



MASTER STREET PLAN

2015

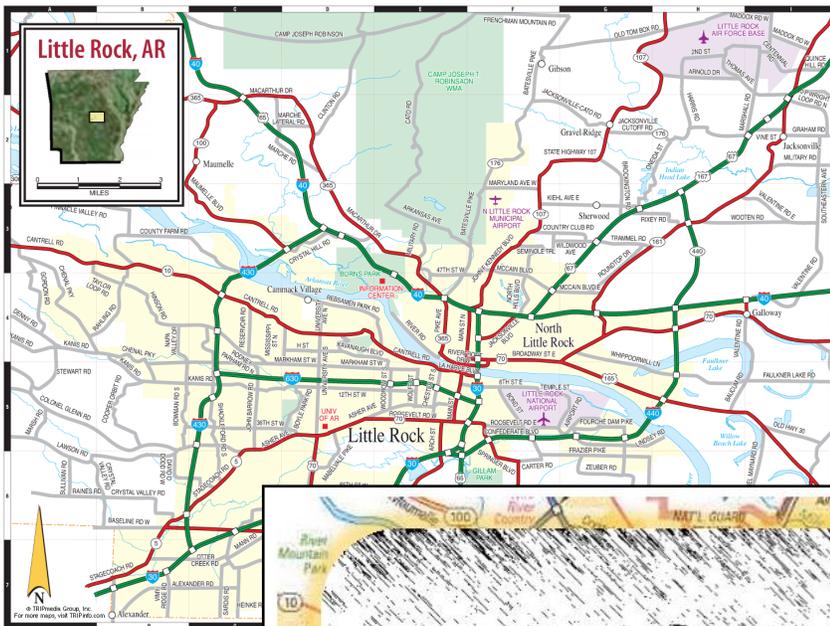


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INTRODUCTION

In accordance with Act 186 of 1957, the City of Little Rock (hereinafter the City) has developed and adopted a plan (hereinafter the Plan) to maximize the efficient, safe, and orderly flow of traffic through and within the City. The Plan (text and map) delineates a road system to service Little Rock's current and future needs, balancing physical constraints, the needs of the individual, and the needs of the general public to produce an efficient, safe, orderly, and economical road system for the citizens of Little Rock, Pulaski County, and the State of Arkansas.

The Plan serves as a framework for efficient growth and development of the City providing reasonable guidelines for street development. Among its purposes are to coordinate private and public sector development activities and to serve as a framework for funding improvements and additions to the street system, as growth demands.

No specific time frame has been applied to the Plan, since it is designed as a "response oriented" document. That is, street improvements will be made through the efforts of both public and private sectors as property is developed. The location of designated streets which do not physically exist at the time of the Plan's adoption are shown as general corridor locations. When an area develops which includes a proposed street, the Planning Commission will approve that street's specific location, taking into consideration both topography and economics. Further, the Commission may approve revisions to the stated standards and alignments at the time of subdivision, in order to address site-specific concerns and interests while assuring that the goals of the plan are achieved.

The City of Little Rock herein locates and/or classifies streets in accordance with an overall plan in order that traffic and circulation of people and goods may be convenient; that safety from traffic hazards may be secured; that congestion in the public streets may be lessened or avoided; that the process of development may be efficient and economical; and that the public safety, order, convenience, prosperity, and general welfare may be promoted.

SECTION 1: AUTHORITY, JURISDICTION AND ENFORCEMENT

- A. Any subdivider of land or applicant for rezoning, variance, conditional use permit, site plan or a building permit (herein referred to as applicant) review within the official planning area of the City shall conform to the Plan by indicating on any plats, drawings or surveys submitted to the City for its review, any street identified in the Plan which traverses or abuts the said property. Applicants for site plan review and building permit are not required to dedicate, mark, or construct any Class I bicycle path or route as described in the Plan. Where only a segment of a block is being developed with no connectivity, either existing or anticipated to occur within the next year, to any other bicycle lane or route, in such case signage and bicycle markings shall not be required for the street abutting the development along Class II Bike Lanes or Class III Bicycle Routes.

Where the said property abuts a street included in the Plan, the property owner shall dedicate one half of the required right-of-way as established in the Plan (except as provided below). In the event that the proposed centerline of the right-of-way does not coincide with the existing property lines resulting in a disproportionate amount of right-of-way required from one property owner, the City will reserve for acquisition any right-of-way in excess of one half of the total right-of-way which the property owner is required to dedicate. Where the street traverses the said property, the property owner will be required to dedicate the entire amount of right-of-way as established in the Plan.

Any right-of-way acquisition must be made within twelve (12) months from the date the final plat is filed for record with the Office of the Pulaski County Circuit Clerk or within twelve (12) months from date of final approval of the appropriate application. Acquisition shall be deemed as having been made when either an option to purchase is executed or suit to condemn is filed by the City; provided, however, no subdivider or other applicant shall be denied the privilege of having a plat or application approved solely by reason of the issue of reserved right-of-way unless the City determines and advises said subdivider or applicant within sixty (60) days from the date his plat or application is presented to the City that public funds for acquisition will be available within twelve (12) months from the date the plat or application is presented.

Where an Expressway, Principal Arterial or Minor Arterial intersects an existing or proposed Expressway, Principal Arterial or Minor Arterial and where an Expressway or Principal Arterial intersects a Collector street, the subdivider or applicant shall dedicate an additional 10 feet of right-of-way, measured from the centerline of the right-of-way, for a right turn lane. This additional right-of-way shall normally be 250 feet in length measured from the intersecting right-of-way. At such intersections, the intersecting right-of-way lines shall normally have a radius of 75 to 100 feet.

- B. Whenever the City is presented with a request for review of a plat or application involving any facility shown or described in the Plan, the City will determine the exact location and extent of right-of-way necessary for the provisions of said

facility, and shall require, in conjunction with the approval of the preliminary plat or application, the dedication or reservation of the right-of-way.

- C. No building permit shall be issued for the construction of any new building, or for an addition to an existing building, or for the moving of any building, on any lot or parcel of land which is traversed by or abuts any street facility indicated herein unless it has first been determined that the proposed structure would not lie within the proposed bounds of said facility.
- D. No lot or parcel of land which lies within the right-of-way of a proposed street shall be privately developed, nor shall any permit be issued authorizing such until the City shall have refused to execute a written option or to file suit for condemnation to acquire said area. Such refusal shall be given by the City within one year of the date such action is requested by the property owner; provided, however, no property owner shall be denied the privilege of developing such lot or parcel of land by reasons of the provisions of this ordinance unless the City determines and advises such property owner within sixty (60) days from the date of written request for action that public funds for the acquisition will be available within twelve (12) months from the date of request for such action by said property owner.
- E. No provision of this ordinance shall be construed to deny a permit for the remodeling, repair or maintenance of an existing building not involving structural alteration or for the use of said lot or parcel for purposes not involving the construction or relocation of buildings.
- F. The Plan of the Little Rock Planning Area shall be duly considered prior to action on any matter related thereto which comes before the Little Rock Planning Commission, the Board of Directors or any of the departments, agencies, boards or commissions of this City.

SECTION 2: ROAD CLASSIFICATIONS AND DESIGN STANDARDS

Criteria for Street Classifications

In order to provide a street network which will operate efficiently, it is important to recognize the dual traffic function of urban streets. The street system of any given community has two major traffic functions: moving traffic between dispersed points and providing access to individual properties. Because of the opposing characteristics of these two functions, no single road type can safely or efficiently meet all traffic needs. For instance, a major street designed for high speed and high volume traffic cannot function safely or efficiently if the flow is consistently interrupted by traffic movements onto and from adjacent properties.

A system of street classifications can help the City define those streets where land access is a primary function and those streets where traffic movement is the primary function. Some basic criteria are described, which if used for future streets will help maximize the traffic circulation system. The three basic criteria proposed for the Little Rock system are: function, spacing, and width of right-of-way.

1. Functional Criterion

The purpose of the functional criterion, insofar as new development is concerned, is to establish the street type early in the development process so that reasonable configuration or spacing can be established and so that each proposed road will have the specified right-of-way. Functional criterion is also used to base street design types along established roads. This criterion cannot always be applied to design in existing areas without conflict. In some cases a road may, due to the intensity of development or some other circumstance, operate at a different level than for what it was originally designed. In such cases, these streets might be modified to accommodate the additional traffic, traffic might be redirected to some other road, or a lower level of service might be accepted on the street.

It is important to note that in cases where traffic volumes on a street are greater than those for which it was originally designed, this circumstance does not necessarily require that the street be reclassified to a higher volume street type. The City, by establishing the street function, affects the intensity level of future land use activities that may be permitted along the street. For instance, the City Board will usually permit more intense activities to be placed along major streets and less intense activities along minor streets.

2. Spacing Criterion

The spacing criterion is important as a means for establishing a street system that will move traffic efficiently with the least amount of inconvenience to the motorist. Spacing requirements produce a street system on which the motorist can easily move through the City by minimizing major intersection points along those streets that carry high volumes of cross-town traffic. The higher the volume of traffic a street is expected to have due to its function, the greater the interval distance that street should have from a street of the same or higher functional classification.

The spacing criterion is also used as a means for limiting public and private expenditures for the construction of City streets. By establishing spacing, the number of more expensive major streets is limited by the interval distances. These distances are established according to street functions. For example, minor streets which have low volume traffic will be spaced more closely than those that function to carry high volume cross-town traffic.

Finally, the spacing criterion ensures a continuous network of roads. Without consistent spacing, traffic movement through and in the urban area would be difficult if not impossible. The spacing criterion ensures that major streets will not be over-represented in certain areas and under-represented in other areas, and that minor streets will adequately serve to channel traffic to and from these high volume streets.

3. Width Criterion

The width criterion is used to ensure that streets have an adequate capacity to handle expected traffic volumes. This criterion must go hand in hand with the functional criterion. For example, streets that move high volumes of traffic long distances require greater widths than streets that function to move traffic to, from and within residential areas.

Criteria for Design Standards

Street design standards promote traffic safety and continuity in street improvements and orderly development of the street system. Right-of-way widths accommodate adequate space for travel lanes plus adequate space between the curb of the traffic lane and the adjacent property line to allow for placement of pedestrian ways and utility lines for water, gas, electricity, telephones, cable TV, etc. The typical standards are presented in the following table and cross sections for each road classification. The Little Rock Planning Commission, with the advice of Staff through platting, site plan review and the conditional use permit processes may approve variances from design standards of the Master Street Plan. A variance in Design Standards of up to 10 percent does not require an amendment to the Master Street Plan. This variance may be approved by staff as part of the building permit process.

The City will require additional right-of-way when it is apparent that grade problems, horizontal curve problems, intersections, and similar conditions require greater rights-of-way to permit construction. The City also may require additional right-of-way and additional pavement width adjacent to parcels related to a particular development application, where increased traffic demands additional road capacity as determined by the City.

At the intersection of Arterial and Collector Streets, the City may require additional right-of-way if the anticipated turning movements warrant extra lanes. Each intersection will be reviewed on its own merits at the time of application to the City. The intersection right-of-way requirement shall generally not exceed 120' for a depth of 250 feet from the point of intersection of right-of-way lines. In cases of planned large-scale development, dedication of deceleration and acceleration lanes and additional right-of-way may be required in order to maintain the level of service. Sketches of turn lanes can be found on pages 24.

For cul de sac design standards, please see Subdivision Ordinance Sec. 31-202.

Traffic Calming

All new residential and non-residential developments shall include traffic calming measures on each street, excluding arterial streets, within the development. The location and type of traffic calming measures shall be subject to approval by the Department of Public Works. Traffic calming measures include but are not limited to: curb extensions, chicanes, splitter islands, traffic circles, roundabouts and changes in horizontal alignment.

Please see the Institute of Transportation Engineer's book Traffic Calming: State of the Practice Chapter 10 "Traffic Calming in New Developments" for more information on appropriate traffic calming measures.

STREET DESIGN STANDARDS

Design Consideration:	Expressway	Principal Arterial (Stage 1)	Minor Arterial	Collector	Local (Res.)	Minor Res.
Design speed (miles per hour)	55	45	40	30	25	20
Maximum grade at centerline	8%	8%	9%	12%	15%	16% ¹
Min. horizontal radius at centerline (normal crown)	1700'	900'	600'	275'	150'	75' ²
Min. horizontal radius at centerline ³ (super-elevated cross section)	1000'	500'	500'	235'	N/A	N/A
Min. horizontal tangent distance between reverse curves	600'	300'	200'	100'	50'	N/A
Service volume	40,000	25,000	18,000	5,000	2,500	400 ⁴
Min. right-of-way	200'	110'	90'	60'	50'	45'
Min. pavement width (back to back of curb)	48'+shld & median	66' ⁵	59'	36'	26'	24' ⁶
Sidewalks	may be required ⁷	both sides	both sides	one side ⁸	one side	None

NOTE: All Minimum design standards comply with the latest version of the AASHTO Policy on Geometric Design Manual. All roadway design elements shall be in accordance with the AASHTO Manual.

¹ May be increased to 18% with approval.

² Minimum standard corresponds to design speed of 15 mph

³ Corresponds to a 200 ft. horizontal tangent distance between reverse curves.

⁴ No more than 40 lots on cul de sacs or 80 lots on loop streets.

⁵ Two divided 26 ft. lanes with 14' median and proper provisions for future widening.

⁶ Parking restriction on one side. If 26' pavement, no parking restriction.

⁷ Sidewalks may be required in areas of intense development

⁸ Sidewalks are required on both sides of publicly maintained Commercial Collector Streets.

FREEWAYS

FUNCTION: Freeways are generally part of the Interstate Freeway Network, and their design standards are established by the federal government. Because Freeways are intended to serve through long distance trips, they are always designed as full access control roads (no direct access). The spacing of Freeways is variable since they relate to regional transportation needs.

DESIGN: Design considerations for this road class are not included as these are determined by the Federal Highway Administration and State Highway and Transportation Department.

EXPRESSWAYS

FUNCTION: Expressways are devoted to movement of traffic with little or no access function. This road class is intended to provide a high level of service to through, long distance trips within and around the urban areas. Partial access control is used with wide medians and a right of way of 200 feet or more. Future widening to six lanes plus left and right turn lanes are included in the design. Right of way may vary due to topography and connections with other roads. The spacing of Expressways is variable since they relate to regional needs.

Direct access to abutting property is discouraged except for major commercial centers and breaks in the median are allowed only at intersections with collector or higher classification roads. Special engineering studies have or will be performed for these facilities in order to ensure that specific alignments and rights of way are established prior to development.

DESIGN: Expressways should be designed as designated by Federal Highway Administration and the State Highway Department. Access roads shall be considered commercial streets; however, sidewalk construction is not required with development unless specifically required and approved by the Planning Commission.

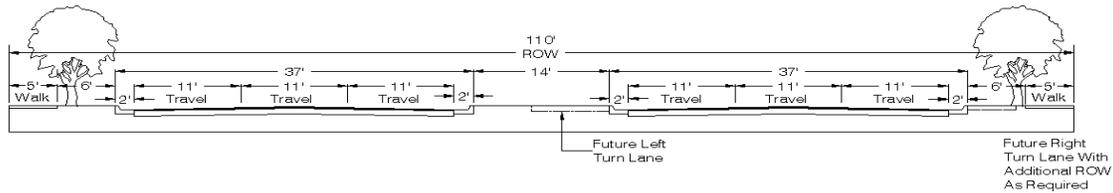
PRINCIPAL ARTERIALS

FUNCTION: The primary function of a Principal Arterial is to serve through traffic and to connect major traffic generators or activity centers within an urbanized area. Lower design standards are required for Principal Arterials compared to Expressways. Since these roads are designed for through traffic and are generally located three or more miles apart, dedication of additional right-of-way is required to allow for future expansion to six through lanes plus left and right turn lanes. Right-of-way of 110 feet is required but may vary due to topography, floodway or other constraints eliminating or reducing future adjacent development.

DESIGN: The standard Principal Arterial is to be used in all cases except where the City Staff and Planning Commission find an unusual condition occurs. Some arterials have special design standards. These arterials are listed on page 12.

DESIGN STANDARDS:

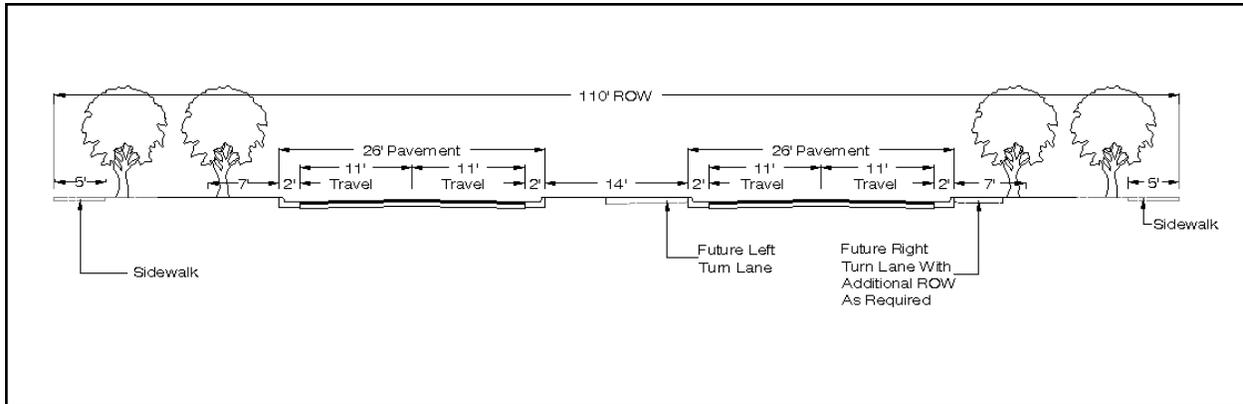
Principal Arterial Stage 2 (Final) Construction



Design Speed	45 mph
Maximum Centerline Grade	8% (5% at intersections—first 30 feet)
Minimum Stopping Sight Distance	400' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	900' (normal crown)
Min. Horizontal Radius at Centerline	500' (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	300'
Service Volumes	25,000
Minimum Right of Way	110'
Minimum Pavement Width (BC to BC)	Two 37', with 14 foot median
Intersection Curb Radius	30'
Sidewalks Required	Both Sides (5' wide at property line)
Driveways	Deceleration Lane not required
Storm Drainage at crossing	Provisions required—100 year storm event

INITIAL CONSTRUCTION OF PRINCIPAL ARTERIAL IN UNDEVELOPED AREAS:

Divided Principal Arterial Stage 1 (Initial) Construction



Note: See page 24 for sketches of Arterial intersection designs.

PRINCIPAL ARTERIALS WITH ALTERNATIVE DESIGN STANDARDS

- Right-of-Way 70 feet with a four-lane section, 5-lanes at major intersections with additional right-of-way 80 feet.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Arch Street	Roosevelt Road	33 rd Street
Roosevelt Road	Asher Avenue	I-30 Interchange

- Right-of-Way 90 feet with typical lane cross-sections, 5 lanes at major intersections with additional right-of-way.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Colonel Glenn/Asher	Stagecoach Road	Roosevelt Road
Baseline Road	I-30 Interchange	Arch Street Pike
Chicot Road	Mabelvale Cutoff	Baseline Road
Cantrell Road/LaHarpe	Polk	Markham/President Clinton Avenue

- Rock Creek alignment, June 1987 – Ordinance No. 15239.
Four lane “Parkway Section”, Ordinance No. 16,622 and 16,652

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Chenal/Financial Parkway	Cantrell Road	Shackleford

- Right-of-Way 80 feet with four-lane section, additional lanes at intersections

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Broadway	Arkansas River	Roosevelt Road
Arch Street	33 rd Street	65 th Street

- Engineering alignment and design standard will be presented to area property owners before construction.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Ferndale Cut-Off Road	Hwy. 10	Denny Road

- Alignment see South Loop Bypass: A Planning and Preliminary Engineering Report, December 1986 Ordinance 15,284. Median is required with breaks cut arterials and turnarounds, direct access from only arterials and collectors (right turn only) with right-of-way of 120 feet.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
South Loop	I-30 Interchange	I-530 Interchange

- Right-of-Way 100 feet with typical lane cross sections.

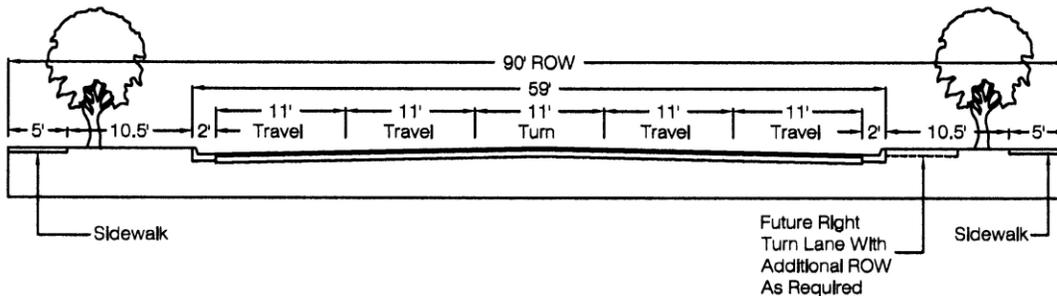
<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
University Ave.	Lee	Markham

MINOR ARTERIALS

FUNCTION: The Minor Arterials provide the connections to and through an urban area. Their primary function is to provide short distance travel within the urbanized area. Generally these roads are spaced at one mile intervals and have a right-of-way of 90 feet. Since a Minor Arterial is a high volume road, a minimum of 4 travel lanes is required. Current platted Master Street Plan Minor Arterials are five lane sections. At the time of redevelopment via boundary street widening, platting or public funded reconstruction, a change in the section may be desirable. Applicants wishing to change the five lane section to either a four lane section with bike lanes or a divided four lane section may do so through an amendment to the Master Street Plan.

Newly created or existing Minor Arterials that have not been partially constructed may select either of the three approved sections at the time of preliminary plat application. A lesser standard may be acceptable in areas of rugged topography or other areas where development will be limited. This lesser standard can only be used in cases where unusual conditions would substantially reduce or eliminate the amount of direct access to the road and substantially reduce the density of surrounding development. The standard Minor Arterial is to be used in all cases except where the City Staff and Planning Commission find an unusual condition occurs. The curb cuts should allow both a continuous flow of traffic and access to adjoining property. See page 15 for a list of Minor Arterials with special design standards.

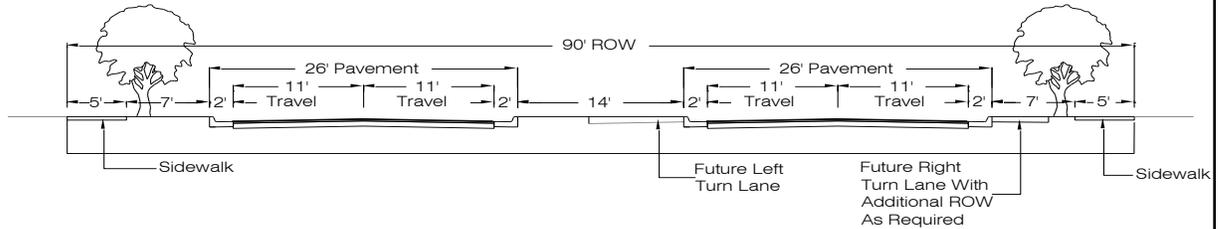
DESIGN STANDARDS:



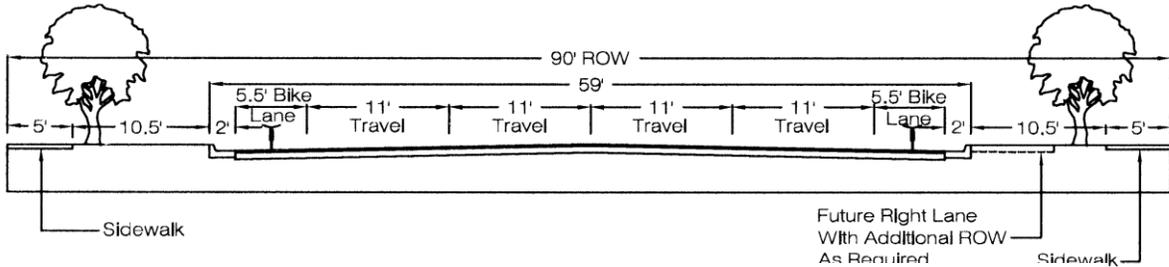
Design Speed	40 mph
Maximum Centerline Grade	9% (5% at intersections—first 30 feet)
Minimum Stopping Sight Distance	325' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	600' (normal crown)
Min. Horizontal Radius at Centerline	500' (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	200'
Service Volumes	18,000
Minimum Right of Way	90'
Minimum Pavement Width (BC to BC)	Two 26', with 14 foot median
Intersection Curb Radius	30'
Sidewalks Required	Both Sides (5' wide at property line)
Driveways	Deceleration Lane required
Storm Drainage	Provisions required—100 year storm event

OTHER MINOR ARTERIAL DESIGN OPTIONS:

MINOR ARTERIAL 4 LANE WITH MEDIAN:

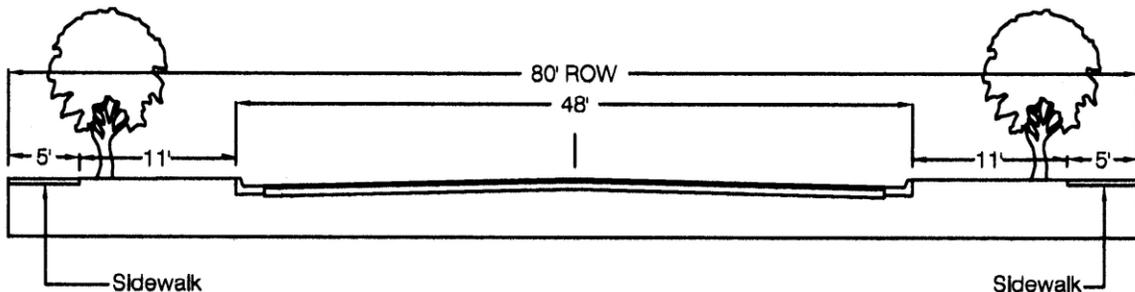


MINOR ARTERIAL 4 LANE WITH BIKE LANE*:



*Where development is substantially reduced and no direct access to abutting property. Left turn lanes are required at intersections. Note: Special approval must be obtained from City Staff and Planning Commission.

MINOR ARTERIAL 4 LANE WITHOUT BIKE LANE*:



*Where development is substantially reduced and no direct access to abutting property. Left turn lanes are required at intersections. Note: Special approval must be obtained from City Staff and Planning Commission.

Note: See page 23 for sketches of Arterial intersections.

MINOR ARTERIALS WITH ALTERNATIVE DESIGN STANDARDS

- Construction staging Ordinance 17,183.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Rahling (West Loop)	Taylor Loop Road	Chenal Parkway

- Right-of-Way 80 feet with a four-lane section, additional requirements at major intersections.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Main Street	I-630 Interchange	Roosevelt Road

- Right of-Way 70 feet with a four-lane section, five-lanes at major intersections with additional right-of-way.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Asher Avenue	Roosevelt Road	Wright Avenue
Fair Park Blvd.	Markham	Asher Avenue
Mabelvale Cut-Off Rd.	Mabelvale Main	Geyer Springs Rd.
* Markham/3 rd /World Av.	Fair Park Blvd.	6 th St. /Bond Ave.
Mississippi	Cantrell Road	I-630 Interchange
Scott	Main Street Bridge	I-630
Woodrow	I-630 Interchange	Wright Avenue
West 12 th Street	Rodney Parham Road	Woodrow

*** Cedar to Woodrow with a four-lane section as exists July 1, 1996 (same paving width), additional right-of-way as may be needed for two 6-foot sidewalk clearance.**

- Right-of-Way 70 feet with a three-lane section, additional requirements at major intersections.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Kavanaugh Blvd.	Cantrell Road	Van Buren
Van Buren	Kavanaugh Blvd.	Markham
West 36 th Street	Shackleford Road	Colonel Glenn Rd.

- Right of-Way 60 feet with a four-lane section, additional requirements at major intersections.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Bond	6 th Street	Roosevelt Road
Chester	LaHarpe	Wright Avenue

- Right of-Way 60 feet with a three-lane section, additional requirements at major intersections or major new developments.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
17 th /Wright Avenue	Asher Avenue	Broadway

Minor Arterial Alternative Design Standards (Cont.)

- Right of-Way (ninety) 90 feet with (forty-eight) 48-foot street with sidewalks on both sides. Sidewalks will be built at the edge of the right-of-way.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
David O. Dodd Road	Stagecoach Road	Proposed Minor Arterial South to Crystal Valley Road

- Before construction a public hearing shall be held to receive comment from area property owners on the engineering alignment and design of the road.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Garrison Road	State Hwy. 10	Ferndale Cut-Off Rd.

- Alignment per engineering study "Bowman Road Alignment March 1989, Ordinance 15647.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Bowman Road	Kanis Road	Colonel Glenn Road

- Design Standard 20 foot wide paving with two 6-foot paved shoulders, two 2-foot green shoulders with a 10-foot utility corridor, open drainage with ditches at a 3 to 1 slope. East of State Park property, industrial street open drainage standard section.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Pinnacle Valley Road	Hwy. 300	County Farm Road

- Design Standard 22 foot wide pavement for 2 travel lanes, two 7-foot paved shoulders and open ditches on both sides.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Pinnacle Valley Road	County Farm Rd.	Cantrell Road

- Right-of-Way 90 feet with a four-lane section and 14-foot center median, media cuts limited to 600 minimum spacing, additional requirements at major intersections.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Kanis Road	Rock Creek	Bowman Road

- 90 feet right-of-way with 3-lanes and increased grades.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Reservoir Road	Cantrell Road	Rodney Parham Rd.

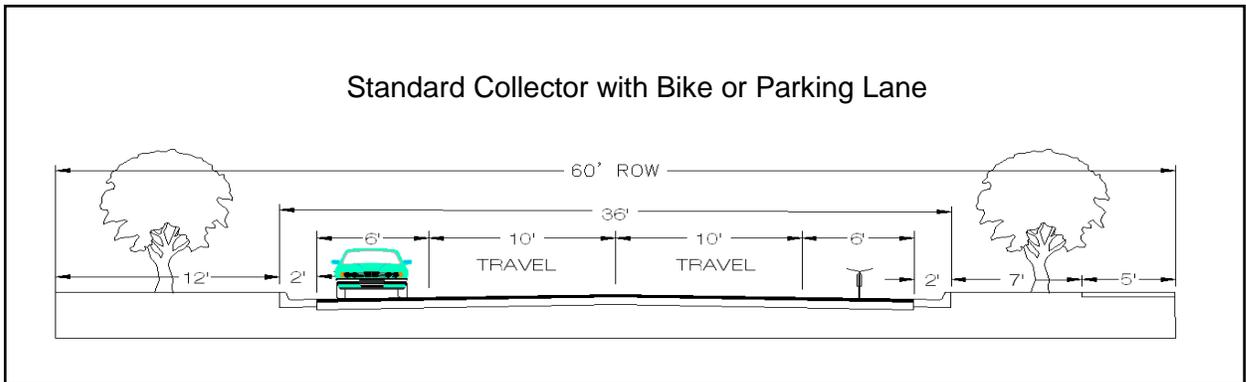
- Paving with 22 feet with two 4-foot gravel shoulders.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Kanis Road	Burlingame Rd.	Stewart Road

COLLECTORS

FUNCTION: A Collector street is the traffic connection from Local Streets to Arterials or to activity centers, with the secondary function of providing access to adjoining property. The Collector system should not be continuous but should direct traffic to Arterials. This class of road is generally at a spacing of a quarter to a half-mile.

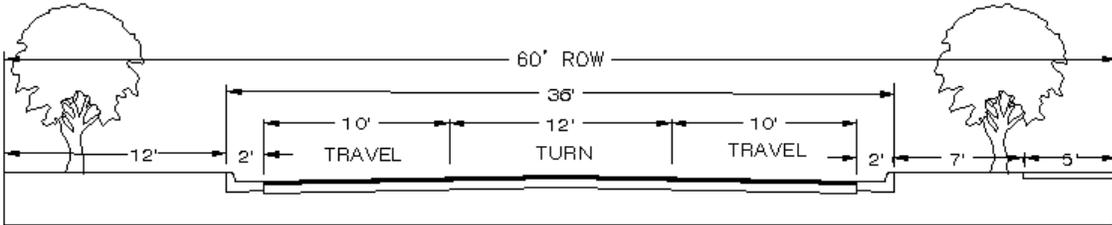
DESIGN: The spacing of Collectors may be decreased and/or the right-of-way and paving surface increased due to density of residential development and locations of commercial areas or other large traffic generators. At the time of the subdivision, the exact location and additional need for Collectors will be determined by the Little Rock Planning Commission upon advice of the City Staff. Sidewalks are required on one side of Collector streets, but are required on both sides of Commercial Streets. Local public streets which are abutted by non-residential zoning or use are considered “Commercial Streets”. In addition to non-residential zoning and use, if the adjoining land is more intense residential than duplex or two-unit residential, then the Local Street is a Commercial Street. This type of street has a design standard (right-of-way, width, etc.) the same as a Collector. Certain Collectors have special design standards. For a list of these Collectors, see page 19.



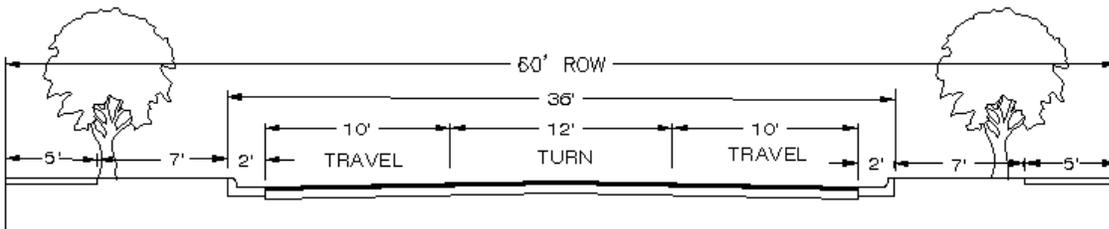
Design Speed	30 mph
Maximum Centerline Grade	12%
Minimum Stopping Sight Distance	200' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	275' (normal crown)
Min. Horizontal Radius at Centerline	235' (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	100'
Service Volumes	5,000
Minimum Right of Way	60'
Minimum Pavement Width (BC to BC)	36'
Intersection Curb Radius	30'
Sidewalks Required	One side for residential land use Both sides for publicly maintained commercial streets

OTHER COLLECTOR DESIGN OPTIONS:

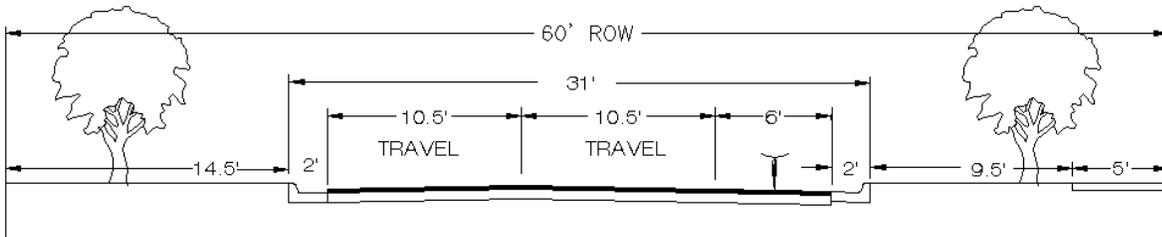
Standard Collector without Bike or Parking Lane



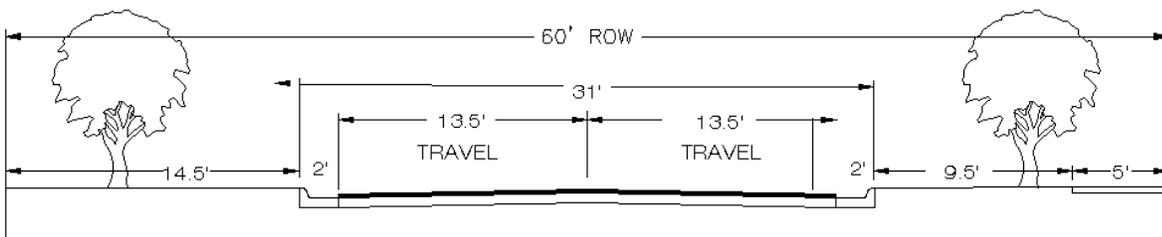
Standard Collector without Bike or Parking Lane
(Commercial Street)



Residential or Minor Commercial Collector
(Special Conditions) w/ Bike or Parking Lane



Residential or Minor Commercial Collector
(Special Conditions) without Bike or Parking Lane



COLLECTORS WITH ALTERNATIVE DESIGN STANDARDS

- Right-of-Way 50 feet with 27-foot paving width, additional requirements at major intersections.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Doyle Spring Road	I-30 Interchange	Baseline Road
Evergreen	Mississippi	University Avenue
Stanton Road	Young Road	Baseline Road
Valley Drive	Chicot Road	Warren Drive
Warren Drive	Valley Drive	Mabelvale Cut-Off Rd.

- Before construction a public hearing shall be held to receive area property owner comments on engineering alignment and design of road.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Barrett Road*	State Hwy. 10	State Hwy. 300
Goodson Road	State Hwy. 10	State Hwy. 10

**Building setback 40 feet*

- Right-of-Way 45 feet, with 28-foot paving sidewalk on easement of not less than 10 feet.

<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Woodlands Trail	Brodie Creek Trail	terminus

- Right-of-Way 60 feet, with 31-foot paving width, additional requirements at major intersection.

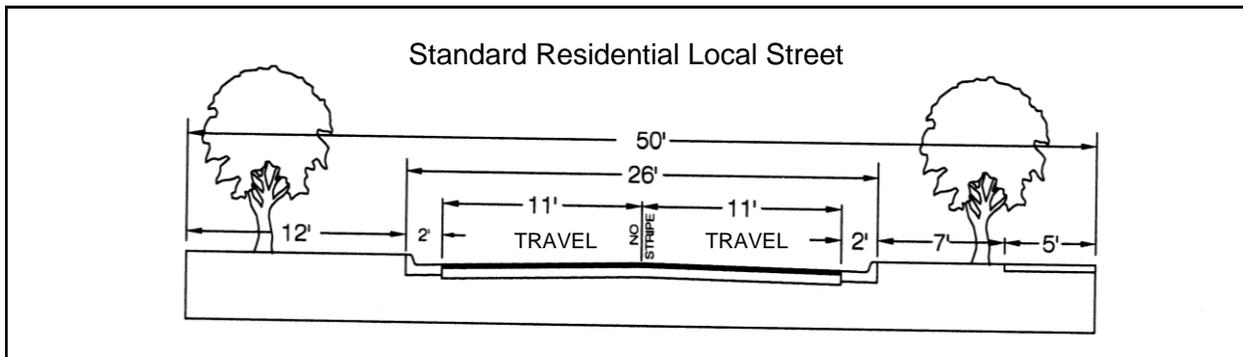
<u>DESCRIPTION:</u>	<u>FROM:</u>	<u>TO:</u>
Chicopee Trail Ext./Grandwood Collector Connection	Chicopee Trail East Pinnacle Road	Sienna Lakes Patrick Country Road

LOCAL STREETS

FUNCTION: The Local Street function is to provide access to adjacent property. The movement of traffic is a secondary purpose. Residential street use by heavy trucks and buses should be minimized. The Local Street generally has a right-of-way of 50 feet. In suburban locations with large acreage single family tracts, Local Streets may be designed with paved shoulders and open space drainage. In the case of short residential Local Streets, a lesser standard is allowed.

Local Streets which are abutted by non-residential zoning or use are considered “Commercial Streets”. In addition to non-residential zoning and use, if the adjoining land is more intense residential than duplex or two-unit residential, then the Local Street is a Commercial Street. A Commercial Street has a design standard (right-of-way, width, etc.) the same as a Collector except sidewalks are required on both sides on Commercial public streets.

At the time of Subdivision approval by the Little Rock Planning Commission, the various types of Local Streets will be approved with the recommendation of the City Staff.

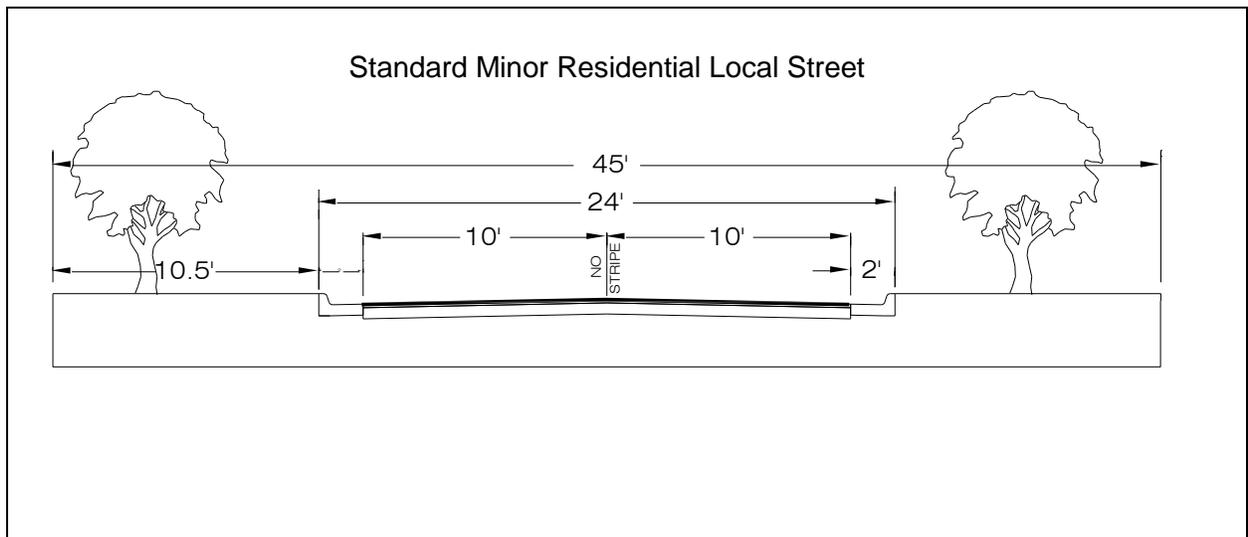


Design Speed	25 mph
Maximum Centerline Grade	15%
Minimum Stopping Sight Distance	155' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	150' (normal crown)
Min. Horizontal Radius at Centerline	N/A (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	50'
Service Volumes	2,500
Minimum Right of Way	50'
Minimum Pavement Width (BC to BC)	26'
Sidewalks Required	One Side

OTHER LOCAL STREET DESIGN OPTIONS:

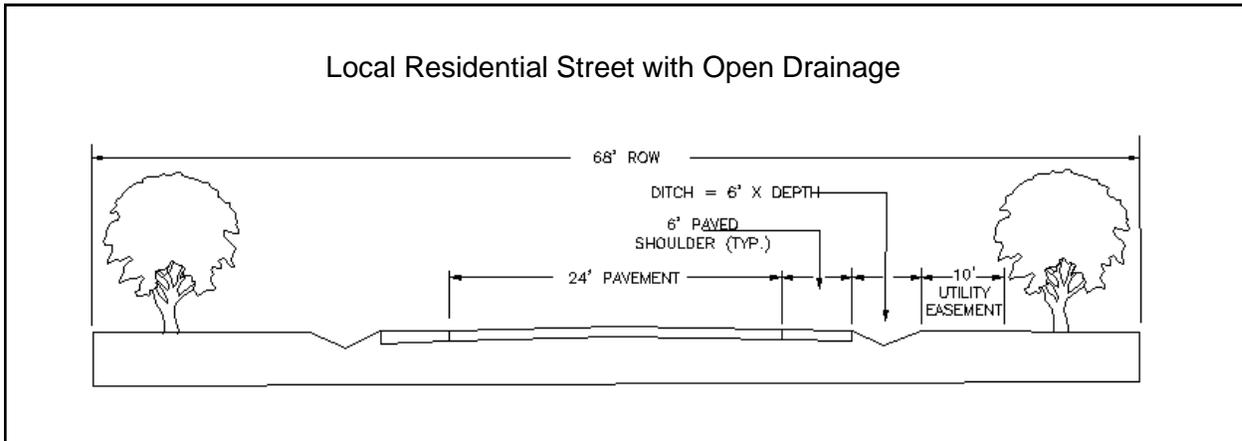
MINOR RESIDENTIAL:

A Minor Residential Street is: (a) a cul-de-sac street not exceeding 40 lots, or (b) a loop street not exceeding 80 lots, and (c) and in no case generating more than 400 vehicle trips per day with the assumption of ten vehicle trips per day per lot. The Minor Residential Street has a right-of-way of 45 feet.



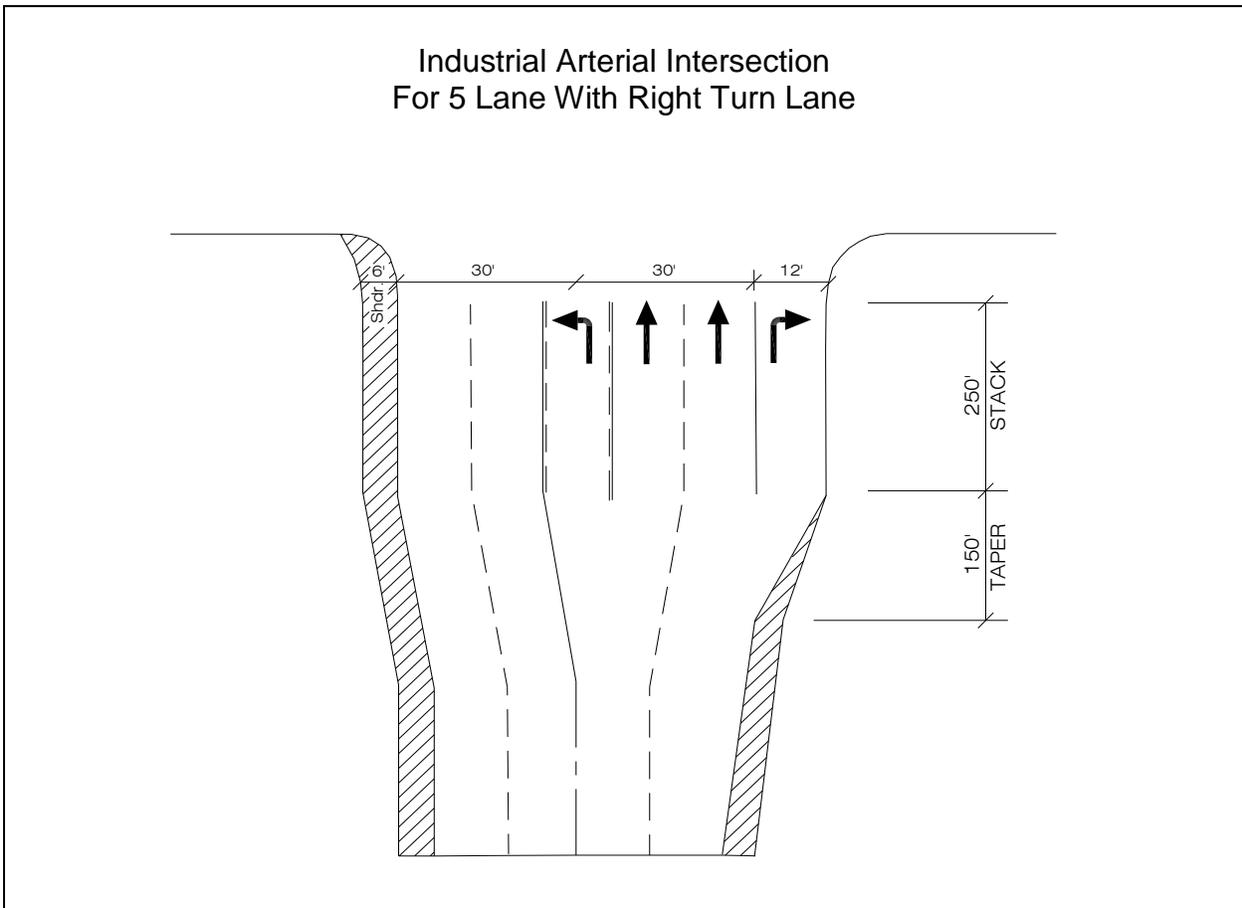
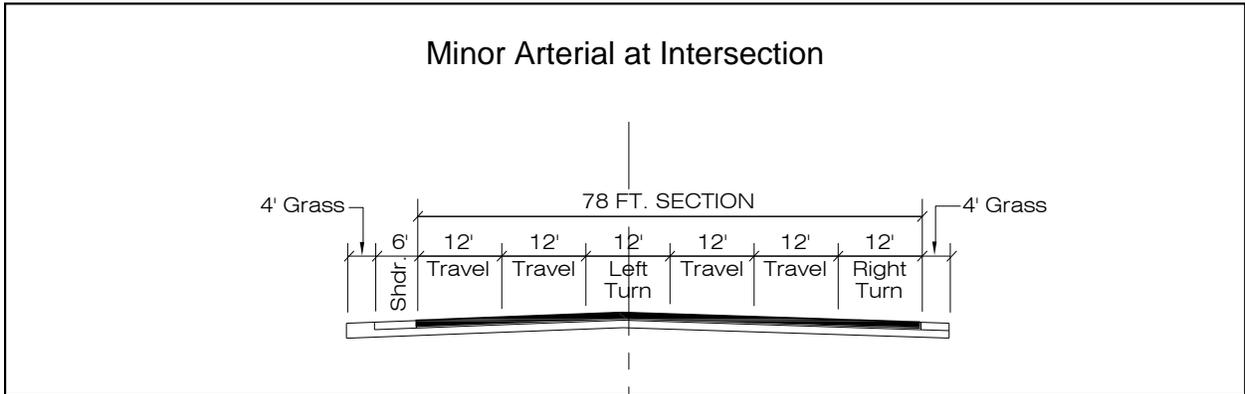
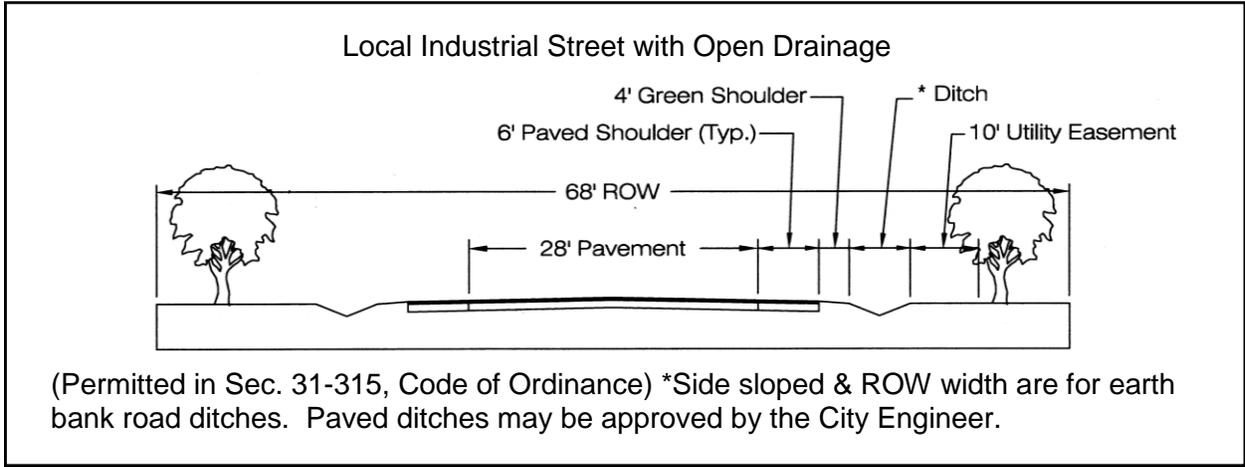
Design Speed	20 mph
Maximum Centerline Grade	16% (may be increased to 18% with approval)
Min. Stopping Sight Distance	115' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	75' (normal crown) (corresponds to 15 mph design speed)
Min. Horizontal Radius at Centerline	N/A (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	N/A
Service Volumes	maximum of 40 lots on cul-de-sacs Maximum of 80 lots on loop streets (not exceeding 400 vehicle trips per day)
Minimum Right of Way	45'
Minimum Pavement Width (BC to BC)	24'—parking restriction one side 26'—no parking restriction
Sidewalks Required	None

OTHER LOCAL STREET DESIGN OPTIONS:



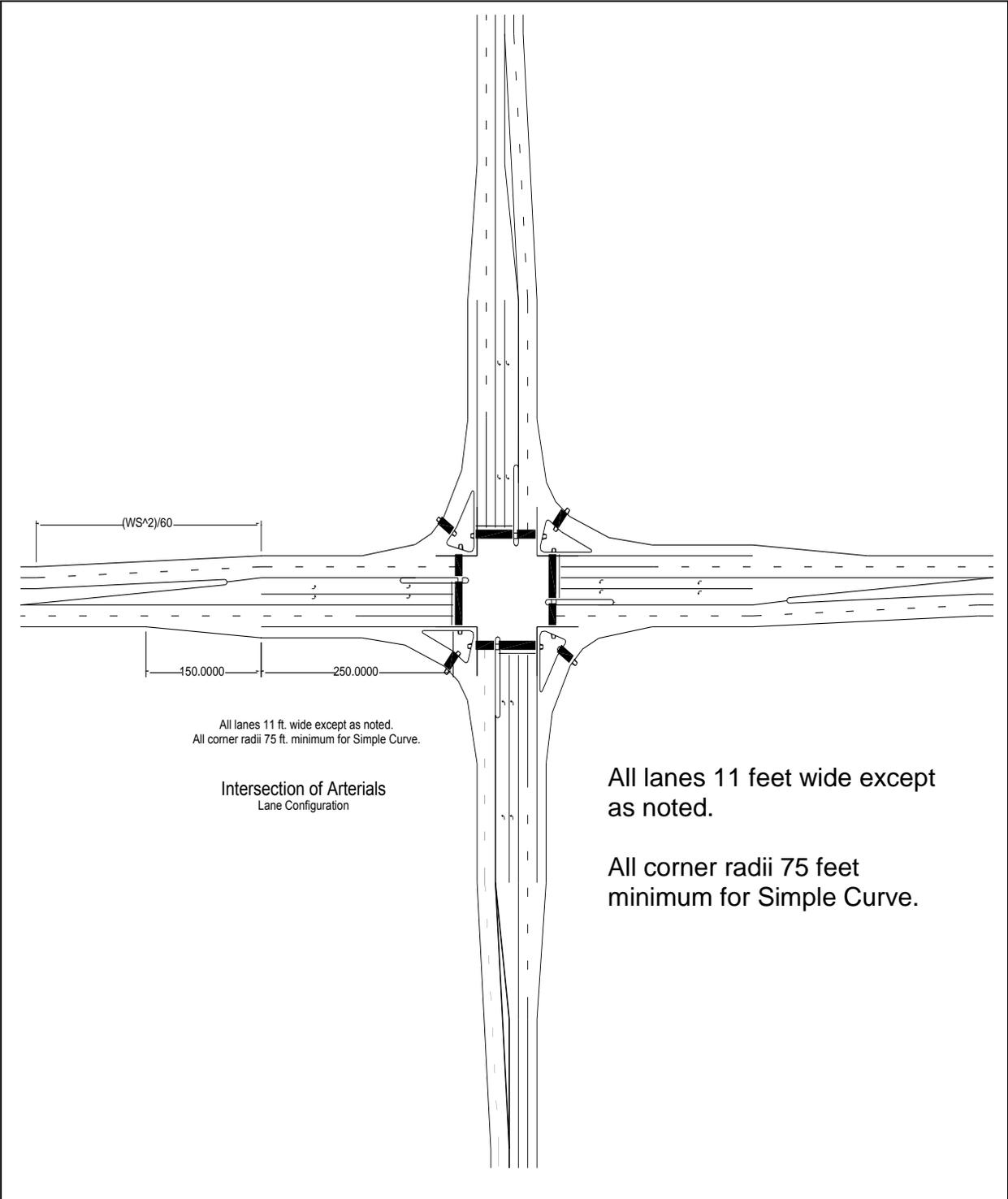
Design Speed	30 mph
Maximum Centerline Grade	12% (5% at intersections first 30')
Minimum Stopping Sight Distance	200' or latest AASHTO Policy on Geometric Design Manual
Min. Horizontal Radius at Centerline	275' (normal crown)
Min. Horizontal Radius at Centerline	235' (super-elevated)
Min. Horizontal Tangent Distance Between Reverse Curves	100'
Service Volumes	5,000
Minimum Right of Way	68' plus open drainage requirements
Minimum Pavement Width (BC to BC)	28' plus 6' paved shoulders (40' min.)
Intersection Curb Radius	30' or Wheel Base-50 turning radius
Sidewalks Required	4' wide one side for residential 5' wide both sides for industrial*
	*Unless in exclusion zone
Storm Drainage	Design period 25 year storm event Provisions required 100 year storm event

TYPICAL INDUSTRIAL STREET:

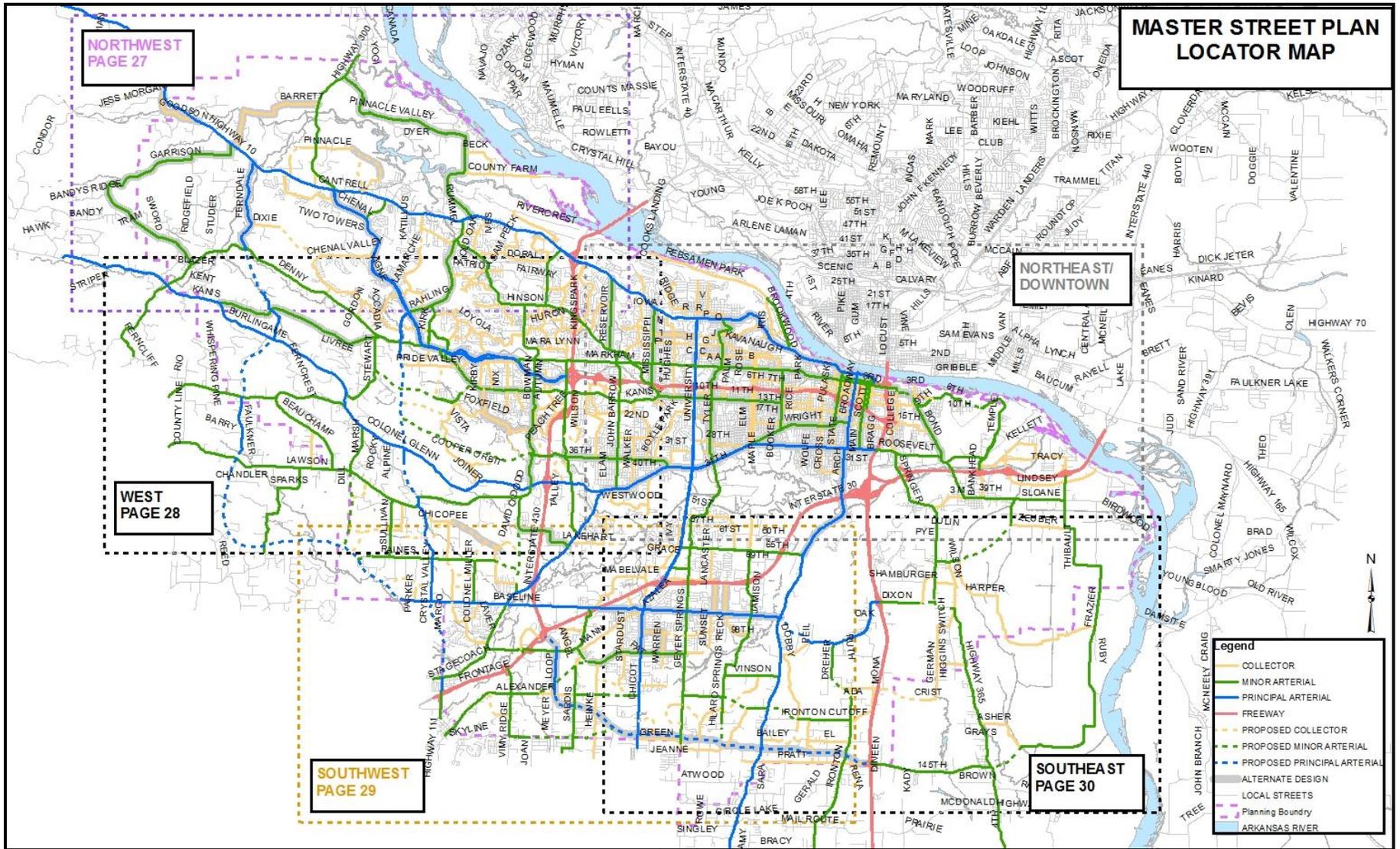


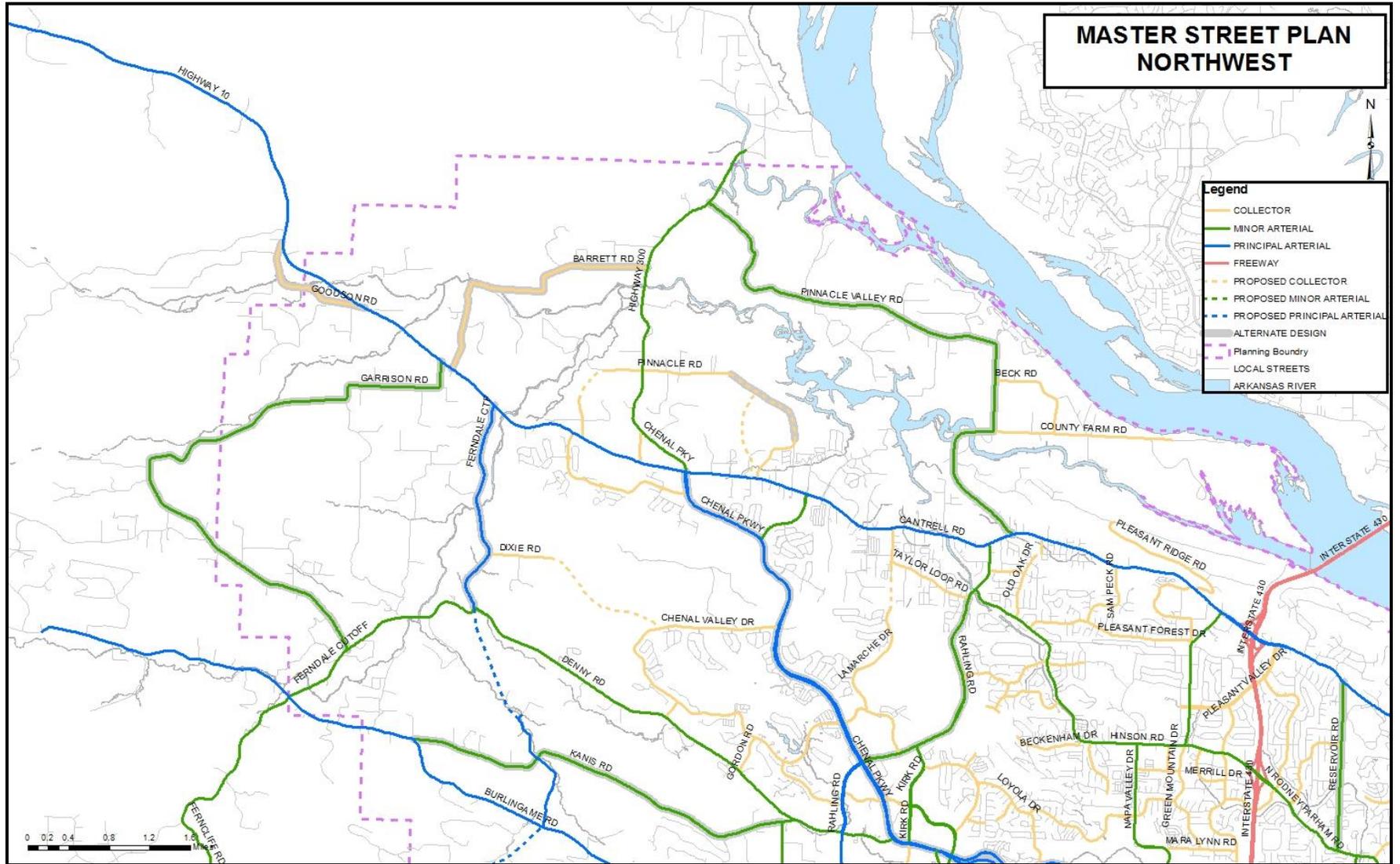
TYPICAL INTERSECTIONS:

**INTERSECTION OF ARTERIALS
LANE CONFIGURATION**

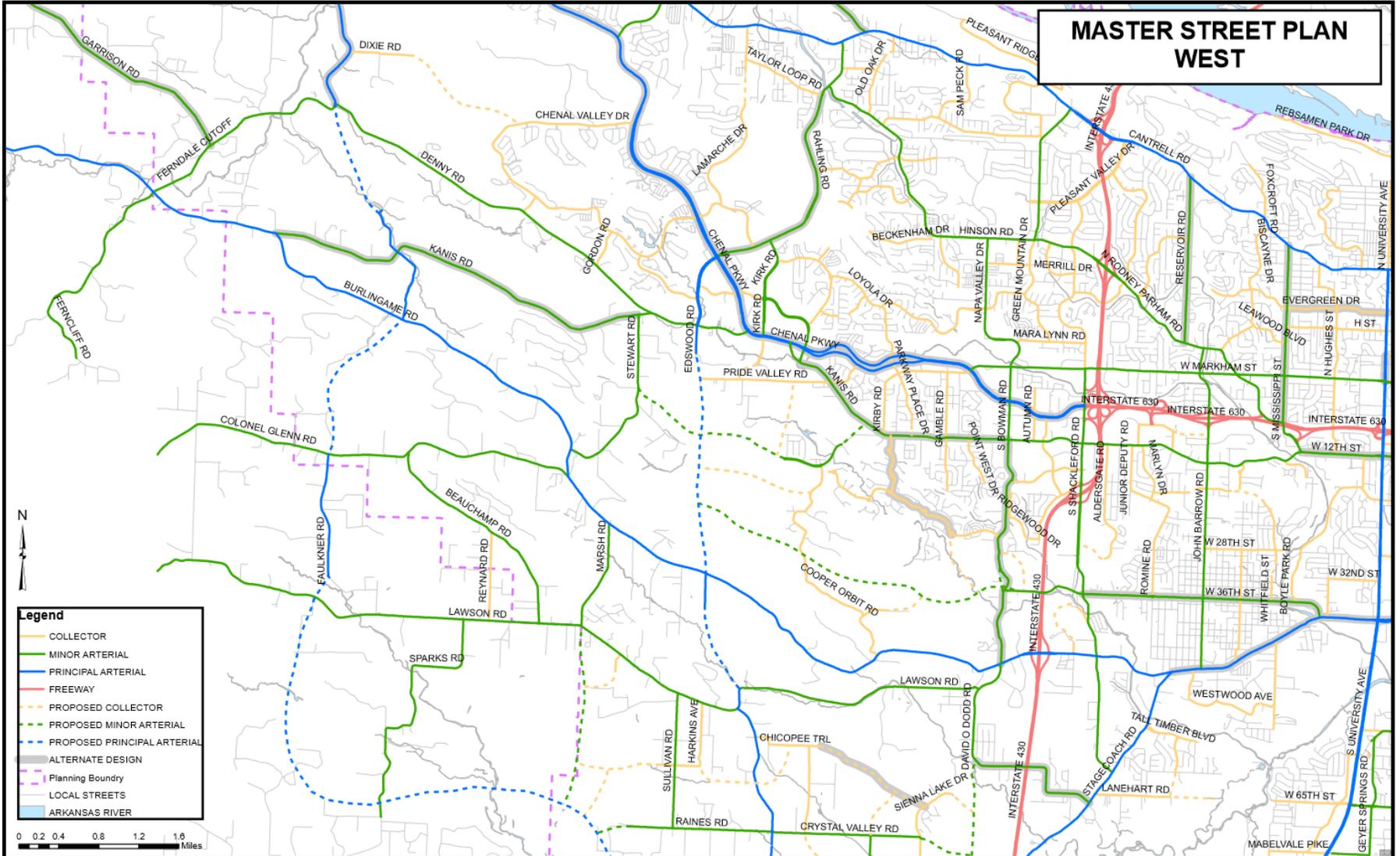


SECTION 3: MASTER STREET PLAN MAPS:

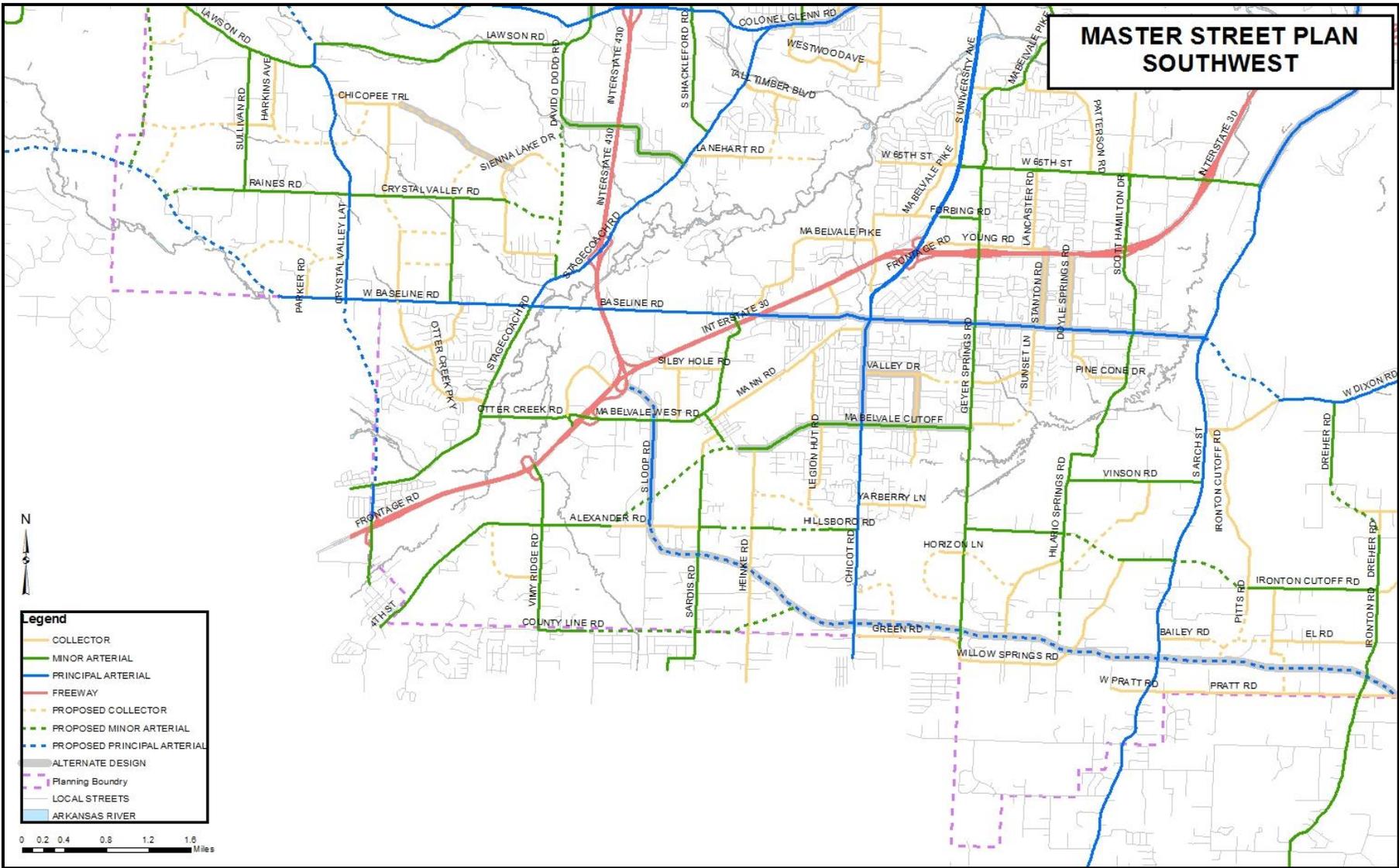




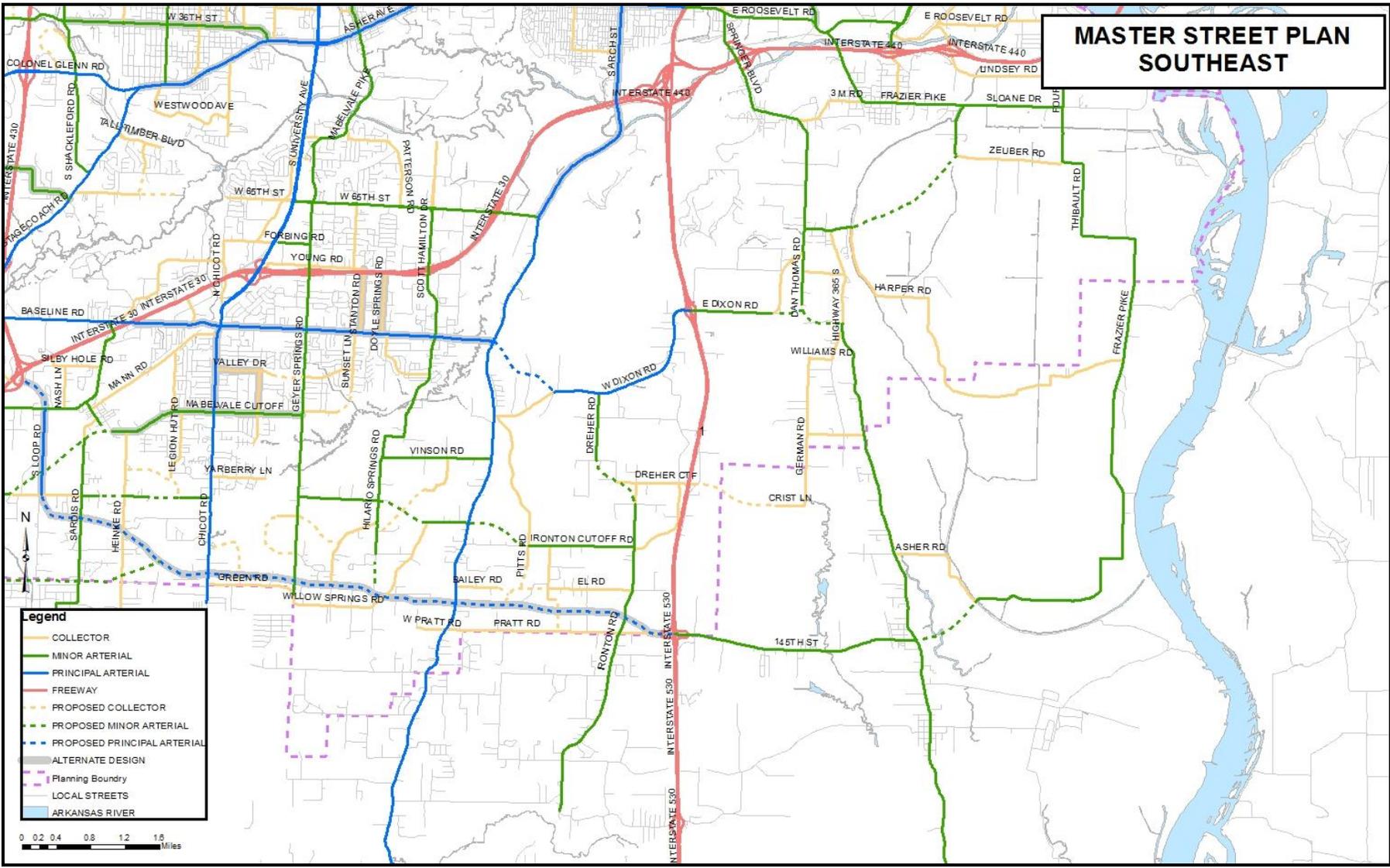
MASTER STREET PLAN WEST

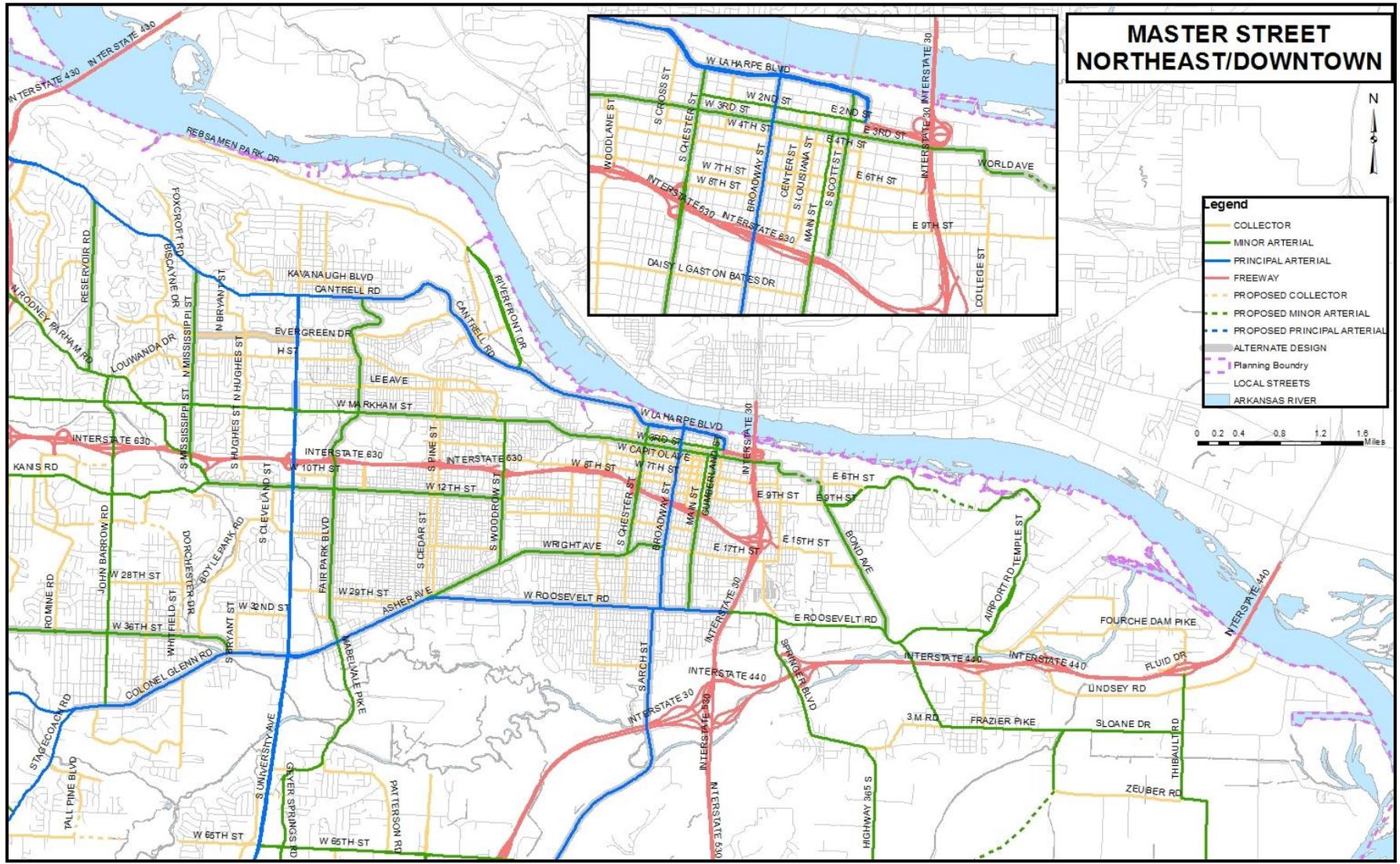


MASTER STREET PLAN SOUTHWEST



MASTER STREET PLAN SOUTHEAST





SECTION 4: BICYCLE PLAN

INTRODUCTION:

It is the City's intention to provide bicycle accessibility throughout Little Rock. This can be accomplished with the use of the existing street network, with additional bicycle paths and lanes where necessary for safety and continuity. In addition to the existing street network, the City of Little Rock has adopted a network of routes to be specially designated for bicycle use. This Plan provides a system of Classes, (see table below). It is the purpose of the City of Little Rock to review these routes on a regular basis to determine the need of upgrading the routes, and to review the need for additional routes. The decision to upgrade the routes will be based on usage, safety and speed and volume of motorized vehicular traffic.

All bicyclists wish to have safe, direct routes for non-recreational trips. The most advanced riders can generally operate under most traffic conditions. However the more casual user often will feel intimidated by the vehicular traffic. This combined with high volume and high speed vehicular traffic and few direct routes available creates the need for a bicycle route system desirable for all users.

The City of Little Rock also intends to implement Class I (without road) Bike Paths in phases. A Class I (without road) Bike Path may be opened and built to a reduced standard (paving surface). If a Class I route is built to less than the standard, the actual standards of these "Development Paths" will be designated on the plan map. Any Class I (without road) Bike Path must be reviewed and approved by the City of Little Rock Parks Department. The City is using the phasing process in an attempt to speed the process of implementation. Over time the Development Paths may be upgraded to full bike path standards. Class I (road) Bike Path must be included in the review of new streets by the Public Works Department.

BICYCLE FACILITIES:

SHARED FACILITIES

Bicycles are legally classified as vehicles, which may be ridden on public roadways. Therefore, any facilities designed for the sole use of bicycles must allow the bicyclists to emulate vehicle drivers. Bicycles have the right to share all city streets. Thus, all streets, unless otherwise stated, should be considered "Shared Facilities". On Shared Facilities, the bicyclist shares the normal vehicle travel lanes with motorized vehicles. Where bicycle travel is significant or high volume and high speed vehicular traffic is present, additional bicycle facilities are recommended.

CLASS I AND CLASS II DIFFERENTIATED:

Bicycle only facilities are of two types: Bike Paths and Bike Lanes. A bicycle path is a physically separate, bicycle-only facility. A bicycle lane is a specifically designated area on a street for the sole use of bicycles.

CLASS I (WITH ROAD OR WITHOUT ROAD) BIKE PATHS

Class I bikeways or "Bike Paths" are constructed and designed for the exclusive use of bicyclists. These paths are completely separated from motor vehicle traffic. Bike Paths are the safest for prevention of accidents with motorized vehicles.

The main advantage of a Class I Bike Path is the total separation between automobile traffic and bicyclists. It is, in essence, a road for bicyclists designed to accommodate speeds of up to 35 MPH with sharp turns and meandering pathways avoided whenever possible. Class I Bike Path should be used when motor vehicle traffic volumes or speeds are too high for Class II Bike Lanes. Class I (without road) Bike Paths are also necessary when connections need to be made where no roadways exist (such as following a creek bed).

While Class I Bike Paths are the safest and provide enjoyable rides, they are the most costly to construct and maintain. A reliable and continuing maintenance program is essential to the continued use and safety of the Bike element of the Master Street Plan. Design of Class I (non-road or road) Bike Paths must be done with care to insure safe intersections avoiding bicycle - motor vehicle accidents.

CLASS II BIKE LANES

Class II Bike Lanes consist of a paved area both sides of a roadway with a painted stripe separating the bikeway from motor vehicle traffic. A Class II Bike Lane is used for safety reasons where mixing of bicycle and motorized vehicles is unsafe for both. These routes may either be a smooth paved shoulder or a section of the paved roadway. Class II Bike Lanes require minimal construction and are likely to be located on higher volume and vehicular traffic major roadways. Class II Lanes on collector roads should use the existing paved area. This would mean that in commercial areas with a Class II Lane, only two traffic lanes would be allowed, except at intersections. Only a painted line on the street separates bicyclists from motorists, additional pavement markings and signage are required. Class II Bike Lanes are easier to maintain and allow for maximum design flexibility. Accommodations can be made for automobile parking between the bike lane and curb where street parking is required. In order to accommodate parking on new (improved) roads additional ROW and paving will be required if parking is included. When space is limited, parking may have to be restricted to one side of the street.

CLASS III BICYCLE ROUTES

Class III Bicycle Routes have only sharrows. These routes use the existing vehicular area with no physical separation. Generally, Class III Bicycle Routes are local streets or higher class streets when speeds are less than 30 miles per hour and volumes less than half design volume. Since there is no additional area, Class III Bicycle Routes have no additional maintenance requirements (except for sharrows).

The main disadvantage of Class III Bicycle Routes is that they provide the bicyclists with minimal protection from vehicular traffic. Safety concerns make shared facilities insufficient for high-speed streets with heavy traffic.

CONSTRUCTION STANDARDS

Class I Bike Paths may have an initial construction phase with a lesser standard. These routes should be designated "Development Routes". Any Development Route must be constructed with industrial sand or screening of 100% crushed material or compacted soil. Off-road (large wheel) or mountain bikes will be recommended for these paths. In all cases the path must be constructed so it will properly drain.

Class I Bike Paths should be constructed to be permanent. Proper drainage is important to prevent standing water on the route. Construction should be of 2" flexible paving on a compacted 4" gravel base or 4" flexible paving on compacted or undisturbed suitable soil. A sloped surface of 1/4" in 1 foot will allow for drainage.

Paths should be constructed at least 10 feet from large trees to minimize root damage to paths and decrease the possibility of a cyclist/tree collision. For safety, separate paths should not run immediately parallel and adjacent to streets.

A one way bike path, while not recommended should be minimum of 5 feet wide, and a two way path should be at least 10.0 feet wide with a stripe down the middle to separate the two lanes. For Class I Bike Paths, non-road, routes where pedestrian traffic is expected, separate lanes 4 feet wide should be constructed for their use.

Class I Bike Paths built as part of an arterial will require an additional 10 feet of right-of-way (5 foot each side for one-way path) or an easement in which the path is placed. The required sidewalk along these streets can be incorporated into the bike path. The result would be a 9-foot wide path on each side of the road. A four-foot section of the path should be marked for pedestrian use.

Class II Bike Lanes should be of the same construction as the streets on which they are constructed. The minimum width is 6 feet from back of curb. If roadway shoulders are used for Bicycle Lanes, the shoulder should be 5 feet wide. This width should discourage vehicular traffic use and keep the path free of debris.

Class III Bicycle Routes are part of the street. Sharrows should be provided. The AASHTO "Guide for Development of Bicycle Facilities", (1991) is the recognized standard for bikeway design and should be utilized by bikeway designers.

	Class III	Class II (1)	Class I With Road (2) e.g. RAHLING ROAD	Class I Without Road
R-O-W	No additional	No additional	10 feet additional	No additional
Paving	No additional	No additional	9 feet (<i>4 feet for pedestrians</i>)	10 to 13 feet

1. If on-street parking is desired, additional ROW and paving will be required, subject to Traffic Engineering approval.
2. Two one-way 5 feet each side, one two-way 10 feet one side.

DESIGN SPECIFICATIONS

	Class I	All Others (non-road)
Design speed	35 MPH	*
Maximum grade	10% ¹	*
Minimum clearance		
vertical	8 ft.	*
lateral	1 ft.	*
Sight distance		
street intersection	100 ft.	*
bike intersection	30 ft.	*
Horizontal curves		
(between reverse curves)	200 ft.	*
Horizontal radius	100 ft.	*
(at centerline)		

¹ For no more than 500 feet

*Use associated street standards

SIGNAGE AND MARKING:

Signage for Bike Paths consists of pole mounted signs and painted graphics on the roadways. Pole mounted signs include: usual traffic signs; bike route signs indicating the degree of difficulty of the Bike Path; signs giving Bike Path designations; bicycle bus stop and color coded signs to aid bicyclists in following routes. Bike crossing signs should be used to alert motorists to the presence of bicyclists. All classes of bicycle routes should be signed. Requirements for signs and graphics painted on the pavement, including sharrows and bicycle emblems, vary depending upon the class of a particular bicycle route.

Class I Bike Paths utilized by bicycles and/or pedestrians should have a solid or dashed 4" wide yellow or white line separating the various use lanes. Intersections should be appropriately striped to warn motorists to be aware of bicyclists.

Class II Bike Lanes require 8" wide, solid or dashed, yellow or white striping to denote the bike lane. Additional striping may be needed at intersections.

Class III Bicycle Routes require sharrow markings on the pavement according to traffic engineering requirements. Class I Bike Paths, when constructed, and Class II Bike Lanes should be marked with on-street bicycle graphics in white paint with directional arrows directing the flow of bicycle traffic. Class III bicycle routes should be marked with on-street bicycle graphics as described above. For Class II Bike Lanes at intersections where it is necessary for bikes to merge with automobile traffic due to right turn lanes, the bike lane should resume on the other side of the intersection. Rating bicycle routes as to degree of difficulty and using color coded signage to designate them is helpful for cyclists. The bicycle routes can be color coded as black for difficult, red for moderate, and blue for a minimal

level of difficulty. Marking specific routes with street graphics is important to keep cyclists aware of what direction they are traveling. East-west routes are designated with even numbers, with north-south routes designated with odd numbers.

The most important aspect of signage is that it remain consistent from bicycle route to bicycle route. This will reduce confusion for and aid those using of bicycle routes.

SECTION 5: BICYCLE PLAN MAPS:

BIKE ROUTES LOCATOR MAP

NORTHWEST
PAGE 39

NORTHEAST/
DOWNTOWN
PAGE 43

WEST
PAGE 40

SOUTHWEST
PAGE 41

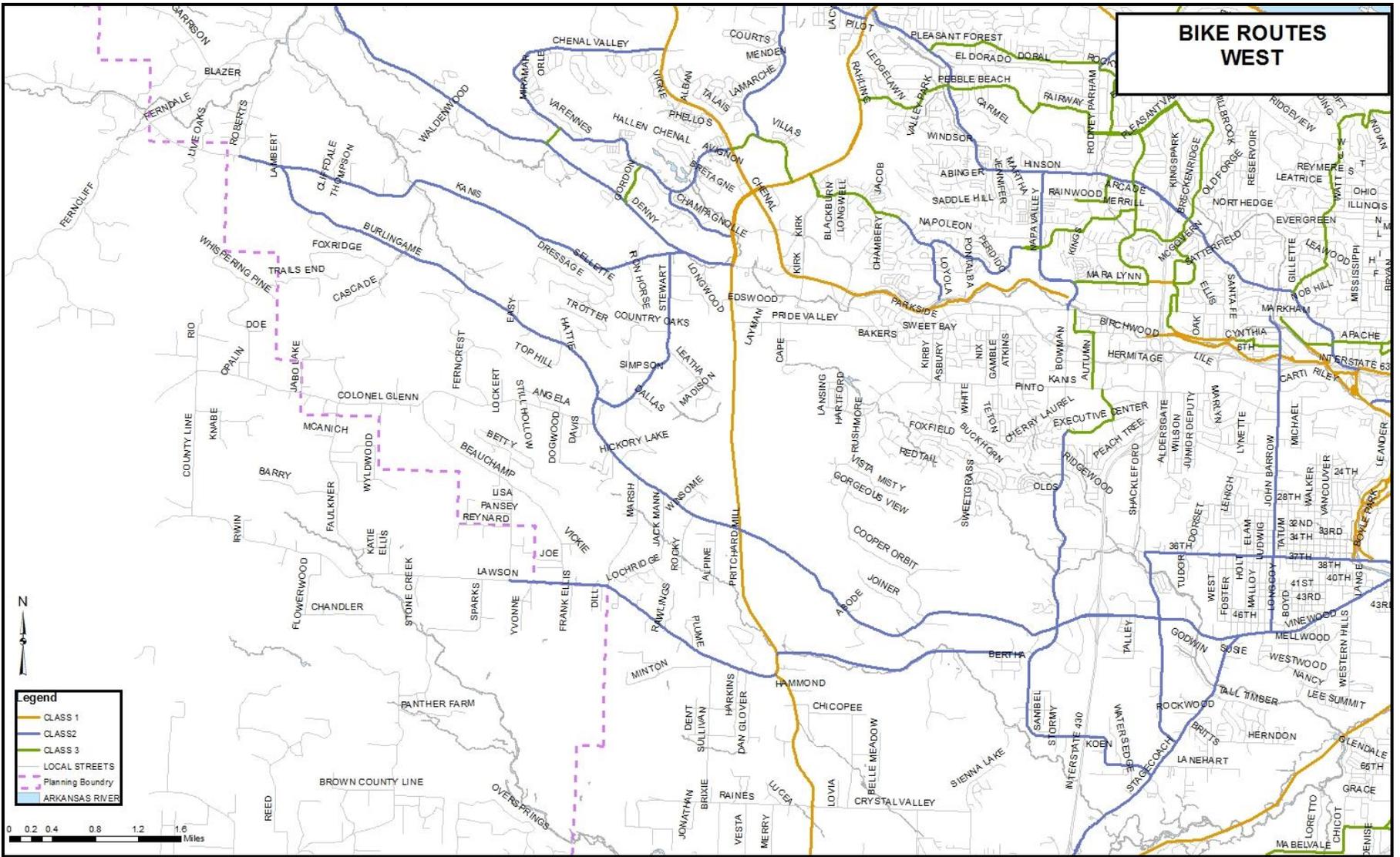
SOUTHEAST
PAGE 42

Legend

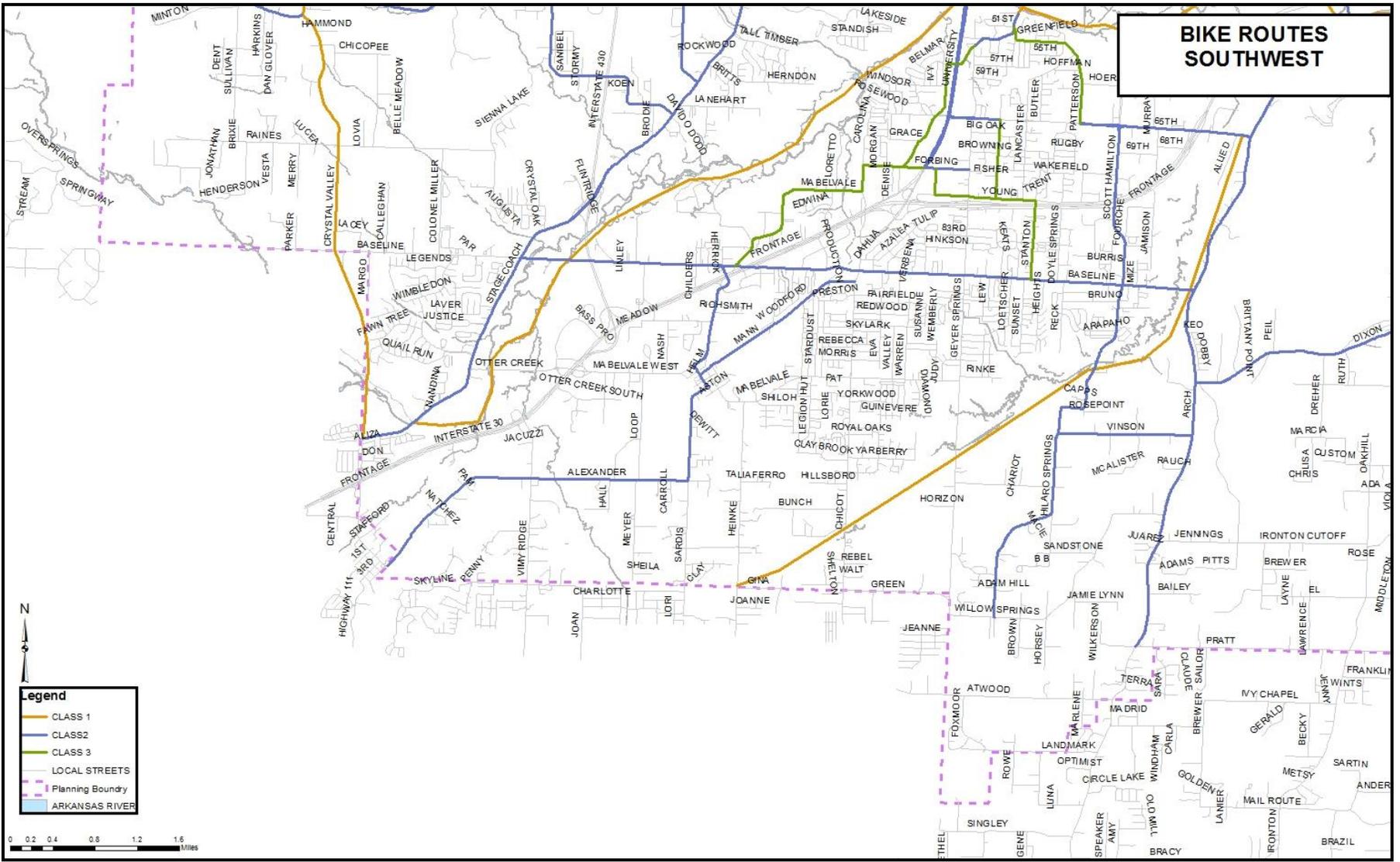
- CLASS 1
- CLASS 2
- CLASS 3
- LOCAL STREETS
- Planning Boundry
- ARKANSAS RIVER

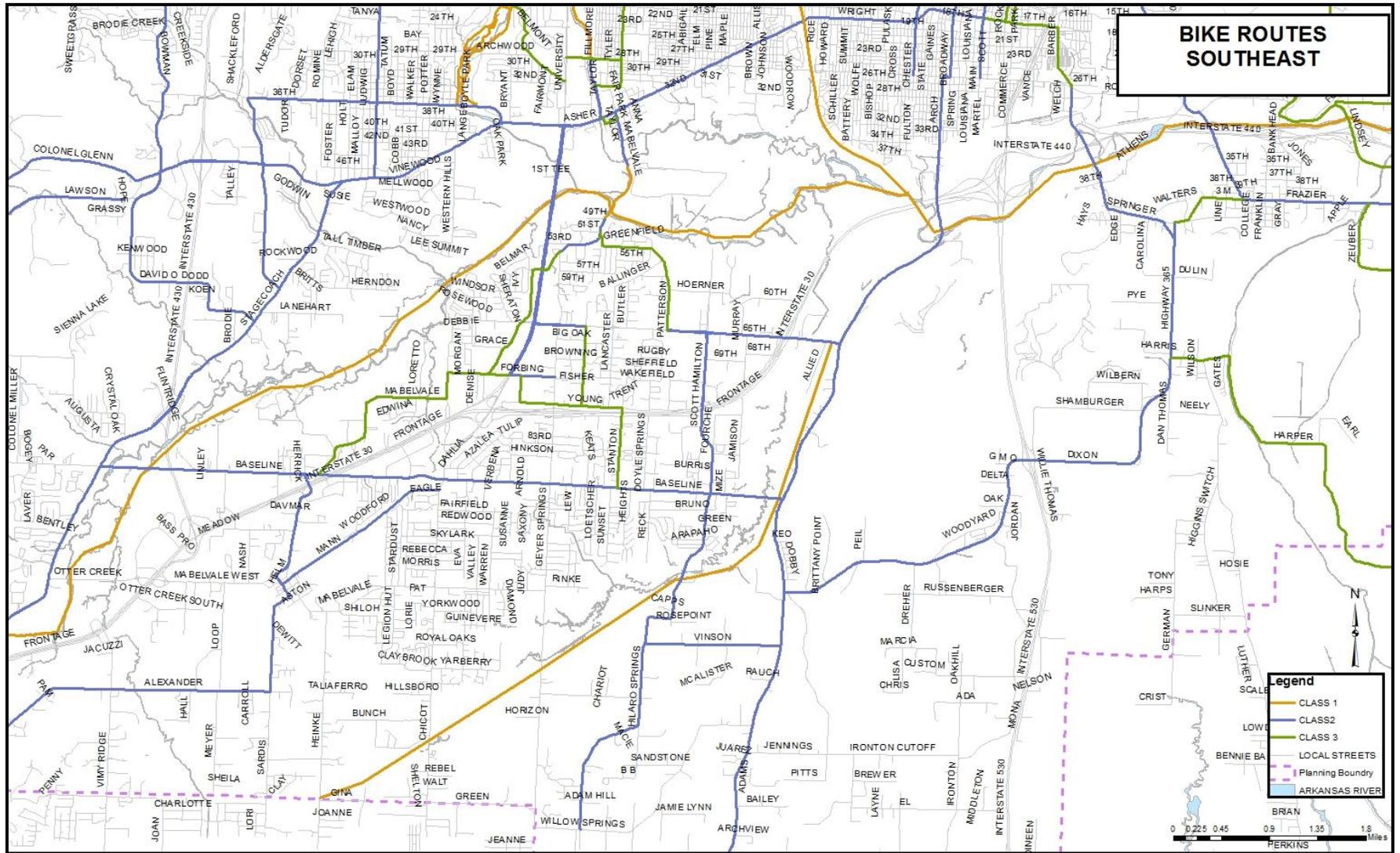


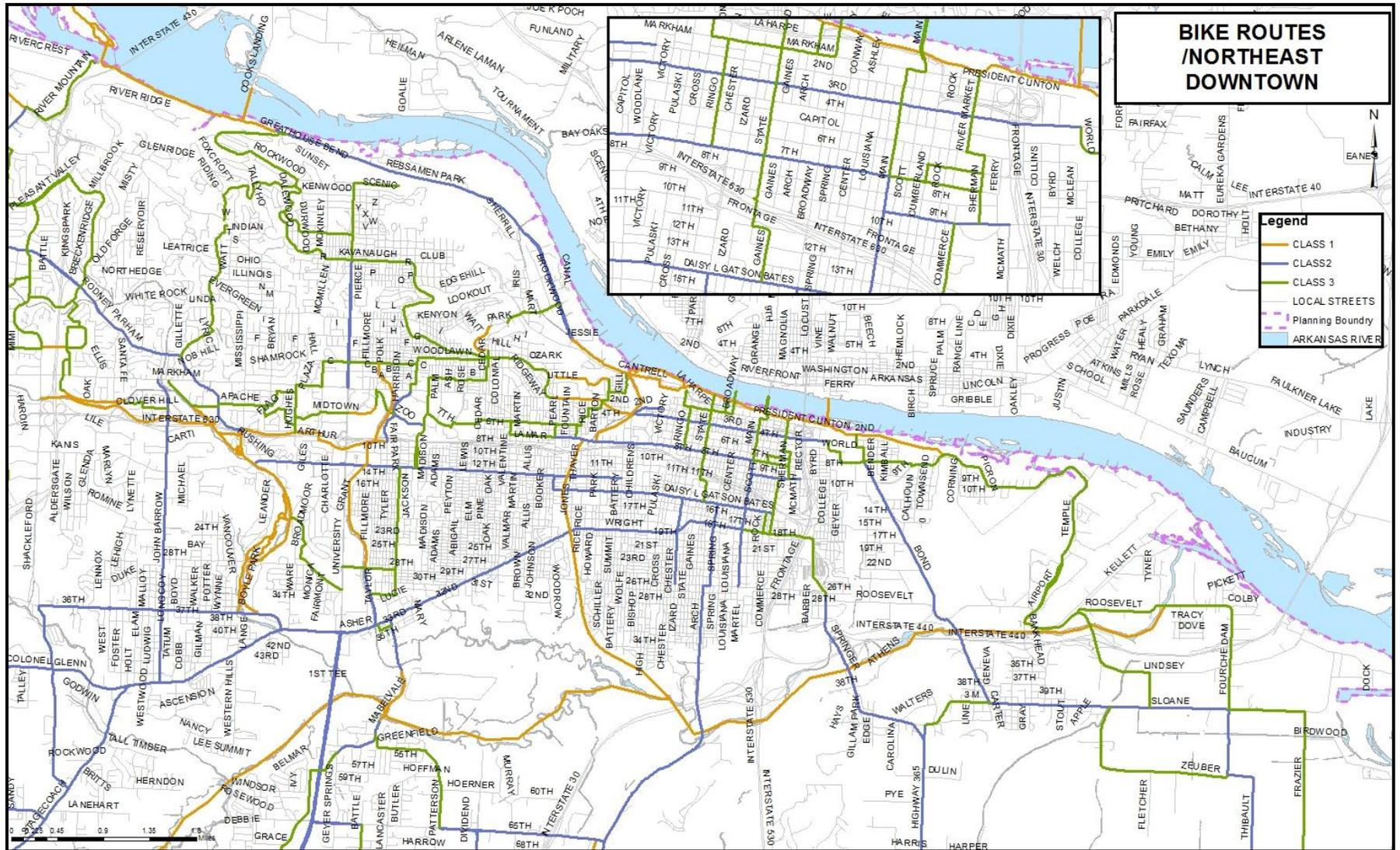
BIKE ROUTES WEST



BIKE ROUTES SOUTHWEST







Section 6: Glossary

For the purpose of this Plan, the following words and terms shall be used, interpreted and defined as set forth in this section. Definitions not expressly prescribed herein are to be construed in accordance with customary usage in municipal planning and engineering practice.

Activity Node (Center): A location where numerous automobile trips are generated. Examples of Activity Nodes are office complexes or regional malls (shopping areas).

Capacity: The maximum number of vehicles reasonably expected to traverse a point or segment of a lane or roadway during a specified period.

Center Line: An imaginary line midway between the edges of the street paving. This line may not be midway, if the street widening has been partially undertaken.

Class I Bike Paths: A route designated for the sole use of bicycles that is physically separated from vehicular lanes.

Class I (with road) Physically separated but within the road right-of-way.

Class I (without road) Physically separated but within its own easement or not associated with a road.

Class II Bike Lanes: A route designated by painted strips separating the bikeway from motor vehicle traffic and intended for the sole use by bicycles. Additional pavement markings and signage is required.

Class III Bicycle Route: A route designated with only signage for bicycle use. These routes use the existing vehicular area, with no physical separation.

Collector: Roads designed to connect traffic from Local Streets to Arterials or to activity centers, with the secondary function of providing access to adjoining property. Right of way is 60' unless otherwise stated. (See page 17)

Commercial Street: A Local public street which is abutted by non-residential or residential which is more intense than duplex or two-unit residential. These streets have the same design standard as a Collector. (See page 17.)

Continuous Left Turn Lane: The center lane of a multi-lane roadway that allows continuous left-hand turning movements in either direction.

Design Speed: A speed selected to determine various design of a street. It is also the maximum safe speed that can be maintained when conditions are so favorable that design features of the street govern.

Level of Service: A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed, delay, travel time, freedom to maneuver, traffic interruptions, comfort, convenience and safety.

- Local Street:** Roads designed to provide access to adjacent property with the movement of traffic being a secondary purpose. Right of way is 50' unless otherwise stated. (See page 20)
- Median:** A dividing strip, often landscaped, between opposing lanes of traffic.
- Minor Arterial:** Roads designed to provide the connections to and through an urban area. Right of way is 90 feet unless otherwise stated. (See page 13.)
- Neighborhood:** A residential area of several blocks with a particular character, inhabitation, identity.
- Pavement Width:** The surface portion of a street measured from the back of a curb or the edge of pavement on one side of a street to the back of the curb or edge of pavement on the other side of the street.
- Principal Arterial:** Roads designed to serve through traffic and to connect major traffic generators or activity centers within urbanized areas. Right of way of 110 feet is required unless otherwise stated. (See page 10.)
- Right-of-Way:** Land dedicated or deeded to the public and on which the public has a right to pass. Public rights-of-way may be used for public roads, sidewalks, bikeways, alleys, trails and utilities.
- Service Volume:** The maximum number of vehicles that can pass over a given section of lane or roadway during a specified time period while operating conditions are maintained in accordance with the selected or specified level of service.
- Shared Facilities:** All streets, unless otherwise stated (interstate freeways for example), should be considered "shared facilities" because bicycles are classified as vehicular which can be ridden on public roadways. Shared facilities have no pavement markings or signage.
- Sight Distance:** The distance required to allow drivers to see far enough ahead to assess developing conditions and take appropriate action such as safe passing, crossing, turning or stopping maneuvers.
- Subdivision Process:** The surveying, drawing, mapping, review and/or legal recording of a plat to indicate the preliminary or final division of a tract of land into lots or parcels. A subdivision is reviewed as required by the City Subdivision Ordinance.
- Through Traffic:** Non-local traffic that has both its origin and destination outside the area through which it is currently traveling.
- Urban Area:** An urban area contains a city (or cities) of 50,000 or more (central city) plus the closely surrounding settled incorporated and unincorporated areas that meet certain criteria of population, size, or density.
- Volume/Capacity (V/C) Ratio:** The volume/capacity ratio is the ratio of traffic demand or volume to capacity for a traffic facility.

Section 7: Amendments

<u>ORDINANCE NO.</u>	<u>DATE</u>	<u>CHANGE</u>
20,426	05/03/2011	Add 9 th Street extension as Minor Arterial
20,507	12/06/2011	Replace Sections 4, 5 and 6 (Bike Plan)
20,571	04/17/2012	Modified Design Standard Pinnacle Road
20,610	07/17/2012	Move Collector Patrick Country Road to Valley Ranch Drive
20,673	12/18/2012	Remove Wellington Plantation Drive Extension
20,679	01/22/2013	Modified Design Standard for Collector between Patrick Country to East Pinnacle
20,689	01/22/2013	Remove Beckenham Drive undeveloped portions
20,833	01/24/2014	Reclassify East 6 th Street (Bond to 9 th St.)
20,878	06/03/2014	Alternate Design Standard David O. Dodd
21,030	04/21/2015	Revise requirements for dedication, construction and marking of bicycle paths and routes
21,022	04/21/2015	Remove Collector at NEC of Bowman Road and 36 th Street