

## **Chapter 5: Streets and Highways**

### **Introduction**

Streets and highways define the structure of a community and connect places. People travel on these streets to perform daily chores: work, shop, and take recreation. Streets and highways will continue to be the major element for social and economic growth of communities. However, with an increase in urban population and dwindling financial resources, it is becoming difficult to construct new roads to accommodate additional trips. Maintenance, trip reduction, use of alternative modes, and transportation and land use nexus are the focus of streets and highways planning for the future.

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### **Goals and Objectives**

The goals and objectives adopted by the MPO for major roadways are listed below:

1. Maximize the capacity and efficiency of the existing major highways and streets to better handle traffic demands.
2. Improve major street and highway facilities to meet the needs of existing and projected vehicle traffic.
3. Provide for the efficient circulation to and from significant traffic generators into, out of, and within the metropolitan area.
4. Locate and design transportation facilities which will minimize traffic hazards.
5. Provide transportation facilities and services which foster desirable patterns of development and are compatible with surrounding land use patterns.
6. Develop and implement a phased program of low-cost improvements to enhance the efficiency of the system and encourage the conservation of energy.
7. Use the Intelligent Transportation System (ITS) and other technologies to improve the capacity of streets and highways.

The above goals and objectives lead to frame specific policies dealing with both long- and short-range road improvements that will enhance the overall system.

#### **Policy 1**

Develop and maintain the street classifications as roadway improvement decisions are made.

The MPO Functional Classification Street Map (page 3-6) in Chapter 3 shows the classifications adopted by the MPO. Streets and highways are typically classified according to their intended function in providing traffic movement. These functional classifications carry a set of design standards consistent with the type of service each facility is intended to provide. Criteria for designation of street and highway facilities include travel desires of the

public, access requirements for adjacent land use, and continuity of the system. Classifications used in the Jonesboro Metropolitan Area are identified in Table 5-1.

**TABLE 5-1: Functional Classification of Streets**

<b>Functional Class</b>	<b>Level of Mobility and Access</b>
Freeway	A limited access highway with no traffic stops and with grade-separated interchanges at major thoroughfares. Intended for high-volume, high-speed traffic movement between cities and across the metropolitan area. Not intended to provide direct access to adjacent land.
Expressway	A limited access highway with some grade crossings and signals at major intersections. Intended for high-volume, moderate- to high-speed traffic across the metropolitan area with minimal access to adjacent land.
Principal Arterial	A street primarily intended to provide for high-volume, moderate-speed traffic between major activity centers. Access to abutting property is subordinate to major traffic movement and is subject to necessary controls of entrances and exits.
Arterial	A street which augments and feeds the principal arterial system and is intended for moderate-volume, moderate-speed traffic. Access to abutting property is partially controlled.
Collector	A street which collects and distributes traffic to and from local and arterial streets. Intended for low- to moderate-volume, low-speed, and short-length trips while also providing access to abutting properties.
Local	A street for low-volume, low-speed, and short-length trips to and from abutting properties.

The MPO will provide assistance to the cities to develop Master Street Plans. These street and highway plans would provide an overall framework for making decisions on street improvements and extensions. The plans would identify the general location of future major transportation corridors and should serve as a general guide for securing street right of way and for determining appropriate zoning intensities. Precise locations of future facilities will be determined prior to right of way acquisition.

**Policy 2**

Establish a system of priorities for the upgrading of substandard streets, replacement of deficient bridges, and the extension of new streets.

Existing streets not constructed to an acceptable standard for their classification and function will pose continuous operational, safety, and maintenance problems until improvements are made. It is recommended that improvements to existing facilities be assigned priorities on the basis of the following factors:

1. Existing and projected traffic volumes.
2. Volume-to-capacity ratios.
3. Traffic crash history.
4. Peak-hour and off-peak hour travel speeds.
5. Structural condition.
6. Surface width.

Extension of new streets should be assigned priorities on the basis of their potential for serving new development and for relieving congestion on other streets without conflict with existing or planned land uses.

Based on these considerations, improvement priorities have been identified in the Project Listing section of the plan. These priorities were defined with the assistance of the Arkansas State Highway and Transportation Department.

### **Policy 3**

Preserve major street alignments by preventing development within corridors designated as right of way for future roads.

The Master Street Plan for each city will identify right of way requirements to prevent encroachment of subdivision development for present and future road improvements. Some flexibility to determine precise alignment is possible at platting and right of way acquisition, but the approximate routes of all major streets as shown on the plans should be adopted and respected by city and county governments as development proceeds.

### **Policy 4**

Locate major streets to foster desirable community patterns and minimize disruption of neighborhood integrity.

Land uses should be developed which are compatible with the functional classification of the adjoining streets, and streets should be developed which are compatible with the planned land uses. Through traffic should not use local streets, and local streets should be aligned to discourage through movements. Collector streets should channel traffic between local and arterial streets. Stop signs and other traffic controls will be employed where warranted to insure that collector streets do not become secondary arterials.

### **Policy 5**

Ensure that the type, intensity, and traffic generation characteristics of all developments bear a reasonable relationship to the street system.

Streets should have adequate capacity so that new development does not cause or compound traffic congestion. A transportation infrastructure impact study requirement is an acceptable method for assuring development compatible with the street system. A simplified traffic analysis, identifying the number of vehicle trips generated by the proposed development and the impact of these trips on the street network, should be conducted whenever an agency approval for a plat or rezoning is required. If this analysis indicates that traffic problems may occur, a detailed study should be conducted to determine the proper course of action. Off-site traffic improvements should be made by the developer if the

development is solely responsible for creating a situation which necessitates the improvements. In addition, the following criteria should be considered:

1. Planned streets and planned land uses should be compatible.
2. If a land use is proposed to be more intensive than the land use planned, studies should be done including:
  - a. Planned land use and the proposed change.
  - b. Planned and existing street capacities.
  - c. Identification of any deficiencies and possible solutions.
3. Rezoning or plat approval should be dependent upon the responsible agency agreeing where and how any deficiencies will be resolved.

### **Policy 6**

Minimize potential traffic conflicts by controlling the frequency and location of driveway access to principal arterial, minor arterial, and collector streets.

Each type of street is intended to perform a different function, and access should be regulated accordingly. Local streets are intended primarily to provide access to abutting property and should do so with minimal restrictions. Arterials are intended primarily to move traffic and cannot do so efficiently if there are too many access points which disrupt traffic. Flashing beacons along arterials for schools and hospitals slow down the traffic. Access to schools should be provided from collectors and local streets. Pedestrian signals may be installed on arterials and collectors to replace flashing beacons. Collector streets serve as a dual function of access and traffic movement and should have moderate restrictions on access.

### **Policy 7**

Discourage the use of arterial streets for short trips by utilizing secondary circulation systems where appropriate.

Major developments which generate substantial volumes of traffic should be served by an internal circulation system or parallel collector streets to supplement the major street system. Such secondary circulation systems provide alternative paths for vehicles making short trips. They also allow traffic to be more evenly distributed onto adjoining streets and reduce congestion at driveway entrances and exits.

### **Policy 8**

Provide off-street parking and loading facilities in sufficient quantity to accommodate vehicle volumes generated by the type and intensity of development.

Provide enough off-street parking bearing a reasonable relationship to the number of vehicle trips attracted by a particular development. The shared use of parking facilities should also be encouraged where two or more establishments are not normally open at the same time. Platting and subdivision regulations of municipalities may be amended to allow movement of traffic from one business to another without using the public street system.

### **Policy 9**

Discourage on-street parking along major streets.

On-street parking should be discouraged or prohibited along principal arterials, arterials and collectors. Consideration should also be given to removing existing on-street parking along major streets where congestion occurs and adequate off-street parking is available.

### **Policy 10**

Seek equitable and effective methods of financing street improvements.

1. Initial Right of Way (ROW) Acquisition and Improvements: ROW dedication at the time of platting should be sufficient to meet ultimate plan requirements. Improvements should be paid by the developer to provide streets that are sufficient to serve their needs and effectively become a segment of the overall street system.
2. Improvements to Existing ROW: The major sources planned to be used for a financially constrained plan are federal grants, state grants, and bonds approved by voters for various projects.
3. Agencies should consider enactment of a proportionate share impact fee requirement for new development consistent with state legislation.

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### **Policy 11**

Maximize the efficiency of the existing street system by implementing effective transportation control measures (TCM).

The construction of new streets is an expensive and lengthy process. TEA-21 stipulates that where the need for a major transportation investment is identified and federal funds are potentially involved, corridor or sub-area studies shall be undertaken to develop or refine the plan. These studies shall evaluate the effectiveness and cost-effectiveness of alternative investments or strategies in attaining local, state, and national goals and objectives.

The alternative strategies can be a combination of various TCM techniques: trip reduction, high-occupancy vehicle (HOV) lanes, traffic flow improvement, and flexible work schedules. These and many other TCM techniques can maximize the efficiency of existing streets.

### **Policy 12**

Employ ITS and other Transportation System Management (TSM) techniques for improving the capacity of the existing street system.

Signal optimization and coordination, ramp metering, and reversing lanes can increase the capacity of existing streets.