Existing Conditions

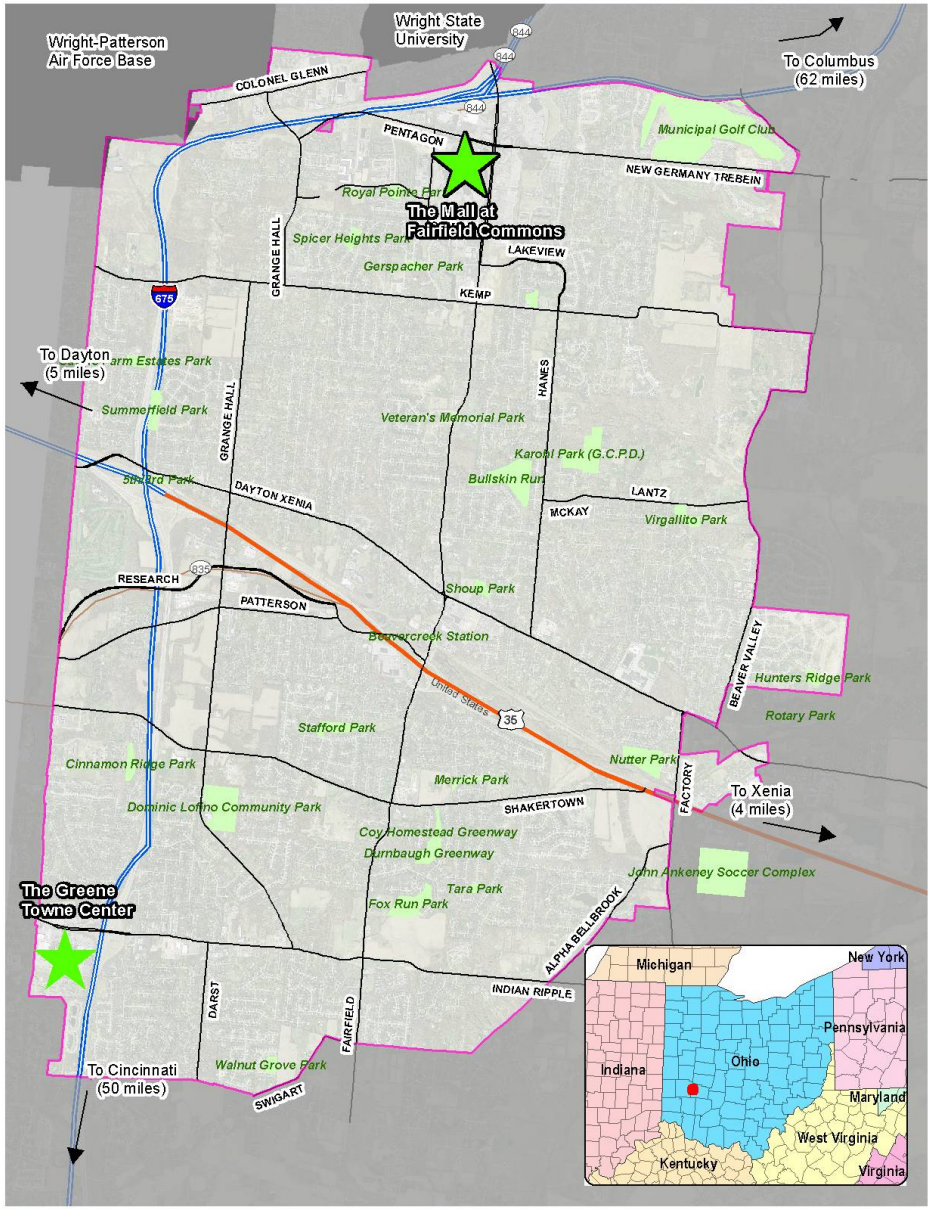
Community Overview

Beavercreek is a fast growing community located in the Miami Valley. The City encompasses over 26 square miles with a current population of over 45,000 people, and has become a benchmark for successful economic growth within the Dayton Region. While the Beavercreek area was first settled in the early 1800's, the City itself was incorporated in 1980.

Beavercreek is characterized by a spacious, rolling environment providing a very attractive setting for many outstanding residential neighborhoods. Beavercreek is considered one of the most attractive and desirable locations in the Dayton area offering a premier quality of life. Consequently, it has also been one of the fastest growing regional communities with a housing stock ranging from exclusive, custom-built homes to charming older neighborhoods.

The Mall at Fairfield Commons and the Greene Towne Center anchor two growing regional business destinations providing convenient shopping, dining and services for residents. Neighborhood shopping areas along Dayton-Xenia Road and Indian Ripple Road are also conveniently located to provide shopping and dining opportunities for residents within the community. Beavercreek is also home to numerous research and manufacturing firms engaged in defense technologies, aerospace, automotive components, electronics and other specialized advanced technologies. Many Beavercreek residents are current or former Air Force and civilian employees of nearby Wright-Patterson Air Force Base and its defense industry contractors serving this significant administrative command and research facility. Most recently, the Indu and Raj Soin Hospital, within the Mills-Morgan Medical Campus, has provided hundreds of jobs and as the project progresses, will provide an estimated 1,000 additional healthcare related jobs for the community.

U.S. 35 provides direct expressway access to downtown Dayton and Dayton International Airport from Beavercreek, and I-675 skirts the northern and western edge of the City, providing convenient access to nearby Cincinnati and Columbus Metropolitan Areas.

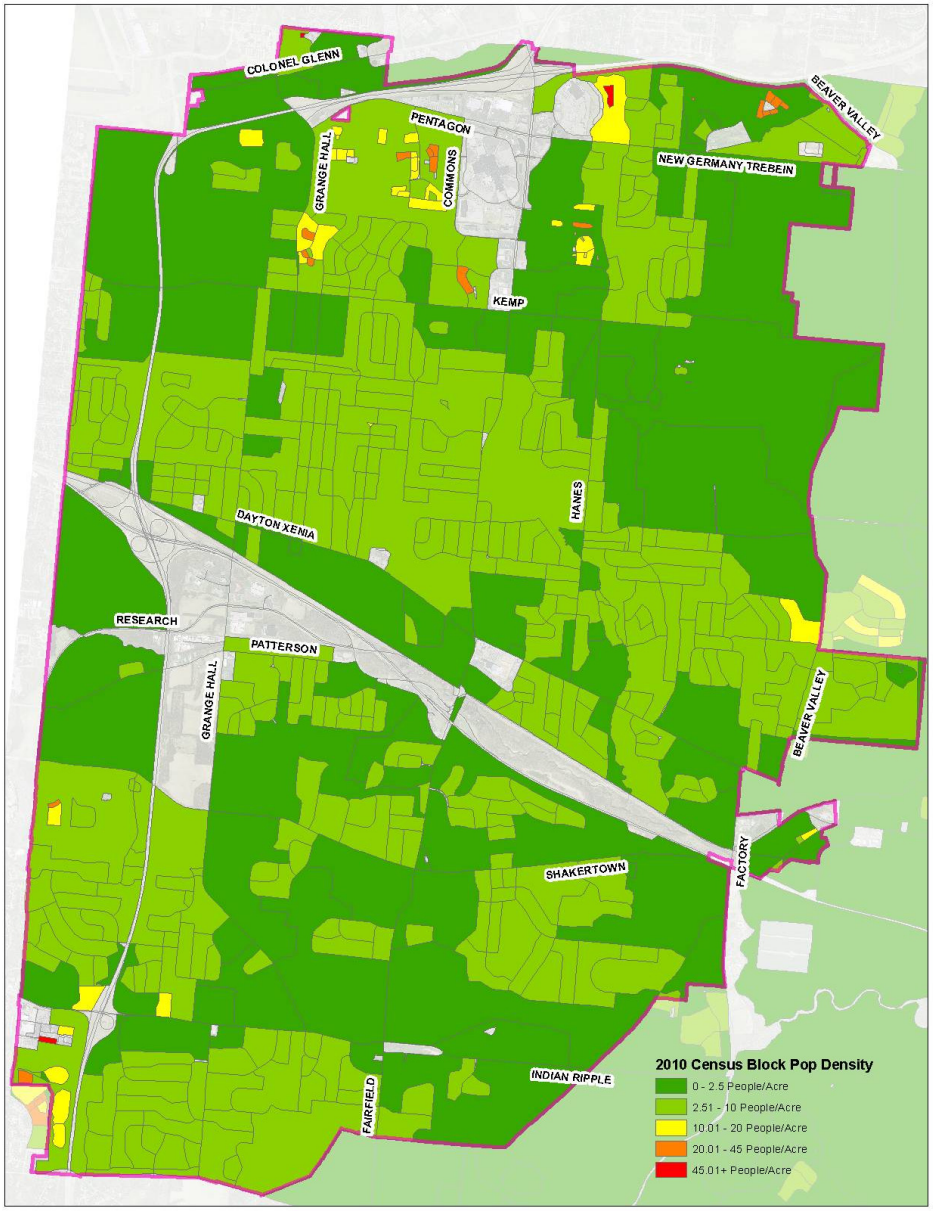


Community Overview *(cont.)*

Population (US Dicennial Census Data)		
Census	*Population*	*% Change*
2010	45,193	18.98%
2000	37,984	12.96%
1990	33,626	6.45%
1980	31,589	-
Population Change since 1980		*43.07%*

Housing Units (US Dicennial Census Data)				
Census	*Total*	*% Change*	*Occupied*	*Vacant*
2010	19,449	31.12%	93.55%	6.45%
2000	14,833	22.10%	95.31%	4.69%
1990	12,148	19.21%	96.25%	2.21%
1980	10,190		-	-

Density	
Approximate Land Area: 26.4 mi^2	
Persons Per Square Mile (2010)	1,711.86
Persons Per Square Mile (2000)	1,438.79
Persons Per Square Mile (1990)	1,273.71
Persons Per Square Mile (1980)	1,196.55

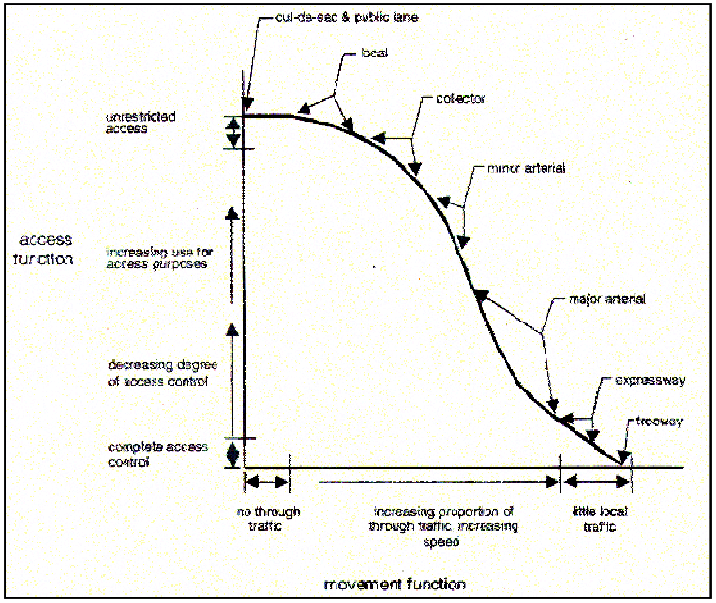


2010 People Per Acre (Census Blocks)

Roadways Functional Classification

A detailed functional classification system provides a hierarchical organization of roadways, streets and highways, which are characterized by their specific functions and the type and level of service which they are intended to provide. The system is classified by considering the relationship of the proportion of access with the proportion of vehicle movements. Expressways and freeways are at the top, allowing the most movement of the largest number of vehicles, while at the same time as having the least access from other roadways. On the lowest end of the spectrum are local streets, which typically have unrestricted access, but are not intended to move large volumes of traffic or traffic at high speed.

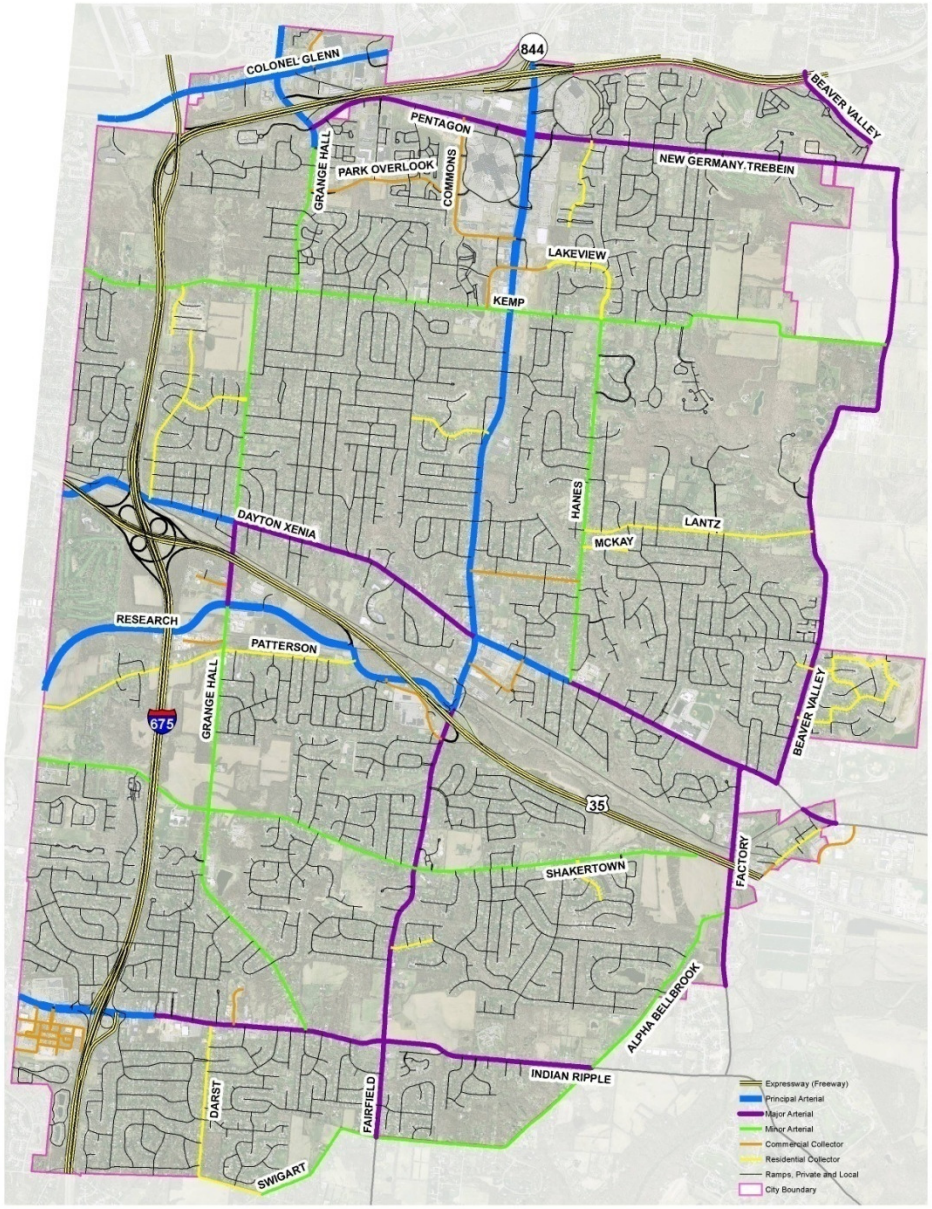
Providing appropriate levels of access, from the top to the bottom of the spectrum, will not only potentially lengthen the life of a roadway, but can also reduce congestion and improve safety across the entire system.



City of Beavercreek – Functional Classification Map

Road Classification	Miles
Expressways and Freeways	33.04
Principal Arterials	15.82
Major Arterials	17.97
Minor Arterials	19.21
Collectors	19.64
Private Roads	20.79
Entrance/Exit Ramps	14.11
Local Streets	189.37
Total	**329.95**

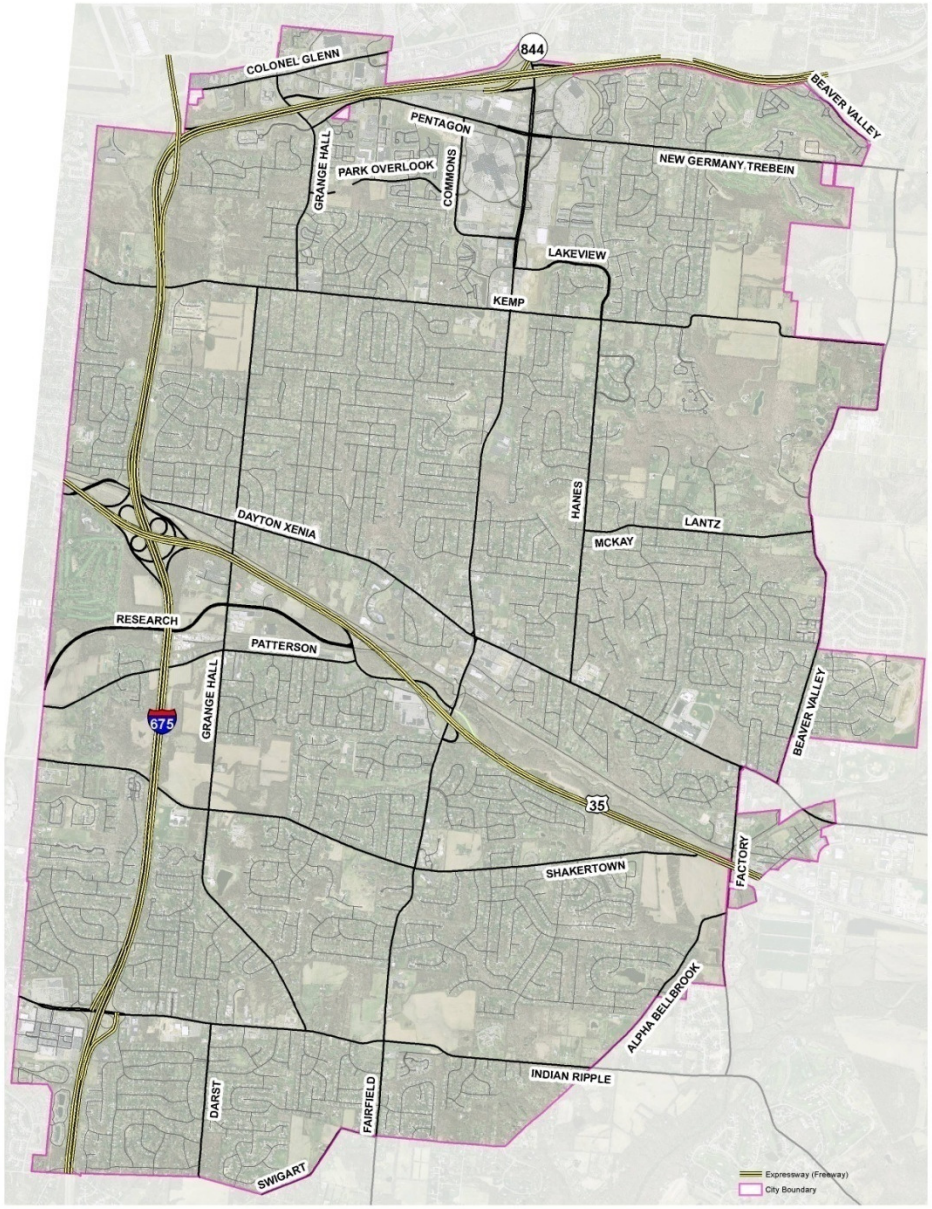
*Mileage includes those roads, such as Beaver Valley Road and Col. Glenn Highway, that are not entirely located within the City, but are adjacent to the City's boundary, and therefore have implications on future City thoroughfare projects.



Expressways/Freeways

This class of roadway is designed for the high speed movement of a variety of vehicular traffic. It is characterized by fully controlled access points with complete grade separations at intersections. Expressways may have four to eight lanes of traffic with an expected carrying capacity of 1,500 vehicles per hour per lane.

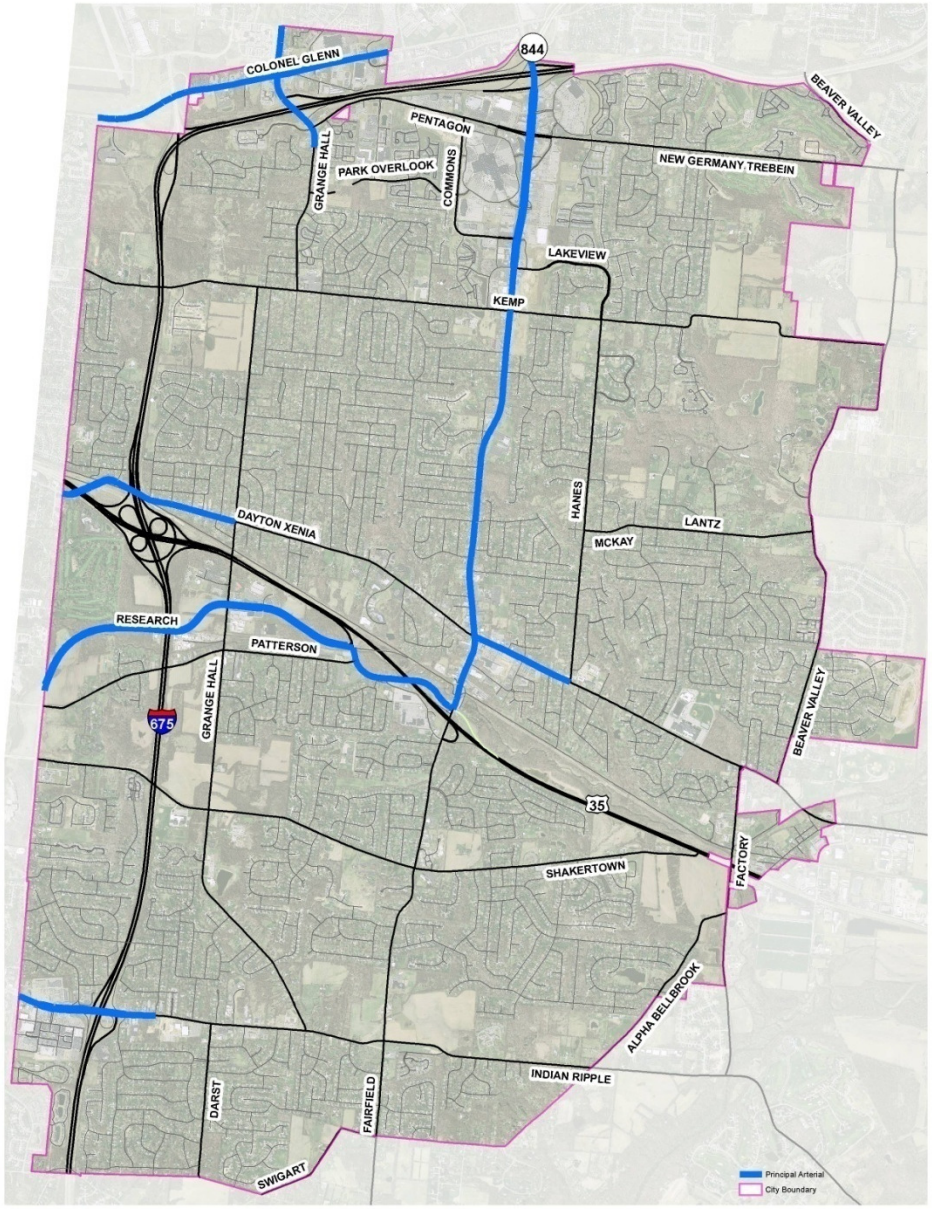
Expressways/Freeways	Miles
U.S. 35	10.05
I-675	22.57
S.R. 844	0.42
Total	**33.04**



Principal Arterials

This class of street brings traffic to and from expressways and other high speed interurban connectors. Principal arterials interconnect the principal traffic generators within the City as well as trips between different areas of the City and should be part of a reasonably integrated system. The typical trip on this class of road usually exceeds one mile. This class of road can carry from 15,000 or more daily trips.

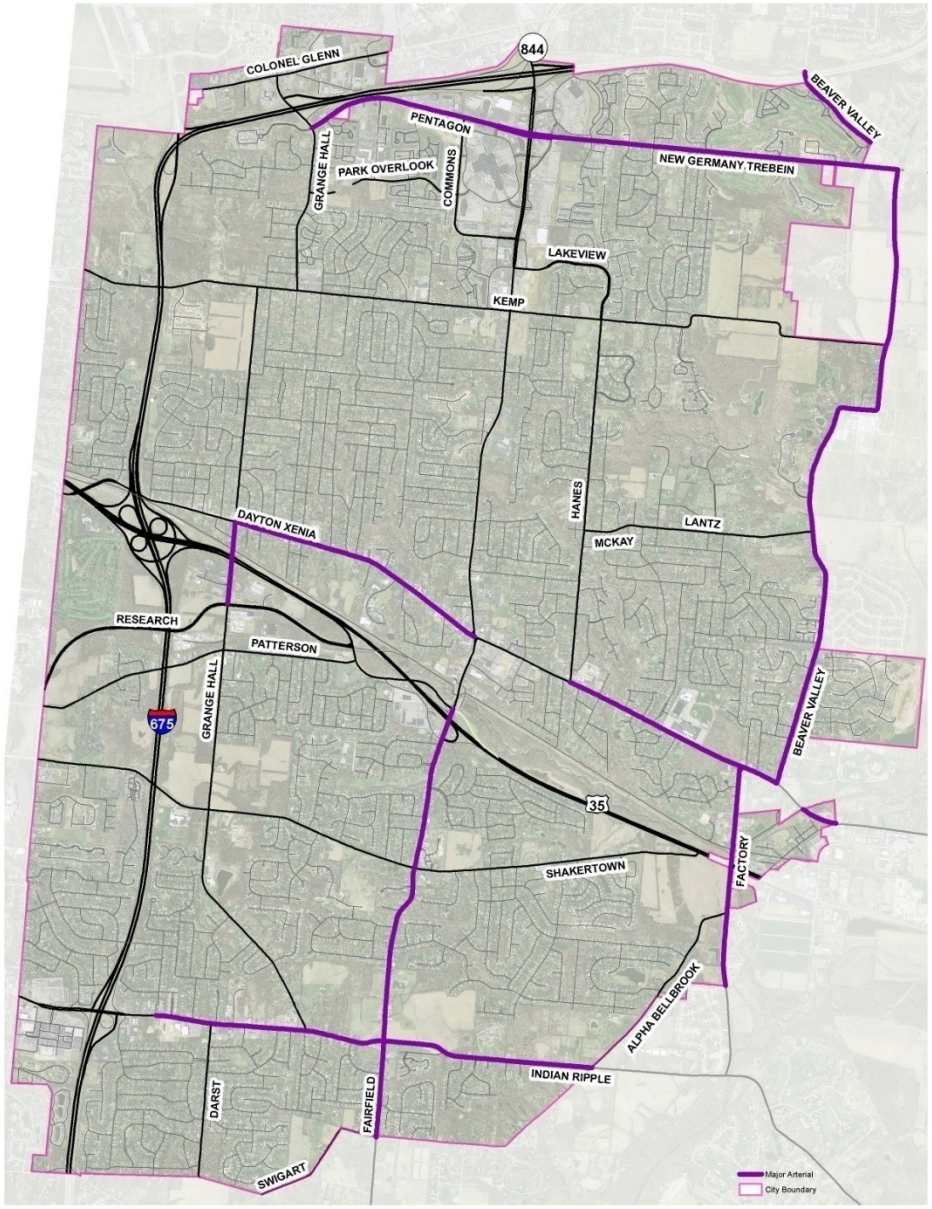
Principal Arterials	Miles
Col. Glenn Highway	1.92
Dayton-Xenia Road	1.96
Grange Hall Road	0.60
Indian Ripple Road	1.32
National Road	0.19
North Fairfield Road	4.98
Research Boulevard	4.85
Total	**15.82**



Major Arterials

This class of street has limited frontage facing individual commercial or residential properties. These roads are ideally served by the collectors and arterial roads with entrances and exits controlled. Speeds of 35 mph to 45 mph are typical for this class of road with daily volumes ranging from 10,000 to 15,000.

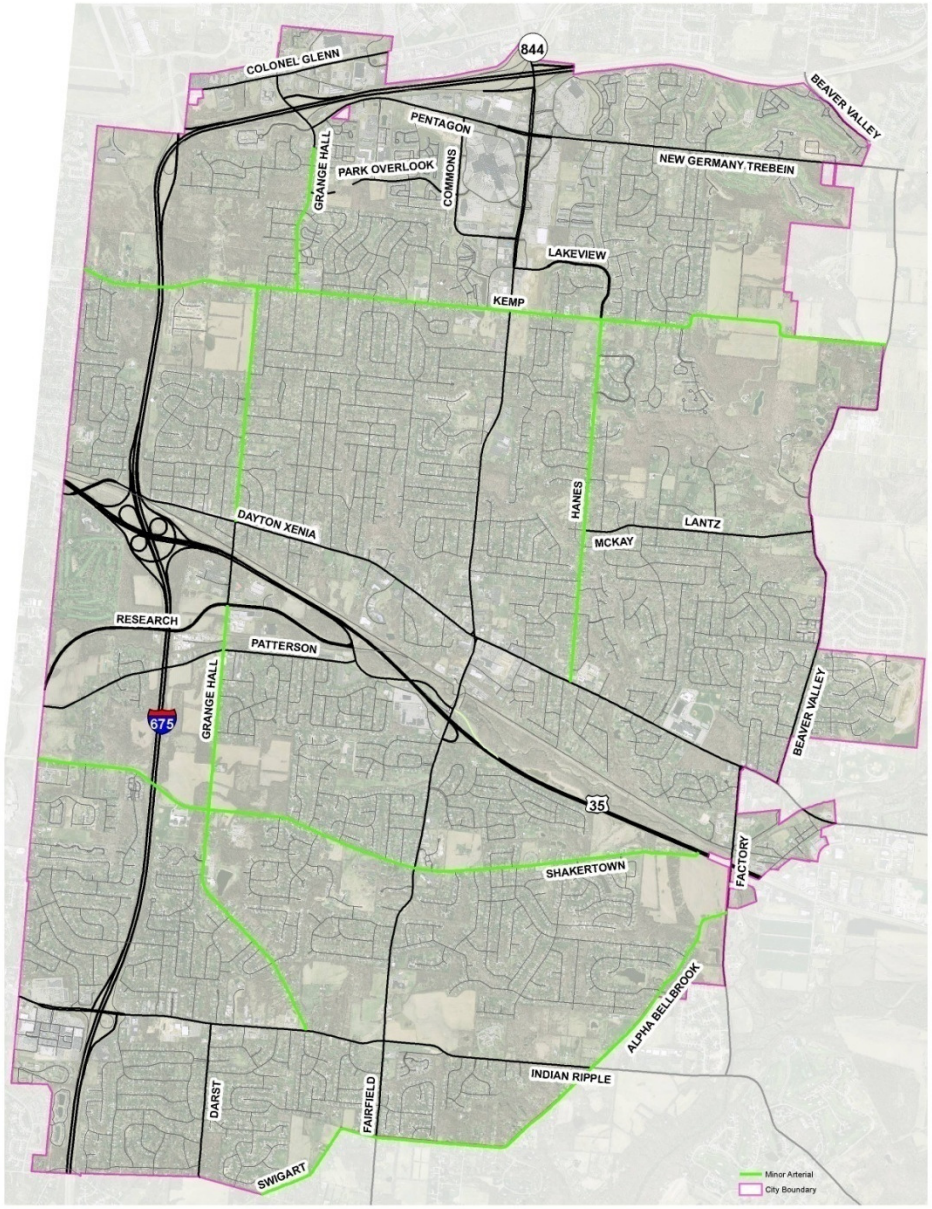
Major Arterials	Miles
Beaver Valley Road	4.45
Dayton-Xenia Road	2.89
Factory Road	1.30
Grange Hall Road	0.47
Indian Ripple Road	2.55
New Germany-Trebein Road	2.25
North Fairfield Road	1.99
Pentagon Boulevard	1.52
South Fairfield Road	0.56
Total	**17.97**



Minor Arterials

This class of street serves as a through connector. Residential properties should be serviced by side streets with these intersections employing a variety of traffic controls. These streets usually have carrying capacity of 2,000 to 10,000 daily trips.

Minor Arterials	Miles
Alpha-Bellbrook Road	2.14
Grange Hall Road	4.87
Hanes Road	2.10
Kemp Road	4.78
Shakertown Road	3.97
Swigart Road	1.35
Total	**19.21**



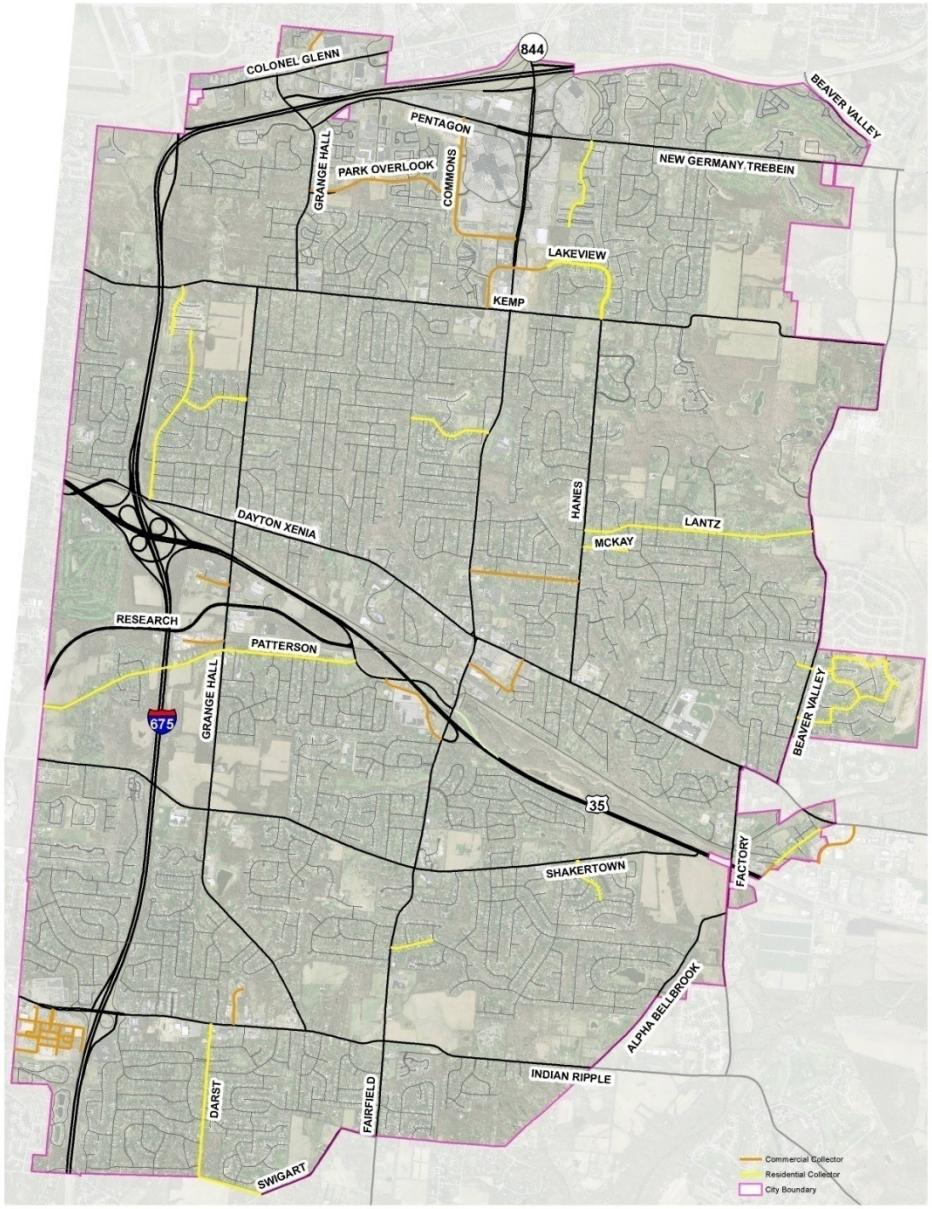
Collectors

Commercial Collectors

This low to moderate capacity class of street serves major commercial developments. Typically this class of road is short, but should have a long-term heavy duty weight capacity. Signalized access to arterial roads is usually recommended in the best interest of safety.

*Residential Collectors**

This class of street serves internal traffic movements within areas of the City, such as subdivisions, and acts as feeders to the arterial system. These streets are usually short, ½ mile to one mile, and are not designed to handle through trips. This class of street does not usually have signalized intersection control and handles between 500 and 2,000 daily trips, and are typically a minimum 36 feet wide.



* Several residential streets throughout existing mature subdivisions serve as a residential collector for that neighborhood, however do not meet the criteria set forth in the definition for residential collectors and are therefore not listed on the map as such.

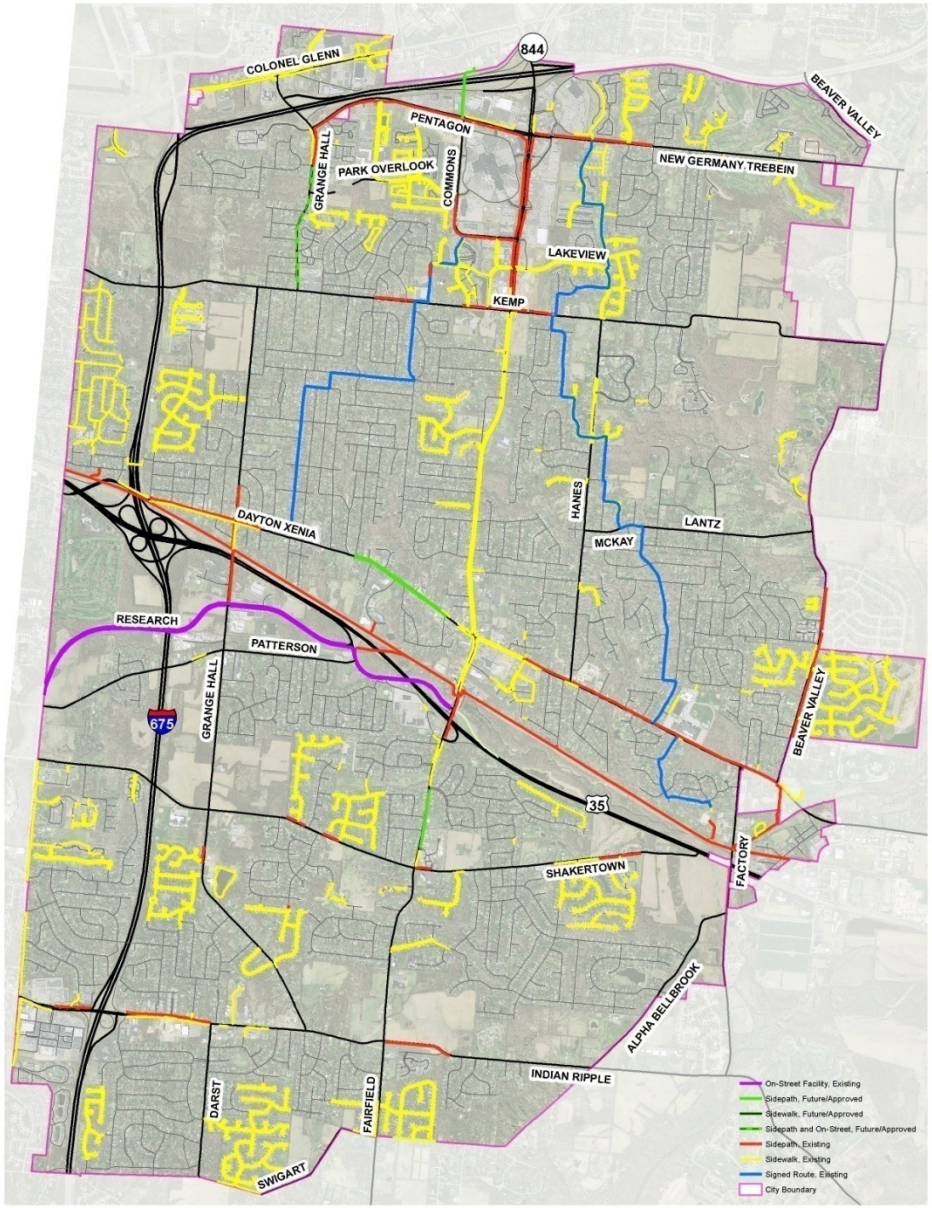
Non-Motorized Transportation Facilities

Non-motorized transportation facilities can be either on-street facilities, such as bike lanes, sharrows or widened shoulders, or could be off-street facilities, separated from the roadway altogether, such as sidewalks or multi-use paths. Ideally, there should be neighborhood facilities, such as 5-foot to 8-foot sidewalks or signed neighborhood connectors funneling pedestrians and bikers into community routes, such as the multi-use paths on Dayton-Xenia Road and Pentagon Boulevard, which in turn funnel riders onto regional routes such as Creekside Trail.

As seen on the map to the right, there are fragments of multi-use paths along Shakertown Road and Indian Ripple Road. These have been completed over the last several years in conjunction with localized roadway construction projects. As projects continue to progress, these gaps will ultimately be filled. Similarly, in residential neighborhoods, sidewalks have been constructed since the early 1980's as each individual project has progressed. As on going residential neighborhoods and commercial projects move to completion, the gaps in the neighborhood system will be completed.

There is a very limited number of on-street facilities in the City to date. In the two instances of on-street facilities are 5.49 miles of widened shoulders on Research Boulevard and 1.98 miles of sharrows Commons Boulevard.

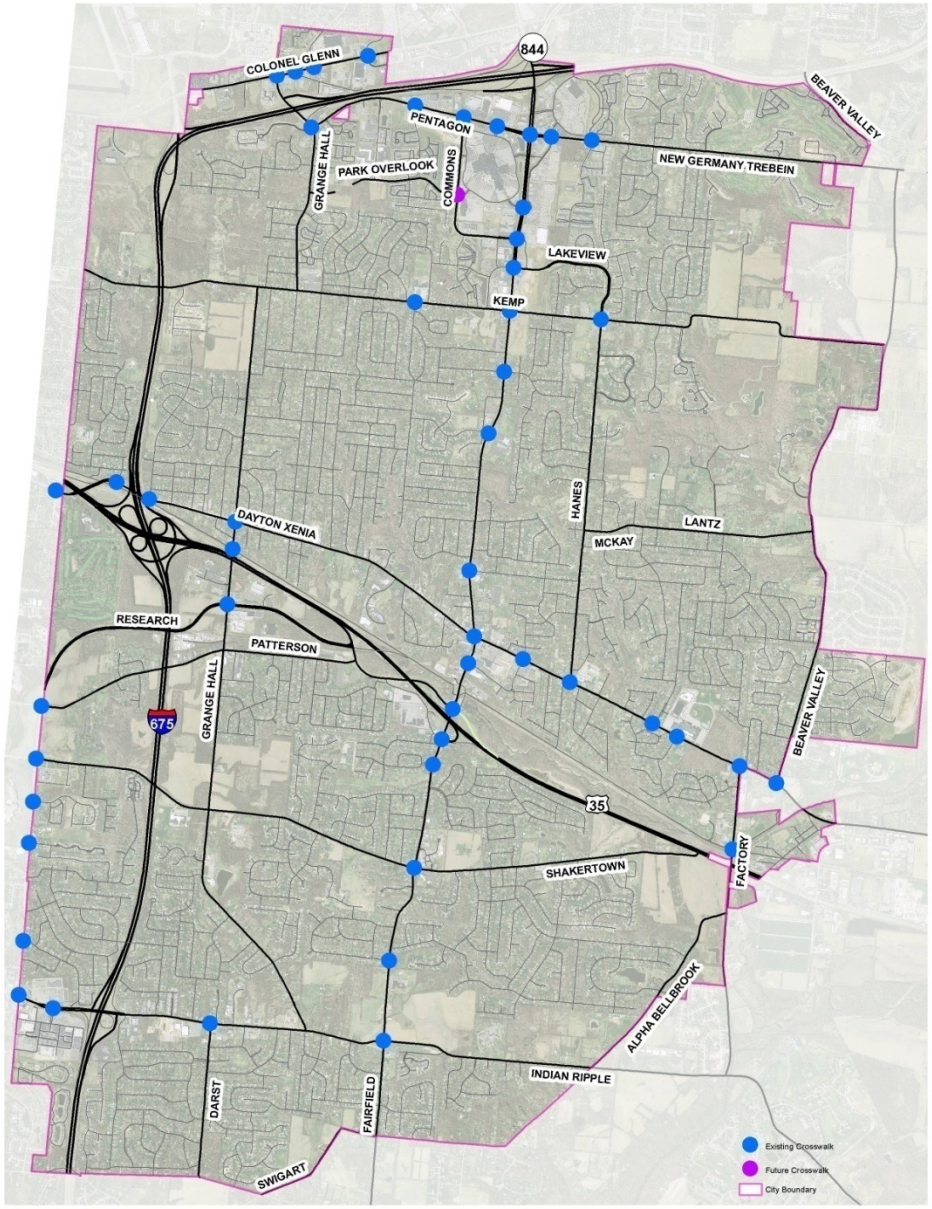
Non-Motorized Facilities	Miles
Sidepath	17.22
On-Street Facility	7.47
Signed Neighborhood Connector	8.37
Sidewalk	102.78
Total	**135.84**



Location of Crosswalks

Closer proximity to a signalized or designated crosswalk decreases the chances of jaywalking, making it more likely the pedestrian or bicyclist will use the crosswalk, and therefore making it safer for pedestrians/bicyclists.

Vehicle drivers are more likely expecting bicyclists or pedestrians within the vicinity of signalized crosswalks, which in turn makes them safer for pedestrians and bicyclists.



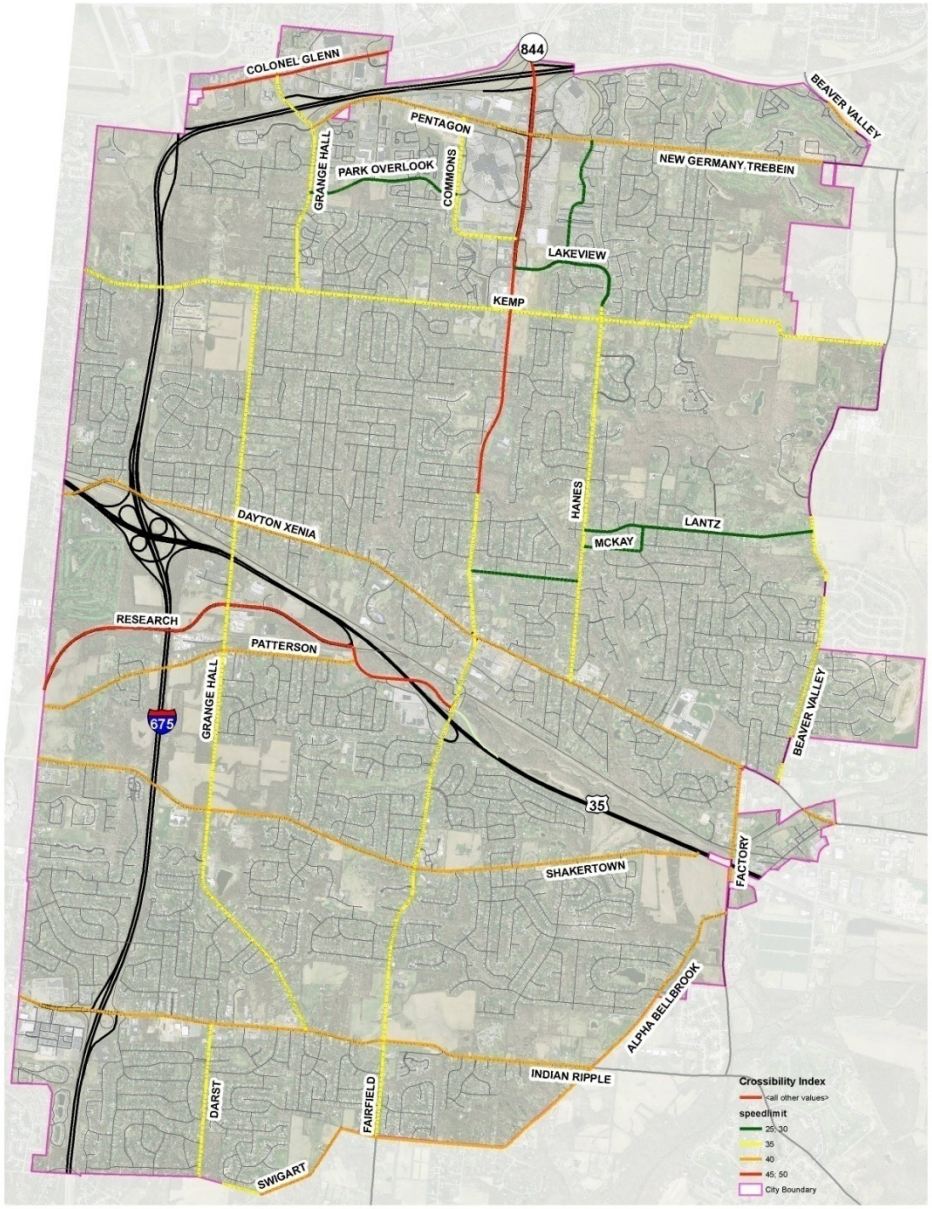
* "Future Crosswalk" indicates a crosswalk that is a current project, and construction is imminent.

Roadway Speed Limits

When a pedestrian or bicyclist is about to cross any given roadway where there is no signalized crosswalk, the greater the time between vehicles passing that location, the less likely the pedestrian or bicyclist will be involved with conflict with a vehicle. Slower speeds will, in general, give pedestrians or bicyclists more time to cross the road safely.

The average speed limit of all major roads in the City is 37.8 MPH.

Speed	% of Major Roads
25 to 30 MPH	9.3%
35 MPH	38.2%
40 MPH	40.1%
45 to 50 MPH	12.5%



Number of Lanes

- The less distance a pedestrian or bicyclist has to travel across a street, the less time the bicyclist will be in the travel lane, and therefore the safer the crossing is.
- The average number of lanes of all major roads in the City 3.12.

Number of Lanes	% of Major Roads
2 to 3	78.8%
4 to 5	16.6%
6 to 7	3.1%
8 to 10	1.5%

Access Management Regulations

POLICY FOR DRIVEWAY ACCESS TO ARTERIAL STREETS

Driveway access to arterial streets is of primary concern to the City of Beavercreek. The long term effects of poor access management are:

1. Erosion of roadway capacity.
2. High accident frequency.

To protect the general public, an arterial street driveway access control policy should be used in conjunction with existing subdivision regulations and the zoning ordinance.

DRIVEWAY ACCESS TO PRINCIPAL & MAJOR ARTERIAL STREETS. Residential driveway access to arterial streets should be totally controlled with access limited to residential or commercial collector.

DRIVEWAY SPACING. Driveways should be spaced a minimum of 200 feet (example for 35 mph arterial) apart to provide safe traffic operation on arterials during all periods (peak and off-peak) of the day.

DRIVEWAY ACCESS TO ARTERIAL (Other than principal & major). Future driveway access to an arterial road should be controlled with access from major residential or commercial development permitted only. The following condition should apply:

- Where such spacing cannot be readily achieved within a particular parcel, joint access with an adjoining property should be sought.

If officials are satisfied that sufficient attempts to secure joint access have been made and that joint access is still not possible, and access cannot be provided via another street, driveway access to the arterial may be granted if minimum corner clearances are met. However, this access should be limited to right turns in and out (left turns in and out prohibited).

CORNER CLEARANCE (example for 35 mph arterial). The minimum tangent curb length between a driveway and an intersection of the arterial with an intersection street should be 100 feet.

However, in no case should variations in corner clearances be permitted, since they are critical to safe, efficient intersection operation.

If the intersection is or is likely to be signalized, then traffic movements to and from any driveway within 125 feet of an intersection with a collector and 250 feet of an intersection with an arterial should be limited to right turns only.

PROPERTY CLEARANCE. The minimum distance between the property line of a parcel and the nearest edge of the nearest driveway to that property line should be 75 feet, except if the driveway provides joint access to more than one parcel. A joint access driveway may be located on the property line.

SIGHT DISTANCE. Adequate sight distance should be available at every driveway. Any movement for which inadequate sight distance is available should not be permitted. Joint access or access to another street should be sought.

MEDIAN OPENINGS. If and when medians are constructed on an arterial street, spacing between median openings should be at least 400 feet. The spacing may be reduced to 300 feet if a competent traffic study shows that the lesser spacing will still safely and efficiently accommodate left-turn movements to existing and projected future development in the immediate vicinity.

NUMBER OF DRIVEWAYS. Each parcel should be permitted access through one driveway, either on the parcel or as part of joint access. Additional driveways may be needed and provided under the following conditions.

1. If the daily volume using one driveway would exceed 5,000 vehicles (both directions).
2. If traffic using one driveway would exceed the capacity of a stop sign controlled intersection during one peak street traffic hour or the peak site traffic hour.
3. A traffic analysis shows that traffic conditions warrant two or more driveways.

In all cases, minimum spacings and clearances should be provided. For major traffic generators, it may be more appropriate to signalize certain driveway intersections than to provide more non-signalized driveways. Any driveway signals should be located to provide proper spacing of signals.

NUMBER OF LANES PER DRIVEWAY. To a great extent, the width for ingress movements will be determined by the turning requirements. Egress width will be determined by peak turning volumes. Generally, if egress left turns exceed 100 per hour, two egress lanes should be provided. Otherwise, one lane will be sufficient.

PROHIBITION OF TURNS. Left turns should be prohibited to and/or from driveways under the following conditions:

- Inadequate corner clearance (Prohibit left turns to and from).
- Inadequate sight distance (Prohibit left turns with inadequate sight distance).
- Inadequate driveway spacing (Prohibit left turns to and from).
- Median opening would be too close to another median opening (prohibition dependent on specific locations at adjacent openings).
- Parcel has signalized driveway on same arterial at which left turns can be made (prohibit left-turn movements provided at signalized driveways).
- Other capacity, delay, or safety conditions identified by agency make specific left turns detrimental to public interest.

Left-turn prohibitions are most desirably physically implemented with median channelization (if a median exists) or driveway channelization. Signing should also be installed as necessary. In cases where multiple driveways with limited turns are needed, right turns may need to be prohibited. Effective channelization should be provided for such driveways.

Access Management Regulations (cont.)

LEFT-TURN LANES. When the peak hour, left-turn warrant is met, left-turn lanes with the appropriate storage length should be provided.

RIGHT-TURN LANES. A right-turn deceleration lane should be installed at each driveway with an average daily volume of at least 1,000 vehicles and an average peak-hour inbound right-turn volume of at least 40 vehicles.

Where several successive driveways meet the above warrant or where driveway spacing is not adequate to avoid encroachment of the right-turn lane on another driveway, a continuous right-turn lane should be used. Continuous right-turn lanes should also be provided when 20 percent of the directional volume on an arterial (35 mph or higher) makes right turns.

PARKING. Curb parking should be prohibited on all arterial streets.

FRONTAGE ROADS (if applicable). All driveway access along arterials with existing or planned frontage roads should be provided to (future) one-way frontage roads. To gain temporary direct access to the arterial (prior to improvement of that facility and construction of the frontage road system), the petitioner should construct the section of the frontage road adjacent to his/her property. This frontage road section should be located where planned. Any right-of-way within 100 feet of the arterial centerline not previously dedicated should be dedicated prior to issuance of a temporary direct access (to the arterial) driveway permit.