access management regulations become void one year after the effective date of the county regulations. Likewise, the county regulations apply to such a township one year after the effective date of the county regulations (ORC 5552.02 (C)).

The law also allows the board of township trustees to adopt a resolution to make the township access management regulations void on an earlier date. If the township chooses to take this action, it must notify the board of county commissioners of the earlier date by sending a certified copy of the resolution to the commissioners (ORC 5552.03(C)).

Adoption of Access Management Regulations

Initiation of the Process

The process of adopting county access management regulations may be initiated in the following ways:

1. The board of county commissioners may adopt a resolution on its own initiative proposing the consideration of access management regulations.
2. The board of county commissioners must adopt a resolution proposing the consideration of access management regulations if the county engineer certifies to the board a request in writing.
3. The board of county commissioners must adopt a resolution proposing the consideration of access management regulations if a majority of boards of township trustees in the county certify resolutions to the commissioners requesting the county to do so.

Adoption of Resolution to Proceed

The first step in the process of adopting access management regulations is for the board of county commissioners to adopt a resolution proposing the consideration of county access management regulations. This resolution shall include a request for the county engineer to draft proposed regulations.

Appointment of Advisory Committee

Upon adopting the resolution to proceed, the county commissioners appoint an advisory committee to review the county engineer's proposed access management regulations. Mandatory members of the advisory committee include:

- a) The county engineer or his designee.
- b) Registered surveyor in private practice.
- c) Representative of the homebuilding industry.
- d) Licensed realtor.
- e) Representative of the county or regional planning commission.
- f) Professional engineer with expertise in traffic engineering.
- g) Representative of the Metropolitan Planning Organization (MPO), where applicable. An MPO must be designated under Section 9(a) of the Federal Highway Act of 1962.
- h) At least three township trustees from the county. The county township trustees and clerks association select the three trustees.
- i) A member of the board of county commissioners, and,
- j) Any other persons the board of county commissioners chooses to appoint.

Preparation of Access Management Regulations

After adoption of the resolution to proceed, the county engineer prepares a set of proposed regulations. When the engineer has completed his proposal, he must send a copy to the members of the advisory committee. This transmittal shall include a notice of the time and place of the initial meeting of the advisory committee. The meeting must take place within 30 days of the completion of the proposed regulations. At the initial meeting of the advisory committee, the committee shall select one member to serve as the chair of the committee.

Transmittal to Board of County Commissioners

The advisory committee then reviews the engineer's proposed access management regulations, and within 270 days after the initial meeting of the advisory committee, must provide the board of county commissioners with the following:

1. A copy of the regulations originally proposed by the county engineer.
2. The advisory committee's recommendations about each of the proposed regulations.
3. Any other recommendations about the access management regulations the committee considers appropriate (ORC 5552.04).

Public Hearings by the Board of County Commissioners

Prior to adopting the regulations, the commissioners must hold at least two public hearings. The hearings may be held at either a regular or special session of the board. Notice of the public hearings must be published in a newspaper of general circulation in the county once a week for at least two weeks immediately preceding the hearings. The notice must include the date, time and place of each hearing. In addition, copies of the proposed regulations shall be made available to the public at the board's office, and if the county engineer is proposed to administer the regulations, in the county engineer's office. In addition to this notice, at least 30 days before holding the public

hearing, the county commissioners must send a copy of the engineer's proposed regulations and a copy of the advisory committee's recommendations, and a request for written comments to:

1. The board of township trustees of each township in the county.
2. The ODOT district deputy director.
3. The MPO, where applicable.

At a minimum, the following local professional associations must be represented:

- ✓ Homebuilders
- ✓ Realtors
- ✓ Professional surveyors
- ✓ Attorneys
- ✓ Professional engineers

Adoption of Access Management Regulations by County Commissioners

Prior to adoption of the access management regulations, the commissioners must consider the county engineer's proposed regulations and all comments on the regulations. After the public hearings, the commissioners have discretion to adopt any or all of those proposed regulations, or they may decide not to adopt any access management regulations (ORC5552.06). If the commissioners adopt the regulations, they become effective on the 31st day following their adoption, unless another date is indicated in the regulations.

The commissioners must then publish a notice of their adoption in at least one newspaper of general circulation in the county within 10 days of the adoption of the regulations. The notice must include a statement that the regulations are available at the board's office. A copy of the adopted regulations must also be provided to the ODOT district deputy director (ORC5552.09).

Finally, the same general adoption procedure applies when a board of township trustees adopts access management regulations. In this case, a county commissioner serves on the township advisory committee and the county engineer also has significant involvement in the process of adopting township access management regulations.

Administration of Access Management Regulations

The law specifies that the board of county commissioners must designate the county engineer to administer county access management regulations. In the event the county engineer declines to administer the regulations, the commissioners may designate another person or a planning commission to administer the access management regulations. If a board of township trustees adopts access management regulations, the board may administer the regulations or may appoint the township clerk or any other person to administer them, with the advice of the county engineer (ORC 5552.10).

Appeals and Variances

County access management regulations must include the designation of a board to hear and decide appeals and variances. This appellate board may be a separate new board provided for in the regulations or it may be some other board, including the board of county commissioners, acting in an administrative capacity. If the board of county commissioners serves as the appellate board, appeals of its decisions would thus become subject to appeal under ORC Chapter 2506 to the court of common pleas and would not be subject to a referendum.

The appellate board would hear appeals where it is alleged that the administrative official of the access management regulations made an error in the enforcement of the access management regulation. The appellate board would also hear requests from applicants for variances from the regulations. Variances to the regulations can be granted if not contrary to the public interest and where, owing to special conditions, a literal enforcement of the regulations will result in unnecessary hardship, and so that the spirit of the regulations will be observed and substantial justice done (ORC 5552.07).

Provisions Related to Access Management Permits

An access management permit must prescribe permitted uses and limitations on the permit. Once a permit is issued, no modifications or amendments to the permit are possible. If an applicant wants changes from a previously approved access management permit, the applicant must apply for a new permit. The new permit then supercedes the original permit (ORC 5552.08).

Fees For Permits

The act specifically authorizes the county to charge a fee for the processing of a permit. The amount of the fee, however, may not exceed the actual cost of administering the access management permit (ORC 5552.08).

Amendments to Access Management Regulations

Once a board of county commissioners has adopted access management regulations, they may be amended. ORC 5552.06 specifically requires county commissioners to hold two public hearings on the proposed amendments and to make the amendments available for review at the board's office. It is unclear under the statute whether the advisory committee must be convened and whether various other provisions required when originally adopting regulations must be met. In such instances, we recommend that you get a ruling from the county prosecutor, however, full compliance with the procedures required for original adoption should eliminate any question (ORC 5552.06).

Promote Bicycle, Pedestrian, and Other Alternative Modes of Transportation

Meets Transportation Objectives: 10

Across the country, bicycle and pedestrian tourists are making significant contributions to local economies. In some areas, the contribution made by these non-motorized tourists can be as much as tourists using motor vehicles. Studies show that where bicycle and pedestrian tourism is fostered and promoted, and where investments are made in bicycle and pedestrian facilities, the economic impact may be even greater. A thriving tourist industry, in turn, can attract and revitalize businesses, create jobs, and increase public revenue.

Trails and greenways are very popular among vacationing bicyclists and pedestrians. Visitors appreciate and often return to communities that provide places for bicycling and walking safely removed from busy roads and streets. Trails, similar to the North Coast Trail, offer scenic recreation opportunities suitable for a wide range of ages and abilities. Where popular trails exist, lodging providers can encourage extended stays among their guests, thereby increasing occupancy. For residents, investments in trails and greenways can increase property values and improve the overall livability of a community.

Bicycle tourism can often take place with little or no investment in facilities or infrastructure normally required to sustain motor vehicle-based tourism. In areas of the county where networks of lightly traveled back roads and hospitable accommodations are prevalent, on-road bicycle routes can provide visitors and residents alike an ecologically sound alternative to cars and motor coaches for sightseeing and recreational traveling purposes. Bicycle tourists attracted to such regions are important customers for bed and breakfasts, eateries, and service providers in even the smallest of communities.

The examples below show how local zoning ordinances can be amended to require more attention to the needs of pedestrians and bicyclists.

- ⇒ Subdivision Layout: Residential subdivision layout (including Planned Unit Developments) should provide safe, convenient, and direct bicycle and pedestrian access to nearby (within ¼ mile for walking and 2 miles for bicycling) and adjacent residential areas; bus stops; and neighborhood activity centers, such as schools, parks, commercial and industrial areas, and office parks.
- ⇒ Cul-de-Sacs: Cul-de-sacs have proven to be effective in restricting automobile through-traffic; however, they can also have the effect of restricting bicycle and pedestrian mobility unless public access ways are provided to connect the cul-de-sac with adjacent streets. Trail connections between cul-de-sacs and adjacent streets should be provided wherever possible to improve access for bicycles and pedestrians.
- ⇒ Future Extension of Streets: During subdivisions of properties, streets, bicycle paths, and sidewalks should be designed to connect to adjacent properties that are also likely to be subdivided in the future, so that a secondary system of roads and

sidewalks develops over time. When subdivisions are built with only one outlet to a main thoroughfare, the result is heavy traffic congestion and difficult intersections for both motorists and pedestrians.

- ⇒ Inclusion of Bicycle and Pedestrian Facilities in Piecemeal Development: This is intended to ensure that pedestrian and bicycle facilities are included in projects that occur in a piecemeal fashion. For projects in which only part of the land owned by the applicant is proposed for development, a sketch plan showing the tentative locations of streets, bicycle facilities, and public access ways should be submitted for the entirety of the land owned. “Stub-outs” should be constructed for bicycle and pedestrian facilities on-site, and the next construction phase should be designed to connect to this network.
- ⇒ Internal Bicycle/Pedestrian Circulation for Commercial and Business Developments: Adequate provisions should be made for bicycle and pedestrian circulation between buildings and related uses on development sites (the Americans With Disabilities Act also contains regulations for on-site circulation).
- ⇒ Lot Coverage: Zoning codes should be amended to raise the allowable lot coverage along bus routes to encourage intensification of uses and more efficient use of land in these areas.
- ⇒ Parking in High-Density Residential Developments: In some high-density residential areas, existing regulations require off-street parking, and at the same time, a reduced lot frontage. This results in homefronts that primarily consist of garage doors. Ordinances should be modified to allow for rear-lot access (alleyways) or other innovative solutions in these areas.
- ⇒ Parking Reductions: Parking codes should be modified to allow for a “reduced parking option” for developments that are located on bus routes and which provide facilities that encourage bicycling and walking. In general, shopping center parking lots should not be designed to handle volumes that occur only once or twice per year, but rather more typical volumes.
- ⇒ Compliance with Design Standards: Bicycle and pedestrian facilities should be designed to meet local and statewide design standards.

Promote and Encourage Walking, Pedestrian Mobility and Safety

Meets Transportation Objectives: 4,9

To encourage pedestrian mobility within Sandusky County's several communities, there are several factors that should first be addressed. The following 12 items are recommended tips for communities to utilize to promote walking and pedestrian traffic:

Provide Continuously Linked Walkways

To accommodate people walking, and many with disabilities 5' (1.5 m) or greater width sidewalks or walkways with a separation from the roadway should be provided on both sides of all urban area roadways. A separation of 6 – 7' (1.8 -2.1 m) is recommended to meet proposed Americans with Disabilities Act Accessibility Guidelines (ADAAG). In residential neighborhoods, there should be sidewalks along streets and walkway easements where appropriate. At least 36" (1 m) of the walkway should be clear of obstructions. Consideration should be given to clear sight distances. The walkway environment should include landscaping and streetscape features such as shade trees and plantings, trash receptacles, street vending machines, utility poles, lighting fixtures, benches, transit stop shelters, directions to places of interest and kiosks.

Codes and regulations as well as implementation and enforcement practices should promote street furniture placement so they do not impede or complicate movement for pedestrians. Wide walkways should be constructed in high pedestrian activity generator areas, such as retail centers, government buildings, other employment centers and transit stops and stations.

Make Intersections Pedestrian Friendly

To provide street crossings, which accommodate the physical abilities of pedestrians, intersection design and mechanisms should be clear and understandable. The maximum crossing width should be 48' (14.4 m). Slip lanes, medians and bulbouts should be used effectively to reduce street crossing exposure, especially at complex intersections. Roadway geometry should dictate turning speeds of motorized vehicles to acceptable levels [below 20 mph (32 km/hr) on left turns, and below 10 mph (16 km/hr) on right turns]. Adequate sight triangles should be provided. Left turns should be minimized, if not eliminated, in downtowns and in other places of high volume pedestrian use. Pedestrian signalization, for a 3.5' (1 m) per second walking speed, should be provided.

Comply with the Americans with Disabilities Act (ADA)

To aid in the independent mobility of people who cannot drive, special accommodations should be provided. Two (2) curb ramps should be constructed on each street corner. One (1) curb ramp should be constructed at each side of marked mid-block crossings. Or, as an alternative treatment, the crosswalk area should be raised to curb height. When pedestrian demand signals are used independent call poles should be appropriately placed at the top of each ramp on all signalized intersections.

All corners should have adequate sight triangles and sufficient depth for controller box, signal pole and other hardware to be located out of the walk zone. Audio/tactile pedestrian signal systems should be used in areas with large elder and disabled populations. Minimum walk speeds [3-3.5' (.9-1 m) per second], sidewalk cross slopes, grades, drainage inlets and minimum widths should be considered in constructing new and retrofitting existing walkways.

Use Good Signal Placement

To forewarn both pedestrians and motorists of the hazard potential of left turns into crosswalks, signals should be placed for optimum visibility during critical movements. Box span, mast arm, and corner pole signal placements should be used. Diagonal span signals should not be used because they cause motorists to look up rather than in front and to the side and pedestrians cannot see them at some intersections. Corner pole signals with left turn arrows are recommended to keep the driver focused on the pedestrian entry and travel path, especially in dense urban commercial areas and near schools. If appropriate at mid-block crossings, controls should be placed on the median particularly where the ADAAG is relevant or large numbers of elderly pedestrians travel by foot.

Provide Illumination

To provide clear visibility of pedestrians approaching intersection crosswalks at night, the approaches to and all street corners should be well illuminated. All intersection lighting should illuminate the crossing and waiting areas and/or create backlighting to make the pedestrian silhouette clearly visible on approach. All commercial, entertainment, school and other pedestrian traffic generating corridors and spaces should be well illuminated.

Simplify Median Crossings Simplify Median Crossings

To allow pedestrians to cross roads with a sense of safety, raised medians should be constructed to provide refuge. Modern roads often have signalized intersections spaced 1320' often have signalized intersections spaced 1320' (.4 k) apart. All current 5 and 7 lane cross sections should be retrofitted (.4 k) apart.

All current 5 and 7 lane cross sections should be retrofitted with raised medians. Landscaped medians should be built in existing as well as in new roadways in tourist zones, and entertainment and school districts, residential neighborhoods and in other high volume pedestrian areas zones.

Promote Pedestrian Safety Near Schools

To provide safe access for children on their approaches to schools, school sites should have specific pedestrian access points. Roadway geometry should minimize travel speeds to 15-20 mph (24-32 km/hr). Slowing or calming vehicle traffic may be accomplished with raised crossings, traffic diverters, roundabouts, on-street parking and other land use and engineering designs. School sites should have pedestrian access points that do not require crossing points with vehicles. The approaches to all schools

should have curb and gutter sections except in unusual circumstances. Streetscapes should assure maximum sight distance on all access, crossings and intersections. School zone designations for speed limits should be an element of a comprehensive “circulation” plan, which also includes crossing guard programs and identification of “safe routes” for bicycling and walking to school.

Eliminate the Backing of Vehicles

To eliminate the potential hazard of crashes occurring as motorists back out of parking spaces, site plans should minimize walking in vehicle spaces. Side lot, on street and pocket parking should be included in zoning regulations to eliminate opportunities for backing over walkways. To reduce conflicts between pedestrians and vehicles in parking areas, center walkways in landscaped areas, “U” pattern drop-offs, and long throat driveways lined with sidewalks should be considered. Parking garages and lots should be given special design attention to protect pedestrians as they travel from automobiles to their destinations.

Utilize Access Management

To provide safe pedestrian access to commercial developments, pedestrians should have access ways independent from vehicle access to all commerce. Left turns into unsignalized commercial access driveways should be minimized. Commercial developments should have shared driveways from main roads. Side street driveways should be at least 230’ (70 m) from intersections. Commercial areas should have access ways into adjacent neighborhoods. Reduced building setback requirements should be used to encourage street side window-shopping and store front pedestrian street entries, with side lot and rear lot parking.

Utilize Auto-Restricted Zones (ARZs) and Parking Restricted Zones

To protect pedestrians in busy commercial activity centers, vehicle traffic should be restricted to specific spaces or times of day/night. ARZs should be developed or managed in downtown transit and pedestrian corridors and malls, ocean walks, greenways, river corridors, and rails to trails conversions. Limited parking and true cost parking measures should be instituted in downtowns and other high traffic areas. Transportation Demand Management (TDM) programs should be considered to provide incentives for pedestrianization.

Combine Walking with Transit

To increase travel distances for the pedestrian mode, access to and linkages with transit should be provided. One half-mile (1 k) radius should be used for acceptable walking distances between trip origins and transit stops (5 to 10 minute walk). Transit should be convenient, inviting and efficient. As a general rule, bus stops should be at the “far-side” of intersections so the bus does not become a visual obstruction for motorists and disembarking passengers trying to cross the street. All transit stops should be easy to reach by walkways, and be provided with shaded, visible, comfortable sitting/ waiting space set back from the walkways. Planning and zoning should encourage development that enhances transit use and its access.

Encourage “Walkable” Scale Land Use Planning

New and “in-fill” land use development should favor walking over driving. Traditional Neighborhood Design³ (TND), grid, Planned Mixed Unit Development (PMUD) roadway systems, Transit Oriented Development (TOD) designs, neighborhood schools, pocket parks and neighborhood stores should predominate land use codes, ordinances and regulations. Places to sit should be provided on retail blocks and along corridors where people walk throughout their communities. Businesses should front on sidewalks with parking located alongside or behind stores. Shared use parking lots should be emphasized wherever possible.

Update and Utilize the Capital Improvement Plan

Meets Transportation Objectives: 2,6,7,8

The Sandusky County Engineer’s Office utilizes transportation plan to highlight improvements to be made over a five year period. Reviewed annually for changes due to funding and other issues the plan highlighted improvements to the thoroughfare network and to the inventory of approximately 280 bridges that exist in the county. A map highlighted in the planned improvements to the county’s roads and bridges through 2006 is included in this chapter. It is also recommended that the County’s capital improvement plan meshes well with the State of Ohio’s Transportation Improvement Program (STIP) and any other transportation plans (county transportation “white paper”) that may exist within the region (TMACOG).

Because the improvement and widening of roads may increase development and additional land uses within any given area, it is important that planned improvements occur in a manner that promotes good land use principles, as well as assists in promoting future growth areas.

Promote Public Transportation Services

Meets Transportation Objective: 3

One important component within the overall framework of transportation is the provision of public transportation services. These services are offered throughout Sandusky County by “Transportation Resources for Independent People of Sandusky County” (TRIPS). TRIPS is administered by WSOS Community Action Commission, Inc., and governed by a transit board with broad community representation. TRIPS has a fleet of twelve vehicles, of which as many as ten may be on the road during busy hours.

Approximately sixty percent of TRIPS’ ridership results from contracts with county agencies. These include Sandco, the county MR/DD agency, and employment, training, and work experience ridership contracted by the county Department of Job and Family Services.

³ For more information on Traditional Neighborhood Design, please see the Housing chapter.

Public ridership accounts for the other forty percent. Currently, general public transportation is provided on a demand responsive basis, requiring 24 hours' notice. Vehicles will pick up riders anywhere in the county, operating from 6 a.m. until 6 p.m. Monday through Saturday. Rides within the City of Fremont cost \$1.00, rides into neighboring townships (Sandusky and Ballville) cost \$2.00, and fares are \$3.00 for rides reaching the remainder of the county.

It is not expected that TRIPS will vary from the demand responsive system, requiring advance reservations. However, plans call for the development of more structured provision of rides along the US 20 corridor, with immediate concentration on the western communities of Gibsonburg and Woodville, where demand is relatively high, followed by the Bellevue and Clyde areas. The enhanced coordination along this corridor will include an effort to place riders from nearby locations within the same vehicle ("trip sharing"). The focus on the US 20 corridor, and the immediate interest in the western portion of that corridor, results from the experience of the service provider with relatively intensive demand from these areas.

A Transportation Development Plan was developed in conjunction with a transportation consultant and the Ohio Department of Transportation. A final draft with recommendations was printed in April 2001. The selected alternative for TRIPS included a demand response transit service that operates, at least initially, Monday through Saturday from 6:00 a.m. until 6:00 p.m., providing "curb to curb" service and requiring a 24-hour advance reservation, and using the zone system described above.

A further recommendation of that plan involved providing a service that originates in Bellevue and Woodville simultaneously, providing bi-directional service at key times of the day. When the vehicles are in each of the major communities they will operate in the demand response mode, both picking up and dropping off persons at their destinations. Demand response trips with origins and destinations wholly within a specific community will have access to service when vehicles arrive both from Woodville and Bellevue. Set time schedules will be established for the times the vehicles depart from Woodville and Bellevue respectively. Time slots will also be established for both vehicles for offering demand response services in Woodville, Gibsonburg, Fremont, Clyde, and Bellevue on each trip through these communities. The selected alternative, with service provided from 6 a.m. until 6 p.m., Monday through Saturday, may involve the participation of the private sector to provide trips that cannot be offered by the coordinated transportation system, and to provide service between 6:00 p.m. and 6:00 a.m.

A five-year projection estimated that annual vehicle miles would increase from 253,217 miles in 2000 to 363,176 miles in 2005. Annual ridership would likewise increase, from 14,726 trips in 2000 to 32,400 one-way trips in 2005, a 120 percent increase in passengers.