

Transportation Element (2015)

Purpose

Overland Park strives to create a street and highway network that balances the need for a safe, efficient and well-maintained street network with the desire for environmentally compatible and visually pleasing design. The Transportation Element highlights the principal means used by the City to achieve this optimal street network.

Relationship with other Plan Elements

- Official Street Map:

The Official Street Map identifies the general location of the existing and proposed major streets and highways within the City for which building and setback lines are established in the City's Unified Development Ordinance. The Transportation Element describes the functions of the streets identified in the Official Street Map.

- Safe Bicycle Use Outreach Project (2015):

Vehicles share the roadway with bicyclists in Overland Park. The City of Overland Park Safe Bicycle Use Outreach Project was a coordinated and strategic effort to develop a comfortable, safe, and accessible network of bicycle facilities throughout Overland Park. The recommendations of the Plan call for the implementation of nearly 250 miles of on-street bikeways and nearly 15 miles of off-street paths and trails in addition to what the City has previously planned. Please refer to the Safe Bicycle Use Outreach Project to review how bicycles will utilize the roadways in Overland Park.

- South Overland Park Transportation Plan (2015):

The South Overland Park Transportation Plan study area limits are 159th Street on the north, Johnson/Miami County line on the south, Lackman Road/Black Bob Road on the west, and State Line Road on the east. The Plan includes detailed recommendations for the size and capacity of future thoroughfares based upon the expected level of traffic and land uses in the community. While the City will still acquire 120 feet for right-of-way within the study area, the plan suggests a number of roadways that will serve the needs of the community as two-lane roads based on the 2040 Traffic Model.

Street Network

Three main purposes:

- Provide access to property
- Provide for the safe and efficient movement of vehicular traffic
- Provide for the safe circulation of pedestrians and bicyclists

Hierarchy of streets from local to thoroughfare as shown in Figure 1 on page TE-20:

- Local:
 - ◆ Mainly two-lane streets
 - ◆ Primary function is access
- Thoroughfare streets:
 - ◆ For example, Metcalf Avenue and 119th Street
 - ◆ Primary function is the movement of traffic

Elements of a street:

- Pavement – driving surface which varies in width and types of materials used

- Curbs – define the edge of the street, provide for storm water drainage, and can assist in the application of traffic calming
- Right-of-way – all of the pavement area plus unpaved areas on both sides that are reserved for sidewalks, landscaping, bike/hike trails and utilities
 - ◆ Sometimes used for expansion of pavement
 - ◆ In public ownership rather than private ownership

General rules:

- The fewer the drives and intersections on a roadway the greater the amount of traffic it can handle and the higher the level of safety
- Locations near high traffic areas are more appropriate for nonresidential land uses
 - ◆ Easier access
 - ◆ Higher visibility
- Locations where the traffic volume and speed are lower are more suitable for residential uses

City Street Classifications and Standards

: cf h YI U M g f Y h X Y g [b U b X W b g f i W c b ' g U b X U F X g U b X U b n j U f] U h c b g ' h Y f Y c Z g Y h Y 8 Y g [b ' 7 f] h f] U 7 c b g f i W c b ' G d Y W Z W h c b g U b X G U b X U F X ' 8 Y U] g c Z G W c b % ' % \$ S & S ' c Z h Y C j Y f U b X D U F _ ' A i b] M d U ' 7 c X Y ' .

Six major categories of public streets:

- Local residential streets
- Collector/apartment streets
- Commercial and industrial streets
- Super-Collector streets

- Thoroughfare streets
- Freeways

In areas covered by the Downtown Form-based Code, an alternative system of street designations is in effect. Refer to that document for the specifics of those standards.

Local Residential Streets

Primary function - access to abutting property

- On-street parking permitted in most situations
- The design of local streets is meant to discourage traffic cutting through residential areas
- T-intersections are encouraged to reduce the number of potential conflicts when turns are made
- Pedestrian movements accommodated by sidewalks on one side of the street
- Bicyclists share the roadway with other vehicles

Street standards:

- A 28-foot street (back-of-curb to back-of-curb) within a 50-foot wide right-of-way
- Where existing streets are being rebuilt, standard street widths may be reduced and right-of-way may be less than 50-feet

Traffic handling capacity:

- Up to 2,000 to 3,000 vehicles per day

Collector and Apartment Streets

Primary function (collector street) - collect and move traffic generated by

a neighborhood to a thoroughfare street

- Generally spaced one mile apart and offset one-half mile from thoroughfares
 - ◆ Allows for an efficient level of service without causing disruptions by excessive amounts of traffic traveling through neighborhoods
- Pedestrians are served by sidewalks on both sides of the street
- In some cases, parallel multipurpose trails may be provided within or adjoining the public street right-of-way
- On-street parking on a collector generally is permitted if adequate pavement width is available, but is discouraged in some cases, even if sufficient pavement width is available
- Collector/Collector Intersections
 - ◆ T-type intersections can be used to:
 - Promote safety by reducing the number of conflicting turn movements at intersections
 - Reduce the amount of non-local traffic
 - ◆ Four-legged intersections are acceptable when a roundabout is used or in cases where a new-urbanist design is being pursued

Primary function (apartment streets) - serve multi-family residential areas.

- Apartment streets are located at irregular intervals as multi-family developments are dispersed throughout the City

Street standards (collector and apartment streets):

- A 36-foot street within a 60-foot wide right-of-way

Traffic handling capacity (collector and apartment streets):

- Up to 10,000 vehicles per day

Commercial and Industrial Streets

Primary function - ability to carry high amounts of car and truck traffic

- Traffic from commercial or industrial areas is to be diverted away from residential neighborhoods

Street standards:

- A 36- to 52-foot roadway within a 60- to 80-foot wide right-of-way, depending on the size of the development being served
 - ◆ Greater pavement thickness requirements than for collector streets

Traffic handling capacity:

- 10,000 to 25,000 vehicles per day

In effect, the classification of a street as either an Industrial, Commercial or Apartment street is determined by the zoning of abutting parcels of land. For any section of street with multiple abutting zoning classifications, the most restrictive classification shall apply.

Super-Collector Streets

Primary function - collect and move traffic generated by a residential neighborhood and/or apartment, commercial, industrial or office developments to a thoroughfare street

- Traffic volumes generally are higher than many Collector streets and speed limits may be higher than on typical Collector streets

Street standards:

- A 36- to 52-foot roadway within a minimum 80-foot wide right-of-way, depending on the expected traffic volumes and usage of the street
- ◆ Greater pavement thickness requirements than for collector streets

Traffic handling capacity:

- 10,000 to 25,000 vehicles per day

Thoroughfares

Primary function - move large amounts of traffic through areas of the City

- Located at one-mile intervals
- Direct driveway access is undesirable
- New residential lots are restricted from fronting on, or having direct access to, thoroughfares
- Median breaks are restricted to quarter-mile intervals along thoroughfares
- On-street parking is prohibited
- Pedestrians are served by sidewalks on both sides to the street
- In some cases, parallel multipurpose trails are provided within the public street right-of-way.

Thoroughfare standards:

- 80 to 200 feet of right-of-way to provide for medians, exclusive turn lanes, and four to six through-traffic lanes

Traffic handling capacity:

- Up to 50,000 vehicles per day on six-lane thoroughfares

Freeways

Primary function - carry high volumes of traffic to different sections of the metropolitan area with uninterrupted, high-speed movement of traffic

- Access is restricted to grade-separated interchanges
- The developers of some land uses consider the freeway an asset while others take measures to screen the sight of the freeway and the traffic noise
- Locations near interchanges are highly desired by businesses because of the high visibility and ready access to such sites
- Adjacent residential landowners often lobby government officials to build visual and sound barriers to lessen the noise and screen the sight of the freeway
 - ◆ Sound barriers are expensive and do not always meet residents' expectations, but are a way to lessen excessive freeway noise

Freeway standards:

- Up to 300 feet of right-of-way to provide for exclusive turnoff and merge lanes, and four to eight through-traffic lanes

Traffic handling capacity:

- Up to 120,000 vehicles per day on six-lane freeways
- Up to 150,000 vehicles per day on eight-lane freeways

The Street Network

Traffic Components

The Traffic Volumes Map that is produced by the City each year displays the amount of traffic using the network of collector streets, thoroughfare streets and freeways located within the City. Present and past maps can be accessed on the City's website, www.opkansas.org.

- The traffic counts shown are averages taken over a 24-hour period
- Not all street segments and intersections are counted each year
- The segments of I-435 and I-35 that traverse Overland Park have some of the highest traffic volumes in the Kansas City metropolitan area

Existing and Proposed Transportation System

Existing Street Network

The street network is shown on the Street Network/Official Street Map.

Overland Park has more than 991 miles of public and private streets and highways.

- Local residential streets have the greatest amount with 621 miles (62.6 percent of the total)
 - ◆ 495 miles (79.7 percent) of all local streets are public
 - ◆ 110 miles (17.7 percent) of all local streets are private. The private streets category includes those private streets and major drives serving single-family, duplex, multi-family, office and retail developments.
- Apartment, Commercial, and Industrial streets total 22 miles (2.2 percent of the overall total)
- Collector streets account for 115 miles of streets (11.6 percent of the overall total)
- Thoroughfares total 173 miles (17.4 percent of the overall total)
- Freeways comprise the remaining 48 miles (4.8 percent of the overall total)

Proposed Street Network

The Street Network/Official Street Map also displays the approximate location of future collectors and thoroughfares.

Overland Park has adopted as policy the spacing of thoroughfares at one-mile intervals.

- City policy is that thoroughfares are centered on section lines

Collectors are located approximately half way between the thoroughfares.

Interruptions to this spacing occur where freeways or major public uses appear such as I-435 and Johnson County Community College.

The location of thoroughfare and collector streets is intended to promote the concept of a neighborhood.

- A neighborhood is roughly one-square mile in size
- A neighborhood has well defined boundaries
- A thoroughfare is located on each of the neighborhood's four sides
- Two collector streets intersect in the middle, dividing the neighborhood into approximately four equal parts

Maintenance of the Street Network

Overland Park continues to have an extensive program for maintaining the existing public street network.

Each street is evaluated every two years using the PAVER pavement management system.

- The results from the street evaluations are used to determine the appropriate maintenance schedule for each street type

Thoroughfares are generally resurfaced every seven to ten years.

- Curbs and gutters are replaced as needed

Collector and residential streets are generally sealed every seven years and resurfaced every 25 to 30 years.

The construction, maintenance (including snow removal), and repair of private streets are the responsibility of the property owner(s).

Aesthetic Design

As a part of a federal Tiger Grant, bike/hike trails, extensive landscaping and other streetscape improvements have been installed along a section of Metcalf Avenue from 87th Street to College Boulevard. Those improvements work in concert with major enhancements to transit stops in that area to improve access to transit services.

Landscaping design guidelines have also been approved for various street corridors.

- In 1992, design guidelines were approved for use within and adjacent to the right-of-way of 135th Street
 - ◆ The guidelines are for use by both the private and public sectors

Design guidelines also are part of the adopted Greenway Linkages Guidelines and Plan.

The Overland Park Design Standards, adopted in 2009, and the Downtown Overland Park Form-based Code, approved in 2011, include provisions for extensive landscaping installations when new development projects are constructed.

Commuting Choices

The 2013 Census found that the vast majority of residents rely solely on their personal vehicle for commuting to their jobs. Alternative methods of transportation are, as a whole, very limited in the City and County.

Most employed City (85.9 percent) and County (85.8 percent) residents, 16 years or older, drive to work alone.

Only 6.3 percent of City residents carpool, compared to 6.7 percent of County residents.

City (0.5 percent) and County (0.8 percent) residents walked more to work than used public transit (0.5 percent of City residents and 0.4 percent of County residents).

The average commuting time for City residents was 20.8 minutes and 20.9 minutes for County residents, compared to the U.S. average of 25.8 minutes.

- The commuting times are only slightly changed from 1990 when the average was 19.1 minutes for City residents and 19.5 minutes for County residents.

Public Transportation

Johnson County Transit (JCT) provides weekday public transportation services for Johnson County as well as portions of Kansas City, Missouri; Kansas City, Kansas; and Lawrence, Kansas. JCT operates The JO, a fixed-route public transportation system with a total of 22 routes including:

- Twelve routes between Johnson County and downtown Kansas City, MO. Nine of these routes go through Overland Park. There are currently nine designated park-and-ride lots within Overland Park that provide access to various JO routes.
- The Metcalf-Plaza Route connects major destinations along Metcalf Avenue in Overland Park to the Country Club Plaza in Kansas City, MO.
- The 75th Street-Quivira Route connects portions of Overland Park to the Waldo area of Kansas City, MO, providing transfers to the popular MAX service provided by KCATA.
- The K-10 Connector provides commuter express service from KU-Edwards and Johnson County Community College in Overland Park to the University of Kansas and other destinations in Lawrence, Kansas.
- Five Local Links routes that provide curb-to-curb service within designated areas, and also have fixed stops at major residential complexes and shopping destinations. The JoFlex (Route J) operates Mondays, Wednesdays, and Fridays in the

area of Overland Park between Quivira, 75th, Lamar, and 95th streets.

- Reverse commute routes to Olathe on weekdays from both downtown Kansas City, KS and Kansas City, MO
 - One mid-day fixed route and two mid-day flex routes from Johnson County to Kansas City, MO, including downtown, the Plaza, and Waldo
 - Senior citizens, disabled individuals, and youth between the ages of 6 and 17 are eligible for special reduced fares.
 - The JO - Special Edition is a program administered by Johnson County Transit that provides weekday curb-to-curb service for disabled, elderly, and low-income residents of Johnson County.
 - ◆ Offers a reduced fare program which is based on an individual's monthly income
 - ◆ The Special Edition service area includes all of Johnson County north of 159th Street and east of K-7 Highway and Hedge Lane. Special Edition also travels into portions of Kansas City, Kansas and Kansas City, Missouri for medical trips only.
 - JCT also provides Sheltered Workshop Industrial Fixed Transportation (SWIFT), providing home-to-worksite trips for Johnson County Developmental Supports clients.
- **Metcalf-Shawnee Mission Parkway Transit Planning Study (2009)**
 - This study analyzed and presented options to evolve transit service along the Metcalf Avenue and Shawnee Mission Parkway corridors in the context as presented in Vision Metcalf, the West Gateway Vision Plan, and the East Gateway Redevelopment Plan. This study was a collaborative effort by Johnson County Transit (JCT), the City of Mission, Kansas, and the City of Overland Park, Kansas.

The results of this study led to this corridor being selected, along with other transit corridors in the region, for \$10.7 million in federal funding through the Transportation Investment Generating Economic Recovery (**TIGER**) Grant program. TIGER funded a variety of transit and pedestrian infrastructure improvements in Overland Park, Mission, and Roeland Park that were completed in 2013. Bus Rapid Transit (BRT) operating in mixed traffic was chosen as the Locally Preferred Alternative (LPA).

Traffic Management Measures

Traffic Studies and Traffic Model

The City of Overland Park monitors the existing street network and makes considerable use of traffic studies to determine future transportation improvement needs.

The Overland Park Traffic Model is used to evaluate the effects of future land use changes.

- Projections of traffic volumes and circulation can be used to help determine the future road improvement needs to serve the proposed land uses and intensities of development

Capital Improvements Program

The Capital Improvements Program (CIP) is used to schedule and finance the development of major physical improvements over a five-year time period. The transportation-related components of the CIP include:

- Streets
- Bridges
- Traffic signals
- Street lighting

- Sidewalks

The CIP is reviewed annually to keep it timely, to serve the needs of currently developing areas, and also to take into consideration the needs of areas likely to develop or redevelop in the future.

The transportation-related portion of the CIP focuses on:

- Meeting needs for roadway improvements in the higher-growth areas south of I-435
- Making street improvements determined to be necessary to support redevelopment efforts in the older parts of the City
- Widening existing thoroughfares from four to six lanes where traffic needs dictate the improvement.

Residential Street Program

Initiated in 1988 to upgrade over 40 miles of ditched streets to modern standards found throughout the rest of the City, including storm sewer systems, streetlights, sidewalks and similar pavement

A five-year, 1/8 cent sales tax increase to provide funding for the Residential Street Program was passed in November 1998 and renewed in April 2003 and April 2008.

The City's investment in high-quality public infrastructure has been matched by investment of property owners to upgrade their properties.

The residential street program was completed in 2010. The funds generated by the sales tax have been redirected to a new program, the Residential Street Reconstruction Program, described on the next page.

Residential Street Reconstruction Program

Started in 2011 to totally rebuild streets where the pavement has reached the end of its useful life.

If needed:

- Sidewalks will be replaced
- Storm sewers will be upgraded
- Streetlights will be replaced

In cases where enhancements, such as bike/hike trails, are contained in planning documents, those improvements will be included as part of a construction project.

Traffic Calming Program

The City has developed a traffic calming policy to help deal with complaints about traffic, particularly speeding, on residential and collector streets.

Traffic calming measures may include signage, speed humps, stop signs, increased police enforcement or roundabouts – anything that will reduce the negative effects of motor vehicles, alter driver behavior and improve conditions for residents.

Although funding has not been earmarked specifically for the City's traffic calming program, individuals may contact the City and request inclusion in the program.

OPTCS

Another traffic management tool used by the City is the Overland Park Traffic Control System (OPTCS).

- A computer system which coordinates 168 (approximately 65 percent) of the City's 258 intersection signals
- 222 of the signals monitored and adjusted remotely using the City's extensive fiber-optic network

- Compiles traffic information for use in managing the flow of traffic
- 113 closed-circuit television cameras monitor OPTCS intersection signals
- Nine Dynamic Message Signs (DMS) are available to provide motorist information and special event messages

Transportation Planning Goals and Policies

The transportation planning goals and policies as identified by the Governing Body, Planning Commission, and staff are addressed in the Goals section of the Comprehensive Plan's Plan Implementation text.

Summary

Significant dependence upon personal vehicles will likely continue at or near current levels into the foreseeable future. This dependence will require the City to continue to build and maintain an extensive street network. As the principal means of funding the construction of street improvements, the City's CIP will need to keep pace with increased land development, redevelopment, and the corresponding rise in traffic. The continued development of high traffic-generating land uses such as shopping centers and office buildings will require greater emphasis on traffic management tools by both the public and private sectors.

The goals and policies that are an integral part of the Comprehensive Plan are essential for achieving the ideal of an efficient street network. The continued evaluation of the transportation standards and traffic management measures discussed above are also important for achieving that ideal.

This page intentionally left blank.

Proportion of Service

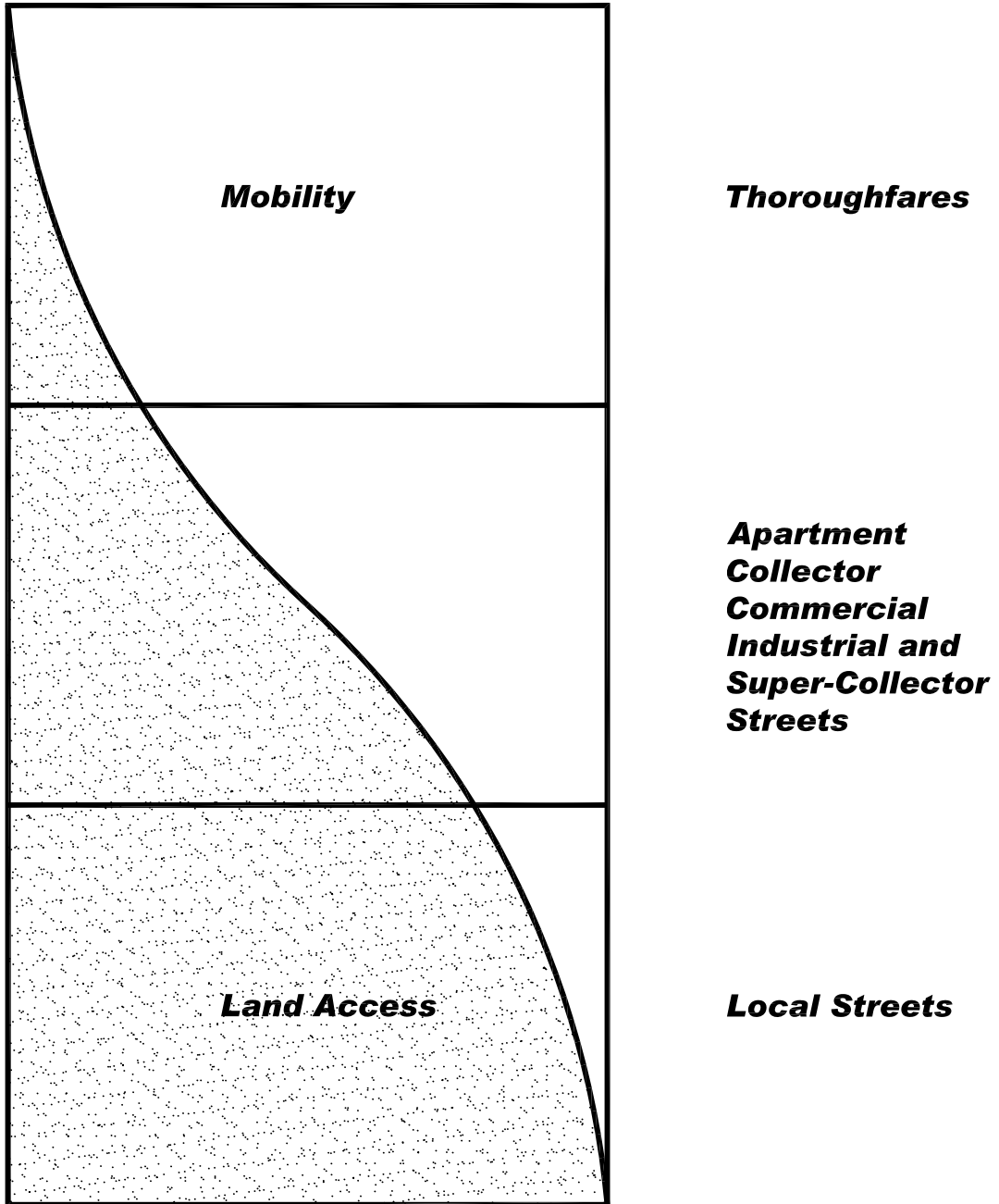


Figure 1
Objectives of the Transportation System

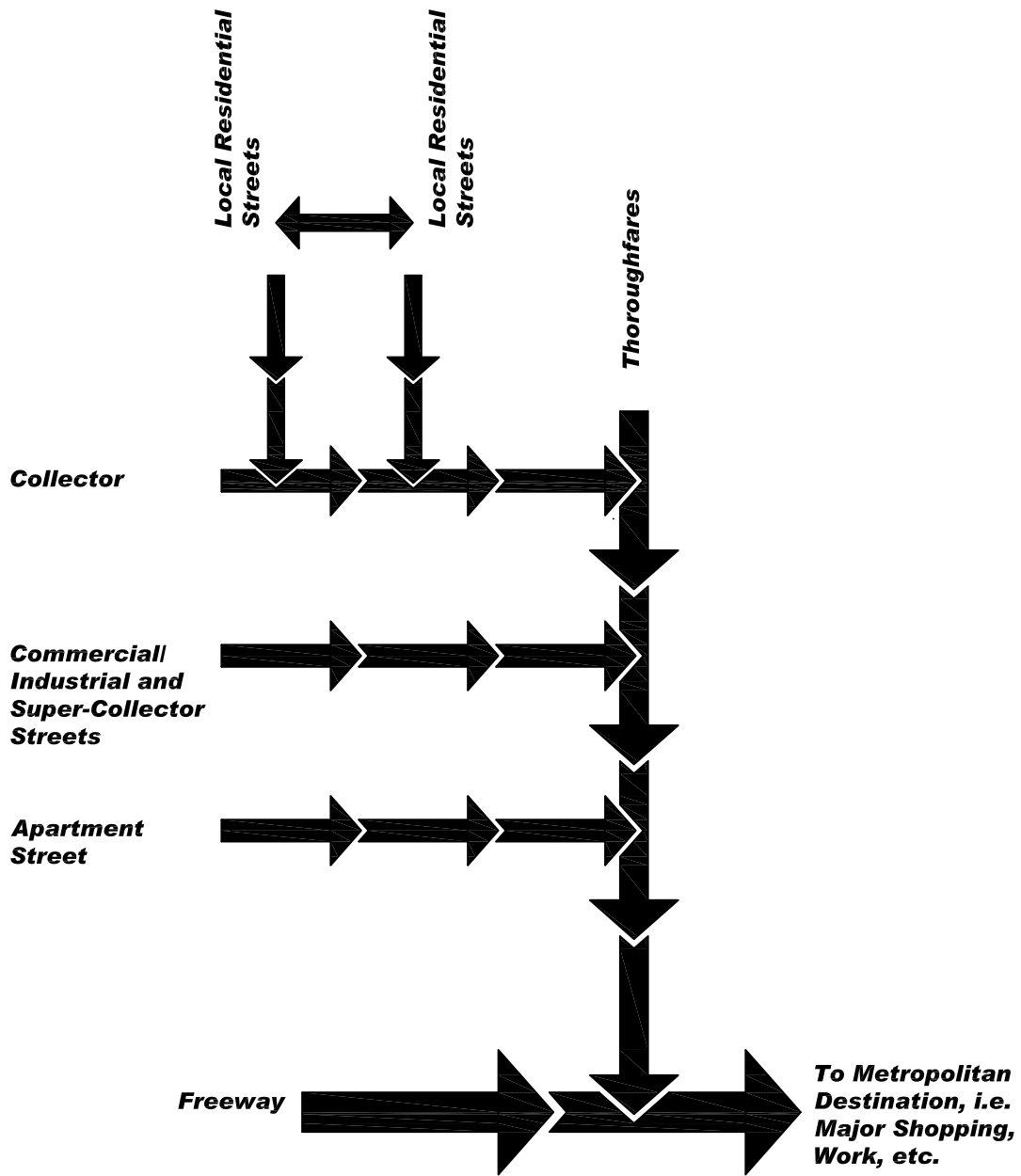


Figure 2
Street Functions