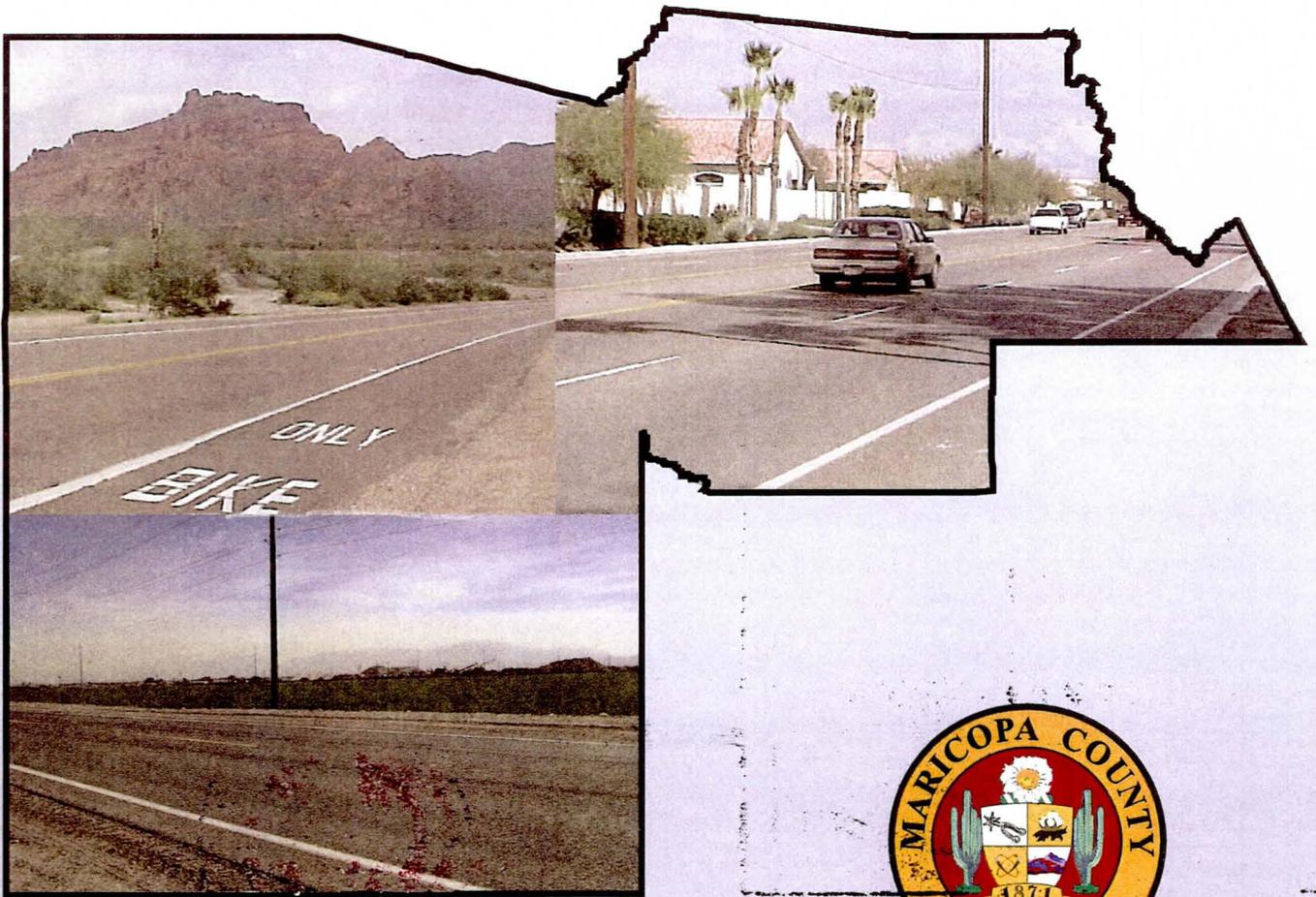


MARICOPA COUNTY MAJOR STREETS AND ROUTES PLAN

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STREET CLASSIFICATION ATLAS



Adopted April 18, 2001

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**MARICOPA COUNTY
MAJOR STREETS AND ROUTES PLAN
STREET CLASSIFICATION ATLAS**

Prepared for

Maricopa County Department of Transportation

By

Lima & Associates

Adopted April 18, 2001

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MARICOPA COUNTY MAJOR STREETS AND ROUTES PLAN STREET CLASSIFICATION ATLAS

BACKGROUND

On December 17, 1997, the Transportation System Plan (TSP) for Maricopa County was adopted. The TSP calls for the preparation of a Maricopa County Major Streets and Routes Plan (MSRP) to designate and map street widths for all primary and secondary roads in the Maricopa County roadway system.

The MSRP includes two components:

- This Street Classification Atlas that designates the future functional classification for 539 miles of the Primary Roadway System and the 1,281 miles in the Secondary Roadway System that are in the County Road Inventory System
- A Policy Document to support the Street Classification Atlas

GEOMETRIC DESIGN STANDARDS

The functional classification system used by Maricopa County to classify County streets includes six classifications: expressway, principal arterial, minor arterial, major collector, minor collector, and local street. The cross-section for each classification is shown graphically in the six figures, starting on page 5.

GEOMETRIC DESIGN CONSIDERATIONS

Urban or Rural Designation

Each figure includes cross-sections for rural and urban conditions, the difference being the urban sections include curb-and-gutter. Dimensions on urban sections are measured to the face of curb.

Typically, Maricopa County will build a rural section (without curb-and-gutter) unless one of the two following situations are present:

- The subject section is a continuation of a roadway with curb-and-gutter.
- A municipality is planning to annex the roadway and pays for the upgrading of the roadway to an urban section.

A determination of the appropriate section (urban or rural) for each roadway will be made as part of the Candidate Assessment Report or Design Concept Report phase of project

development. Depending upon existing conditions, an interim urban roadway, without curb-and-gutter, may be constructed.

Based upon growth projections for Maricopa County, adopted by the Maricopa Association of Governments (MAG), it is anticipated that, with some exceptions, all principal and minor arterial streets within the area east of Perryville Road and north of Hunt Highway will be urban and, thus, have curb-and-gutter by the year 2020. A density of one or more dwelling units per acre was used to define this area. The exceptions are:

- Streets within the Gila River Indian Community
- Streets within the Salt River Pima-Maricopa Native American Community
- Streets within the Tonto National Forest
- MC 85
- Loop 303

Right-of-Way Width

The right-of-way width ranges from 91.4 meters (300 feet) for the expressway classification to 15.2 meters (50 feet) for local streets. Principal and minor arterials require 39.6 meters (130 feet), major collectors require 24.4 meters (80 feet), and minor collectors require 18.2 meters (60 feet). In order to maintain a 9.1 meters (30 feet) clear zone on rural principal arterials without curb-and gutter, 45.7 meters (150 feet) of right-of-way will be required.

Additional right-of-way may be required at some locations:

- Intersections: the Maricopa County Department of Transportation (MCDOT) Roadway Design Manual should be consulted for additional right-of-way requirements at intersections to accommodate turn lanes and bus pullouts.
- Overlays: maps identifying scenic/recreational, public transportation, AZTech, oversized load, school safety, and Roads of Regional Significance routes should be consulted to determine if additional right-of-way is required. The overlay maps are included in the Appendix to this Atlas.
- Mountainous terrain: additional right-of-way may be required to satisfy design considerations in mountainous terrain.

Number of Lanes

The basic width for expressways and principal arterials is six lanes plus a median, although expressways may have more lanes. Minor arterials have five lanes and major collectors have three lanes, both including a two-way-left-turn-lane. Minor collectors and locals each have two lanes.

Based upon a traffic study, the number of lanes constructed as part of the initial project may be less. The primary criteria to be used in determining the appropriate number of lanes is that the roadway should handle the twenty-year forecast traffic at Level of Service C or better.

Bicycle Lanes

Bicycle lanes are included in the standard cross-sections for all principal arterial, minor arterial, and major collector streets. Bicycles are also accommodated on minor collector and local streets with wide outside lanes, possibly sharing a parking lane. Bicycles are not allowed on expressways throughout the urban area.

Bus Pullouts

Right-of-way for bus pullouts and shelters should be preserved at all intersections of all principal arterial/principal arterial, principal arterial/minor arterial, and minor arterial/minor arterial intersections.

STREET CLASSIFICATION

The Maricopa County Street Classification system is presented on a series of nineteen maps covering the entire County. The map page index is presented on page 10, followed by the nineteen classification maps. As the County develops, all section line roads, even those not identified in the Atlas, should be constructed as arterial streets.

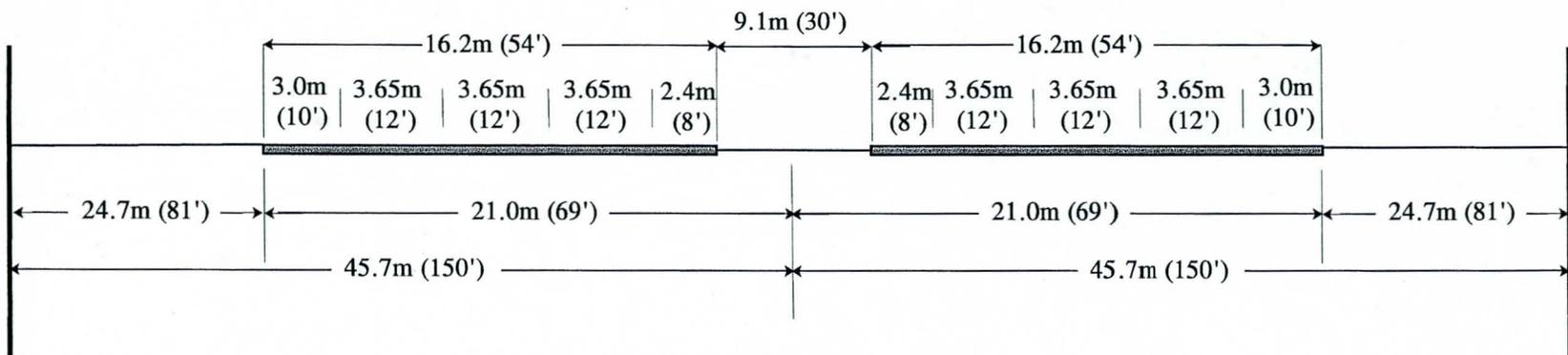
The County classification system should be reviewed and modified every four years, or if necessary, as cities and towns update their classification systems.

County Island Roadways

County islands pose a unique problem in that they create short segments of County-owned roadways that do not connect to other County roadways. Rather, they connect roadways owned and operated by local municipalities. The following County island roadway policy is adopted as part of the Major Streets and Routes Plan.

County Island Roadway Policy

All County island roadways will be classified and right-of-way will be purchased to match the classification assigned by the surrounding municipality. In the case of a County island roadway segment bordered by two different municipalities, either at its end points or on either side of the segment, the classification of the adjacent jurisdiction having the larger right-of-way width will be assigned.

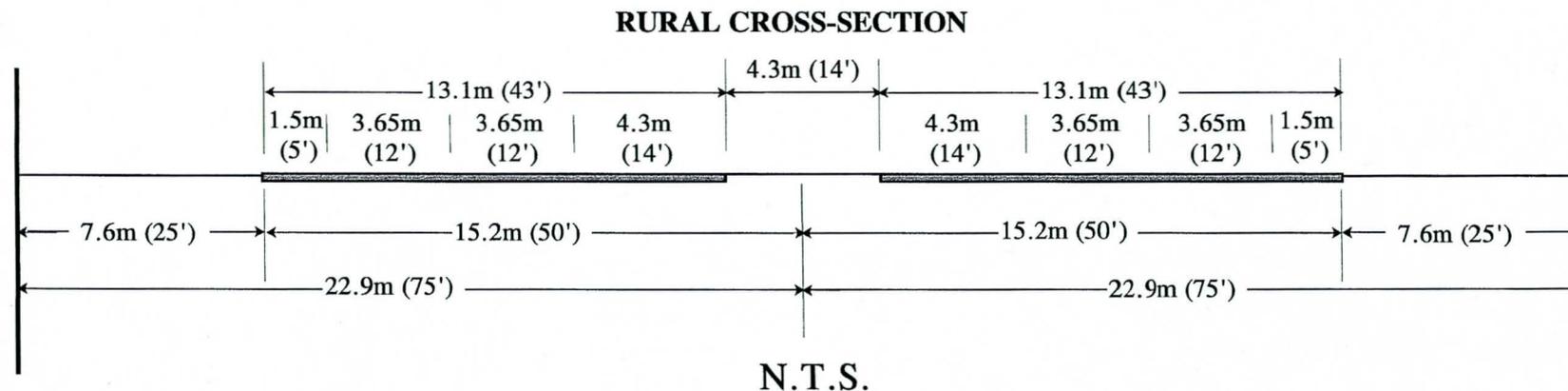
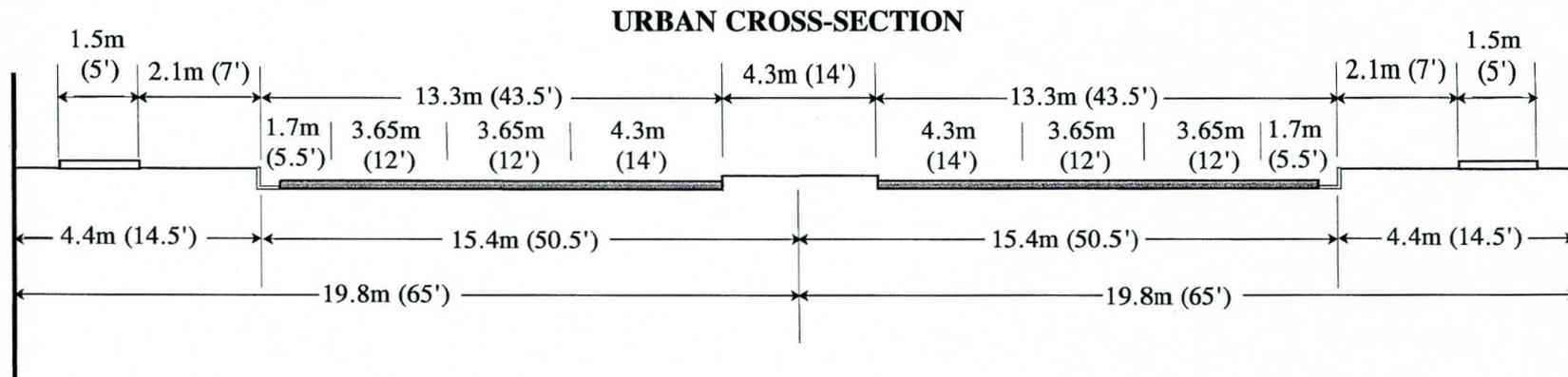


N.T.S.

Notes: * Dimensions measured from face-of-curb or edge of pavement
 * Interim roadway width to be determined by traffic study

Maricopa County Department of Transportation
 Geometric Design Standards

EXPRESSWAY

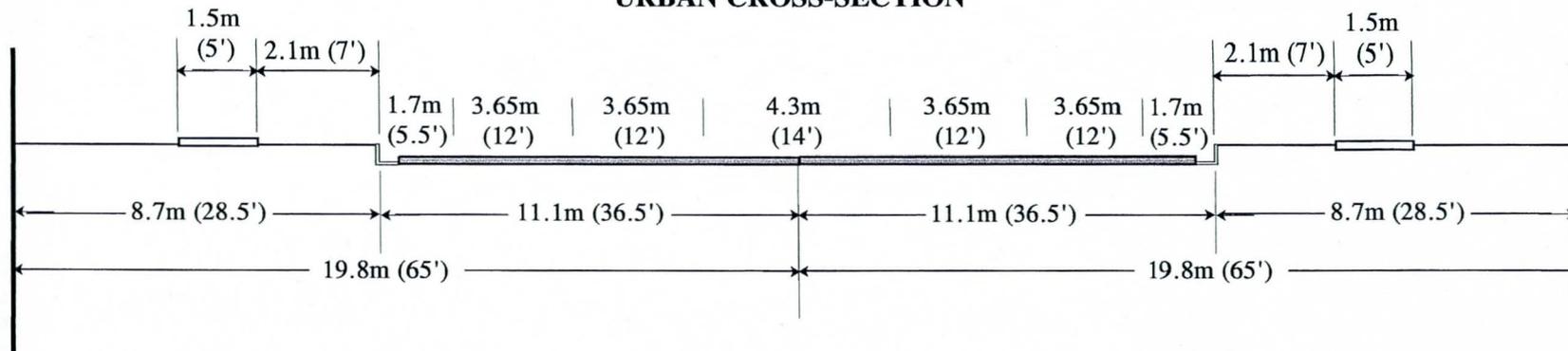


Notes: * Dimensions measured from face-of-curb or edge of pavement
 * Interim roadway width to be determined by traffic study

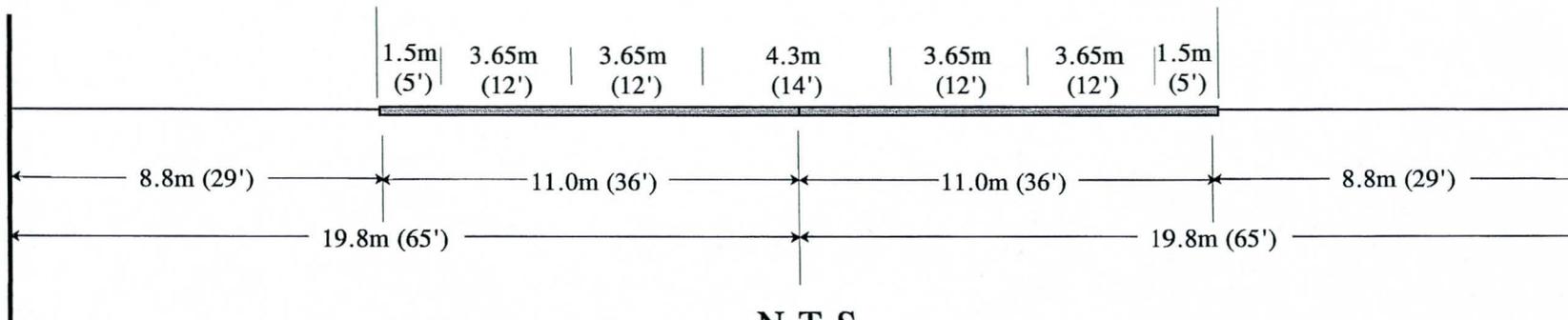
Maricopa County Department of Transportation
 Geometric Design Standards

PRINCIPAL ARTERIAL

URBAN CROSS-SECTION



RURAL CROSS-SECTION



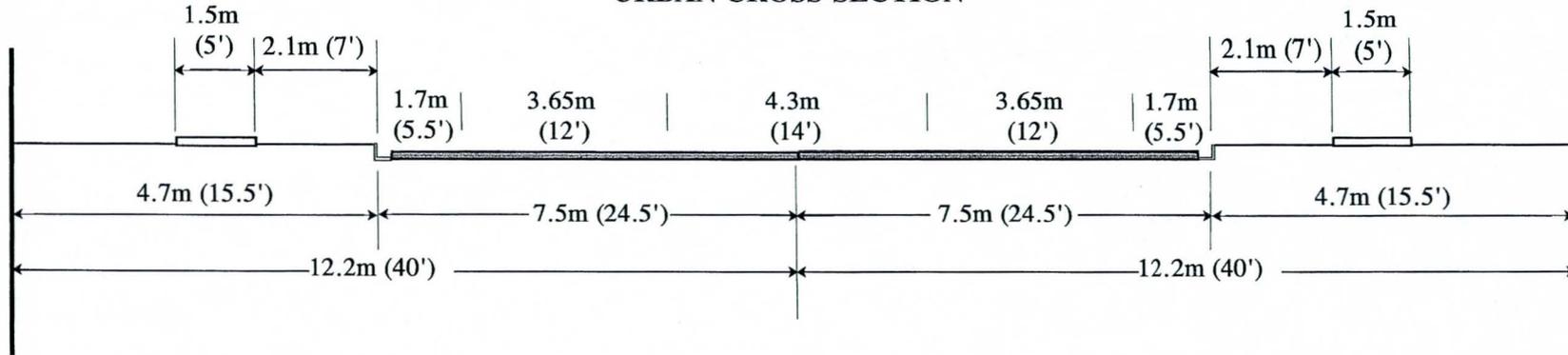
N.T.S.

Notes: * Dimensions measured from face-of-curb or edge of pavement
 * Interim roadway width to be determined by traffic study

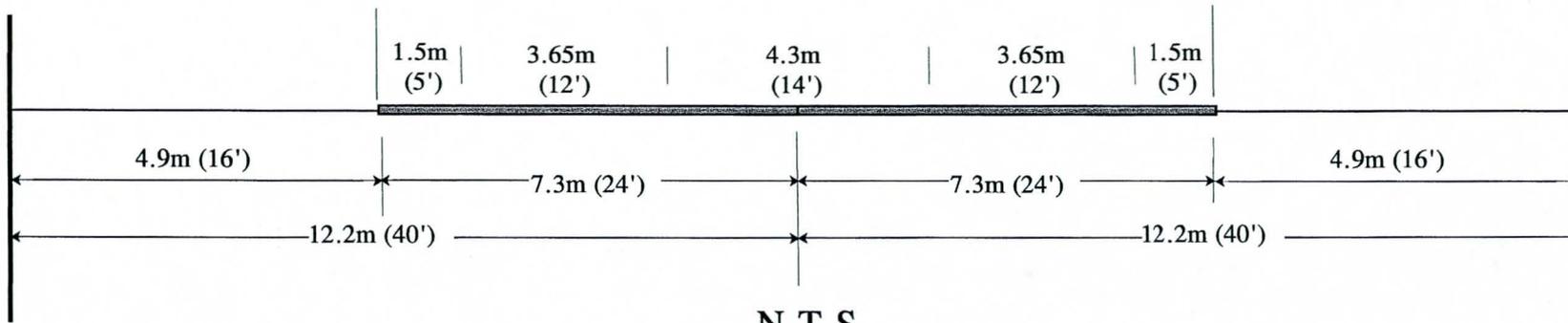
Maricopa County Department of Transportation
 Geometric Design Standards

MINOR ARTERIAL

URBAN CROSS-SECTION



RURAL CROSS-SECTION



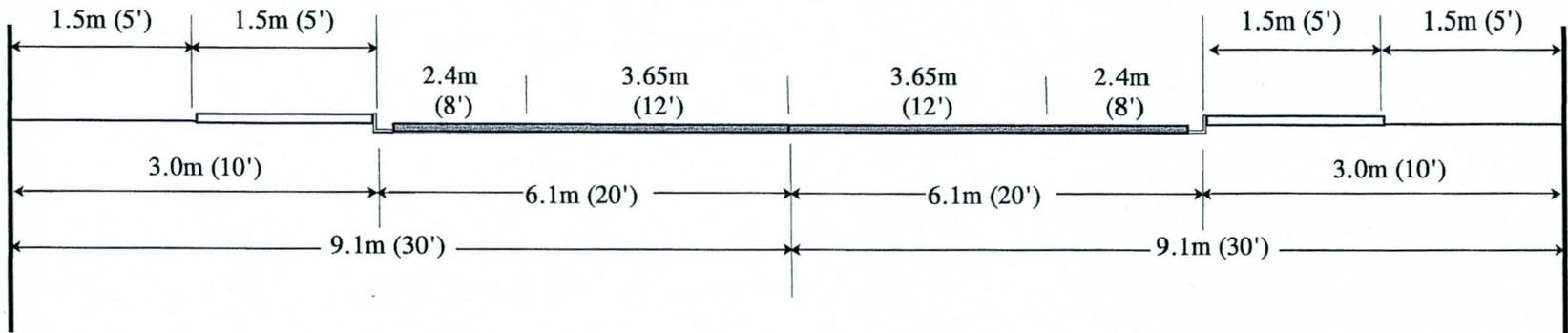
N.T.S.

Notes: * Dimensions measured from face-of-curb or edge of pavement
 * Interim roadway width to be determined by traffic study

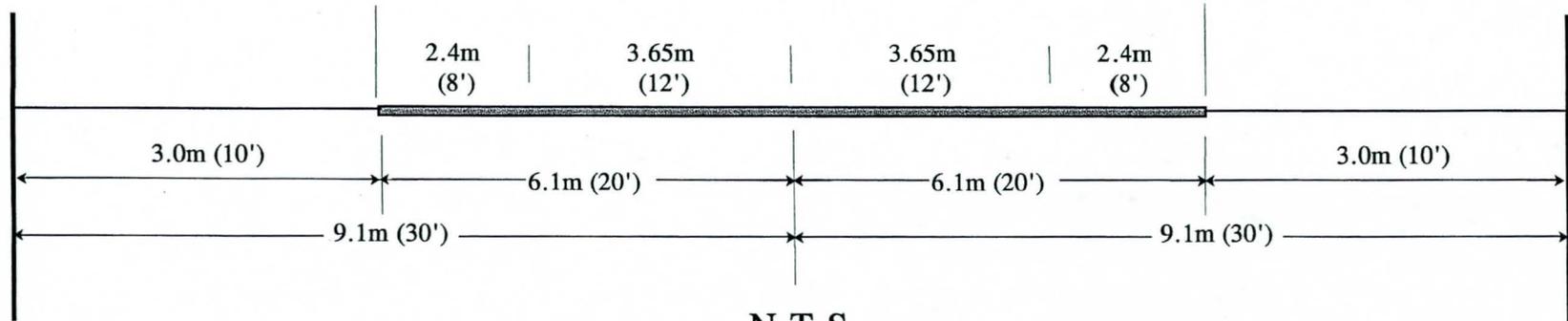
Maricopa County Department of Transportation
 Geometric Design Standards

MAJOR COLLECTOR

URBAN CROSS-SECTION



RURAL CROSS-SECTION



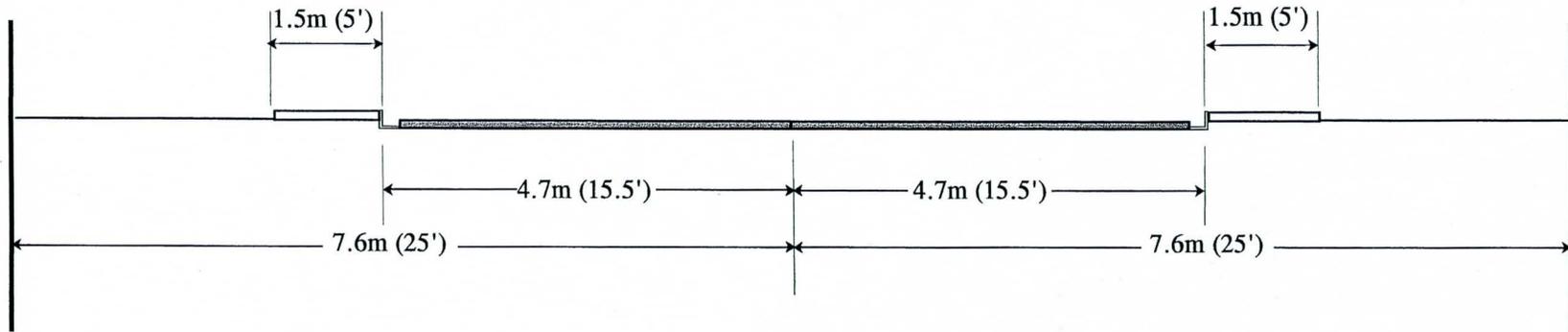
N.T.S.

Notes: * Dimensions measured from face-of-curb or edge of pavement
 * Interim roadway width to be determined by traffic study

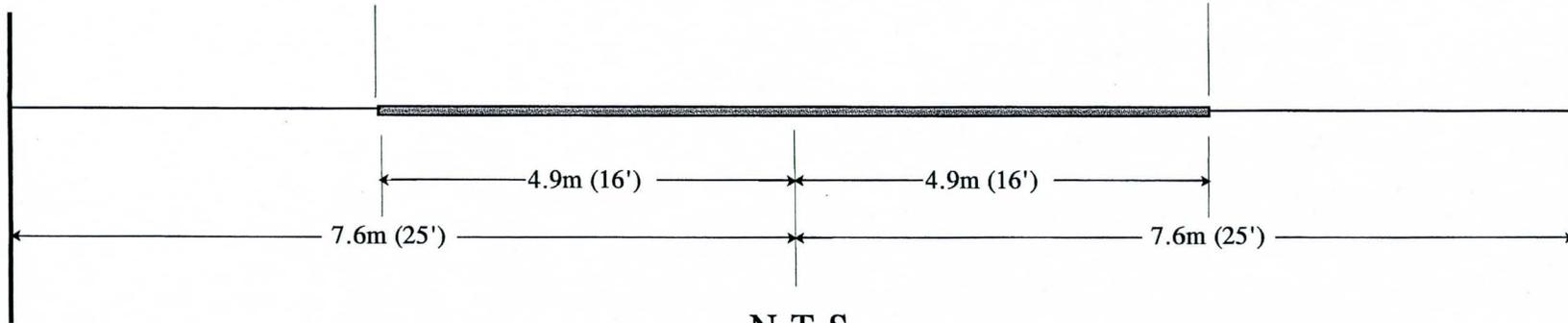
Maricopa County Department of Transportation
 Geometric Design Standards

MINOR COLLECTOR

URBAN CROSS-SECTION



RURAL CROSS-SECTION



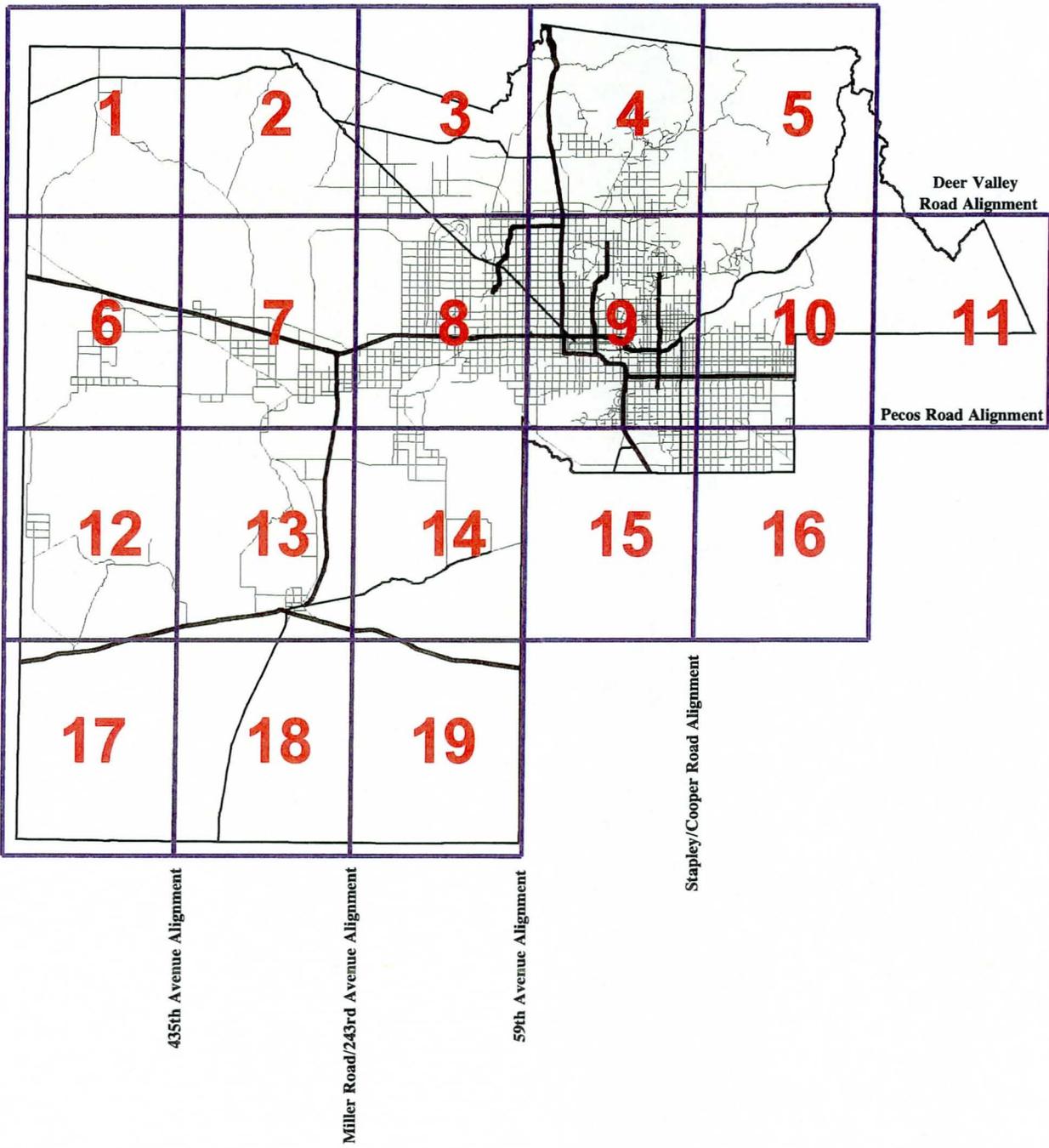
N.T.S.

Notes: * Dimensions measured from face-of-curb or edge of pavement
* Interim roadway width to be determined by traffic study

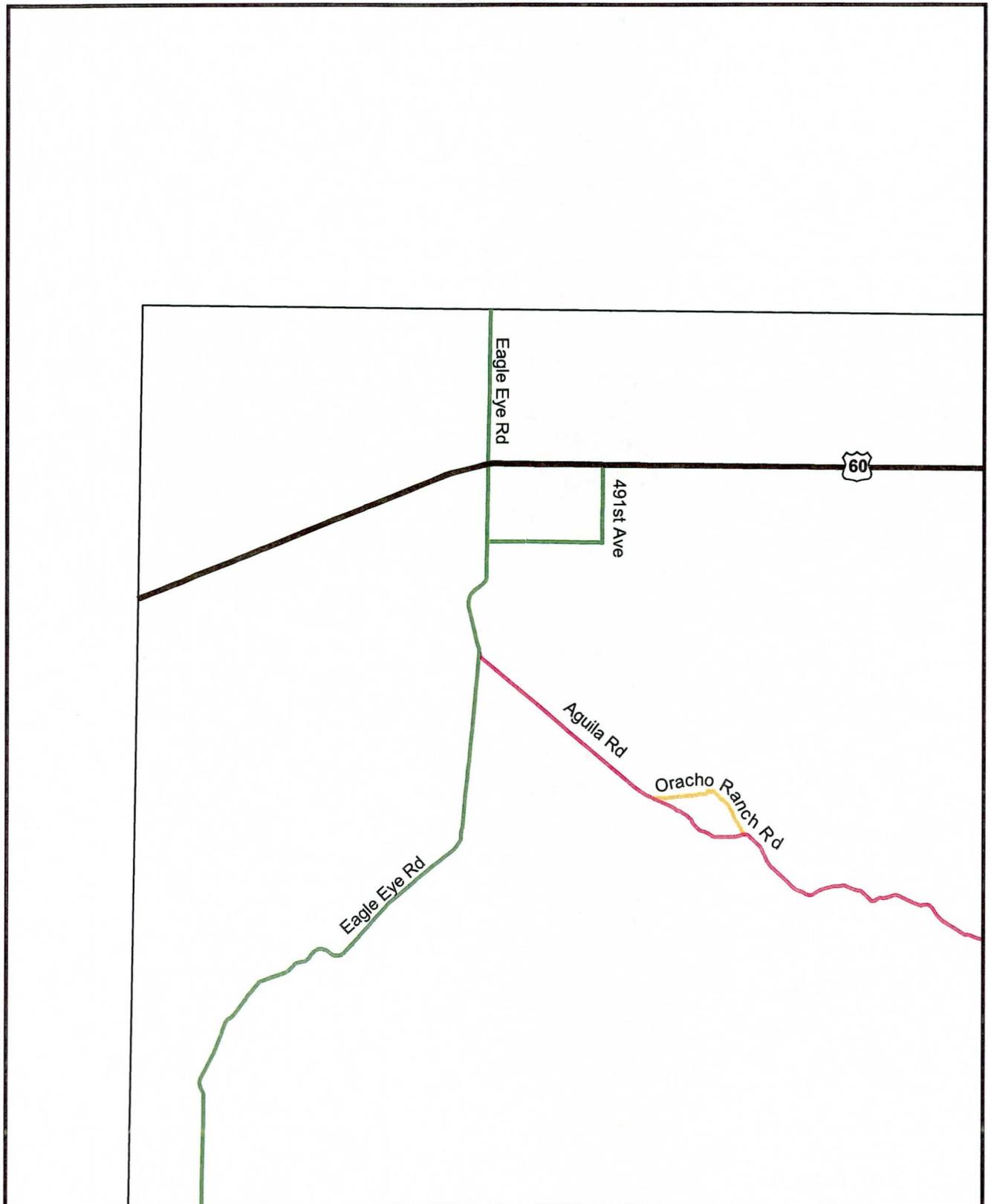
Maricopa County Department of Transportation
Geometric Design Standards

LOCAL STREET

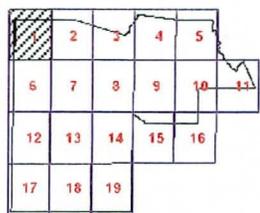
MAP INDEX



MAP 1

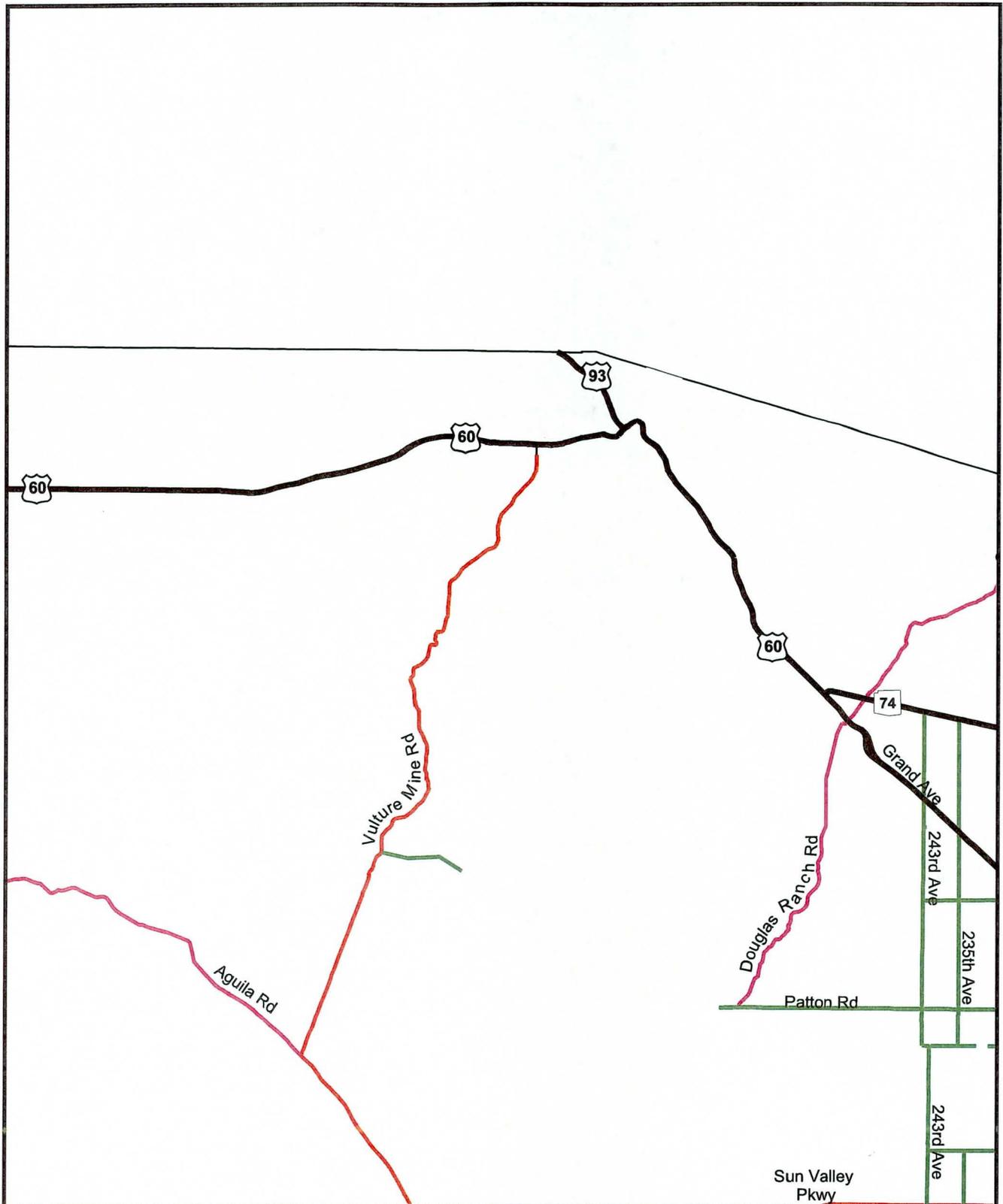


MCDOT CLASSIFICATION		CITY CLASSIFICATION	
	Freeway/Expressway		Freeway/Expressway (Future)
	Principal Arterial		Principal Arterial (Future)
	Minor Arterial		Minor Arterial (Future)
	Major Collector		Principal Arterial
	Minor Collector		Minor Arterial
	Incorporated		Major Collector
			Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 2

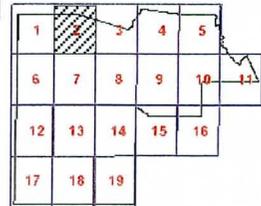


MCDOT CLASSIFICATION

- | | | | |
|--|--------------------|--|-----------------------------|
| | Freeway/Expressway | | Freeway/Expressway (Future) |
| | Principal Arterial | | Principal Arterial (Future) |
| | Minor Arterial | | Minor Arterial (Future) |
| | Major Collector | | |
| | Minor Collector | | |
| | Incorporated | | |

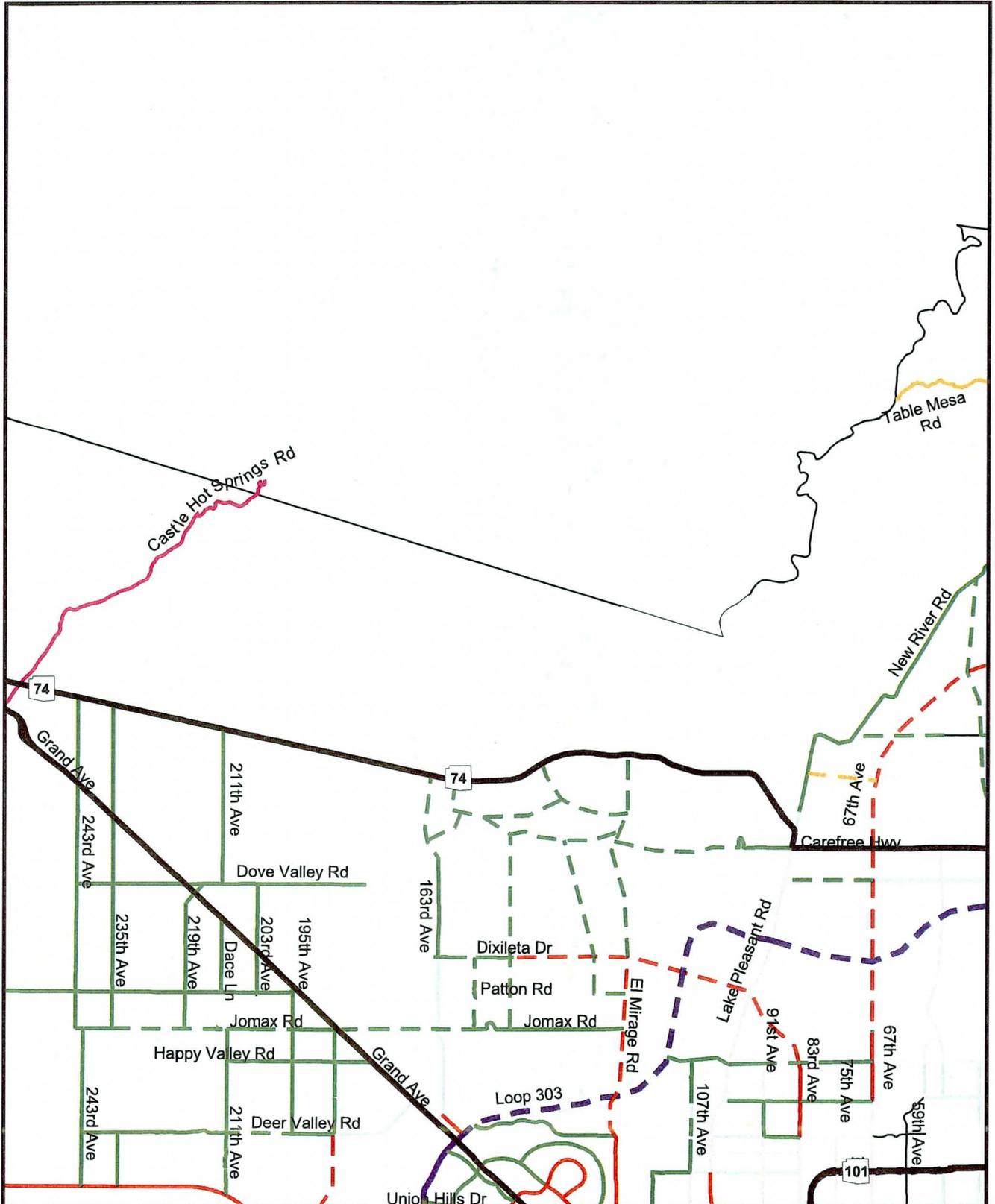
CITY CLASSIFICATION

- | | |
|--|--------------------|
| | Principal Arterial |
| | Minor Arterial |
| | Major Collector |
| | Minor Collector |



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 3

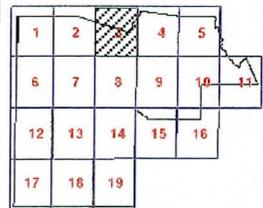


MCDOT CLASSIFICATION

- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Incorporated
- Freeway/Expressway (Future)
- Principal Arterial (Future)
- Minor Arterial (Future)

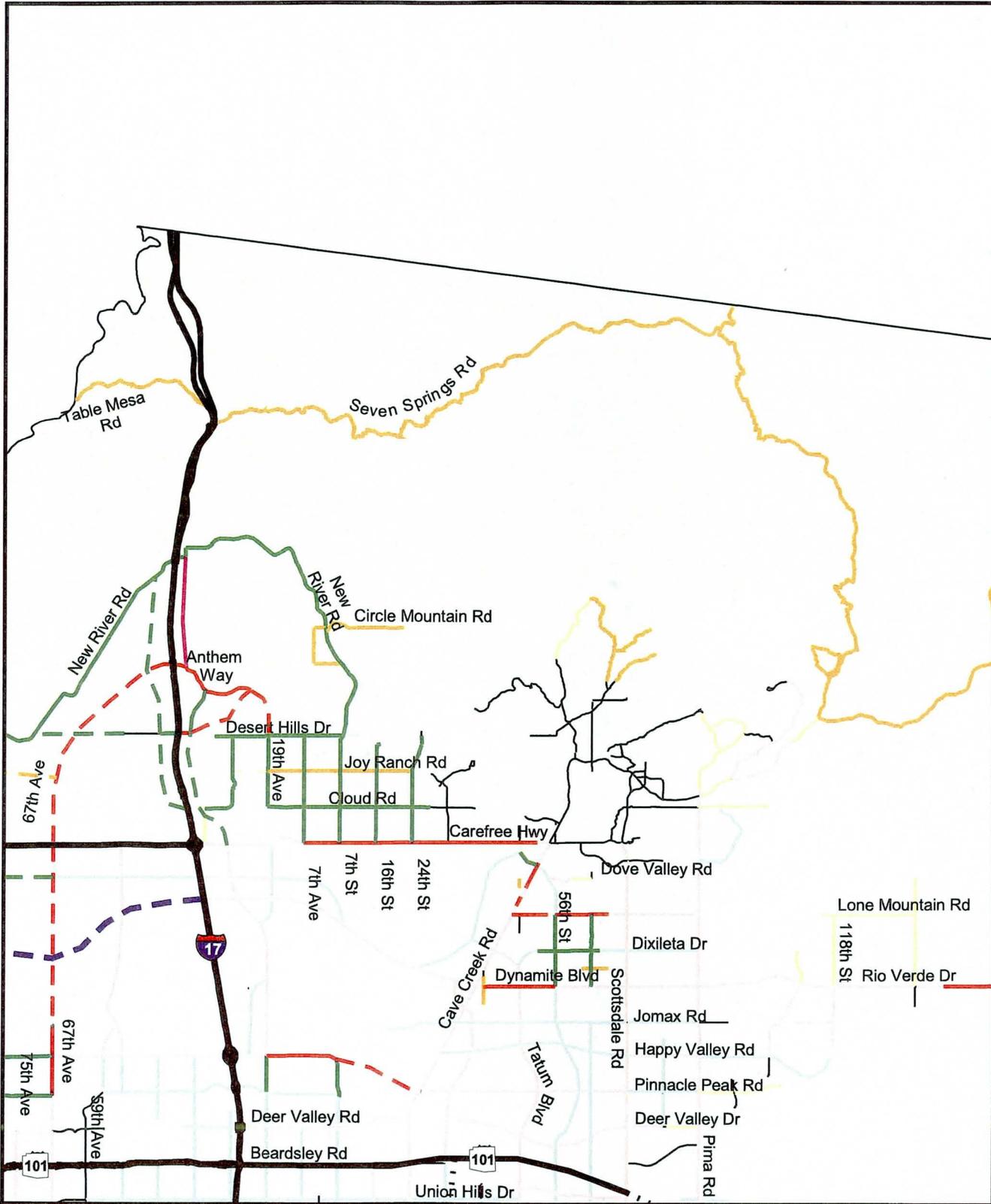
CITY CLASSIFICATION

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 4

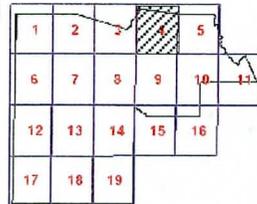


MCDOT CLASSIFICATION

- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Incorporated
- Freeway/Expressway (Future)
- Principal Arterial (Future)
- Minor Arterial (Future)

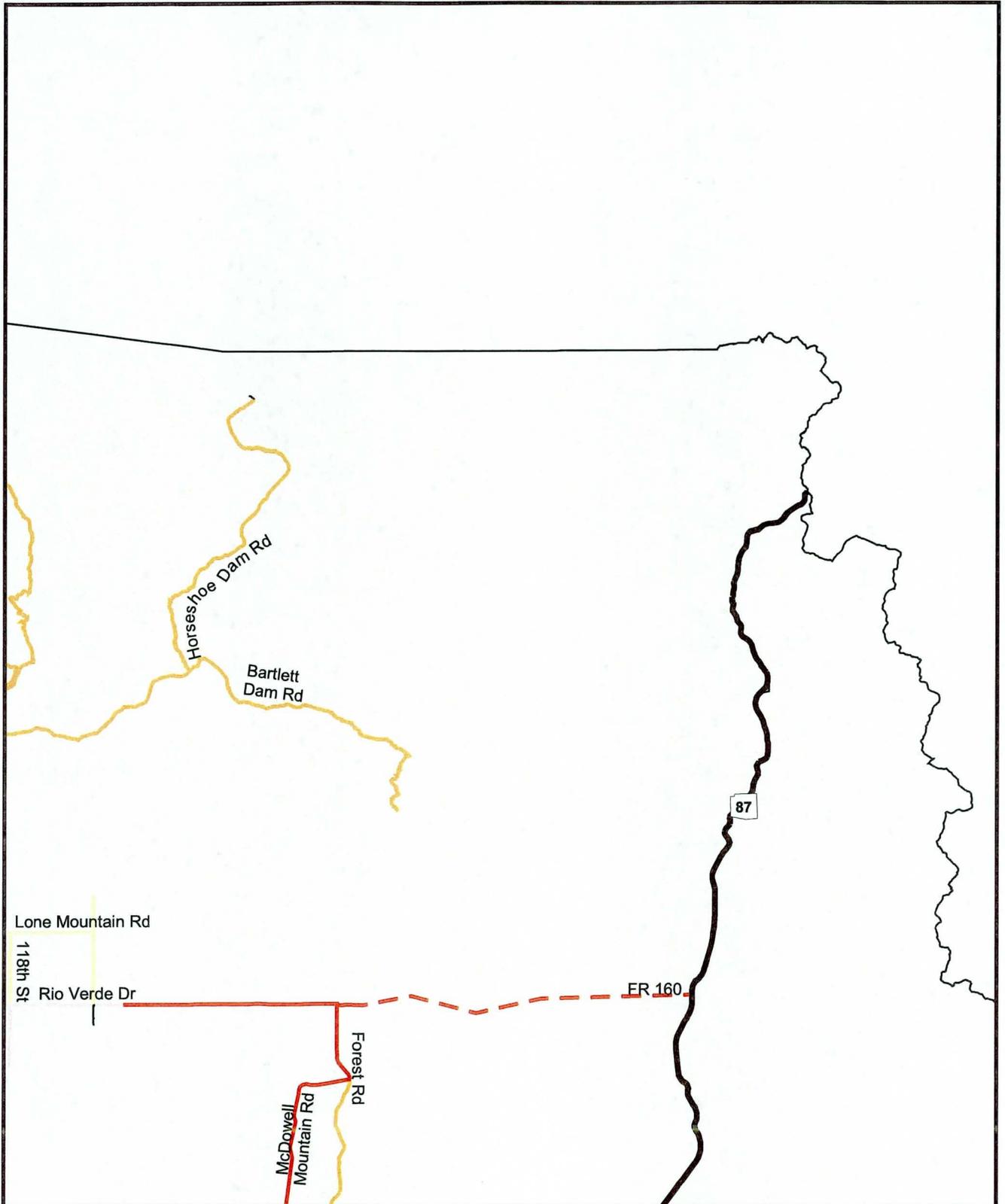
CITY CLASSIFICATION

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 5

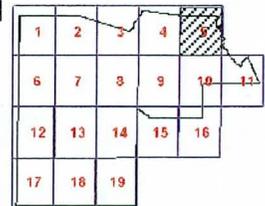


MCDOT CLASSIFICATION

-  Freeway/Expressway
-  Principal Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector
-  Incorporated
-  Freeway/Expressway (Future)
-  Principal Arterial (Future)
-  Minor Arterial (Future)

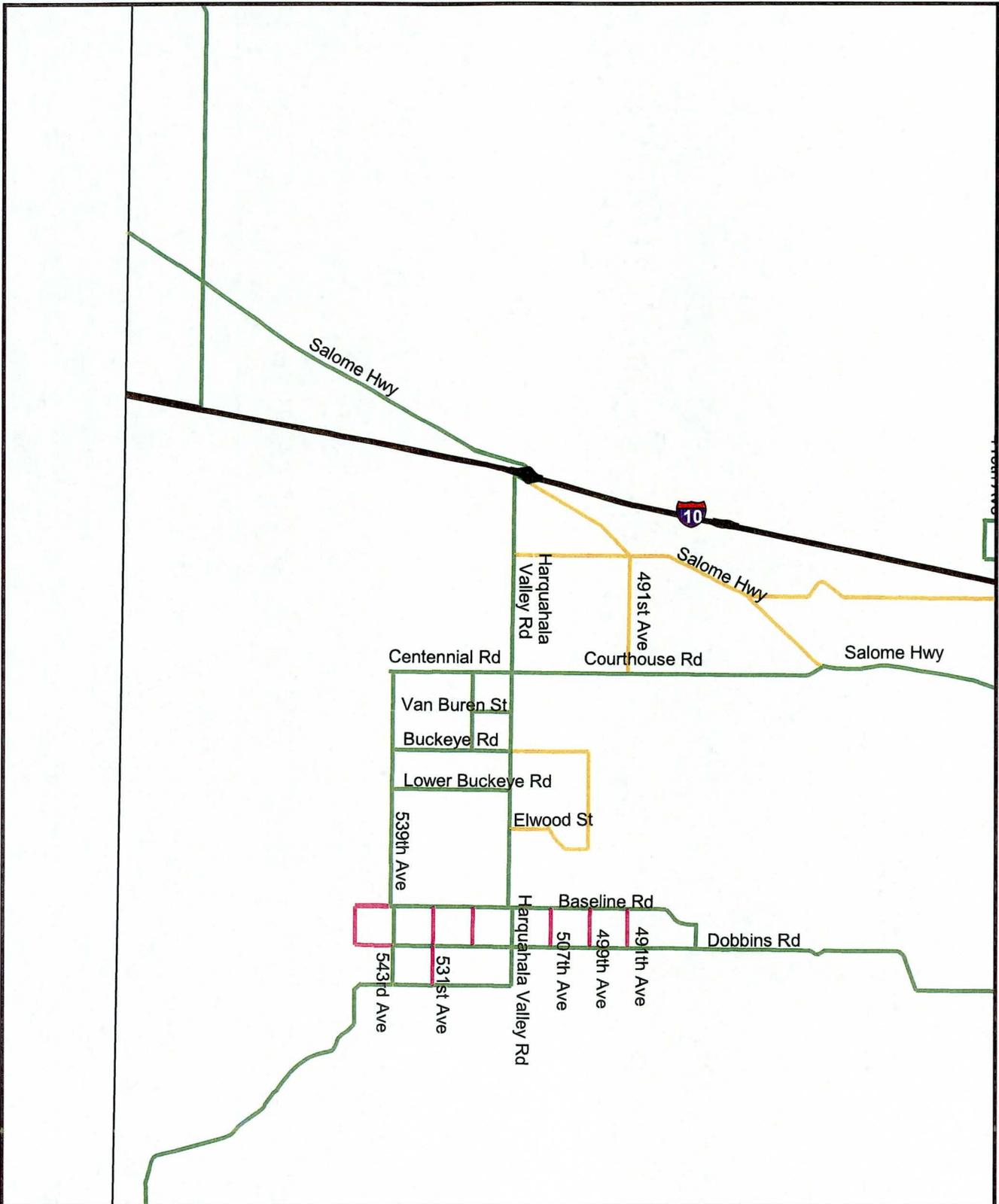
CITY CLASSIFICATION

-  Principal Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

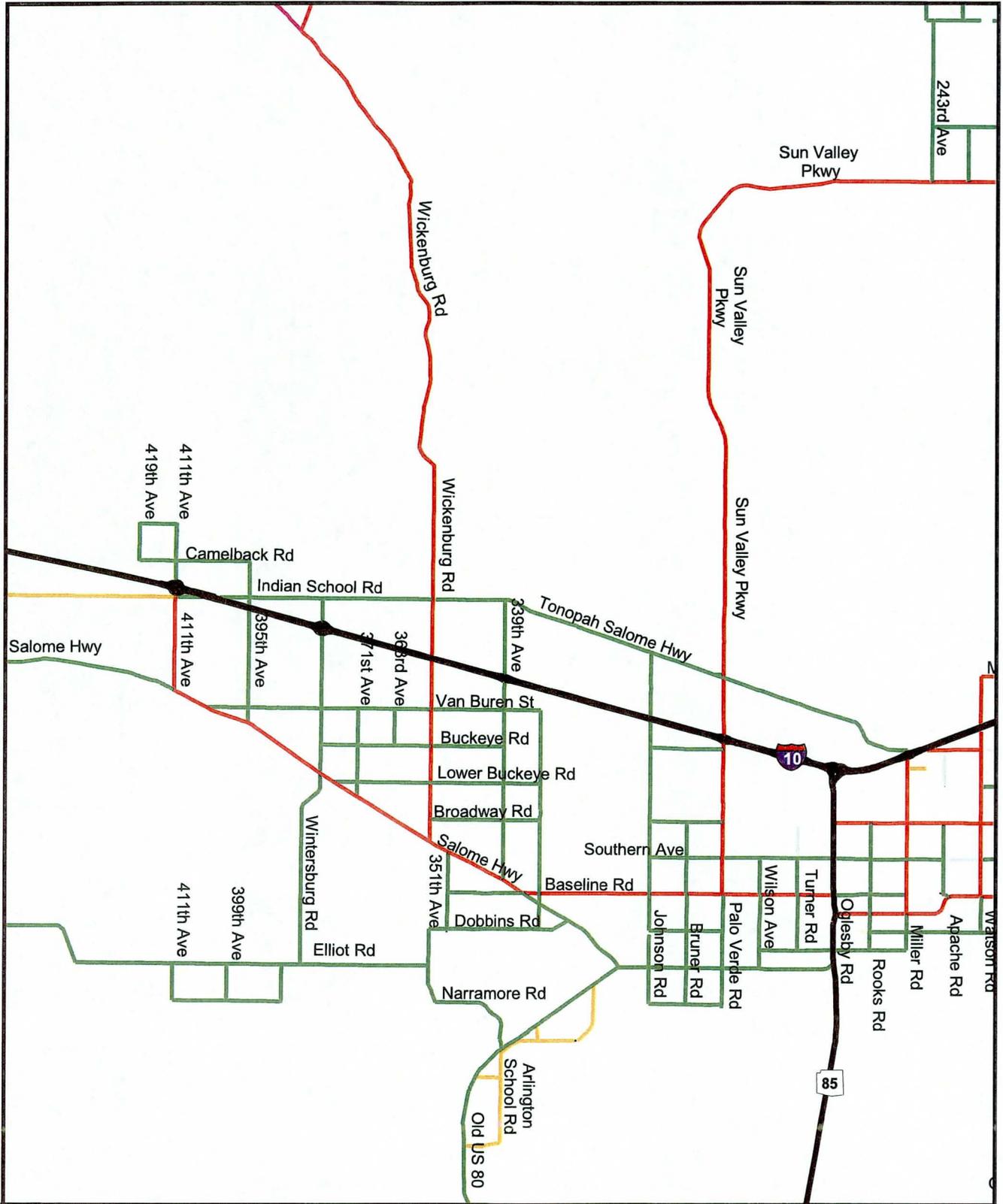
MAP 6



MCDOT CLASSIFICATION		CITY CLASSIFICATION	
Freeway/Expressway	Freeway/Expressway (Future)	Principal Arterial	
Principal Arterial	Principal Arterial (Future)	Minor Arterial	
Minor Arterial	Minor Arterial (Future)	Major Collector	
Major Collector		Minor Collector	
Minor Collector			
Incorporated			

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 7

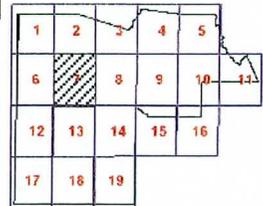


MCDOT CLASSIFICATION

- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Incorporated
- Freeway/Expressway (Future)
- Principal Arterial (Future)
- Minor Arterial (Future)

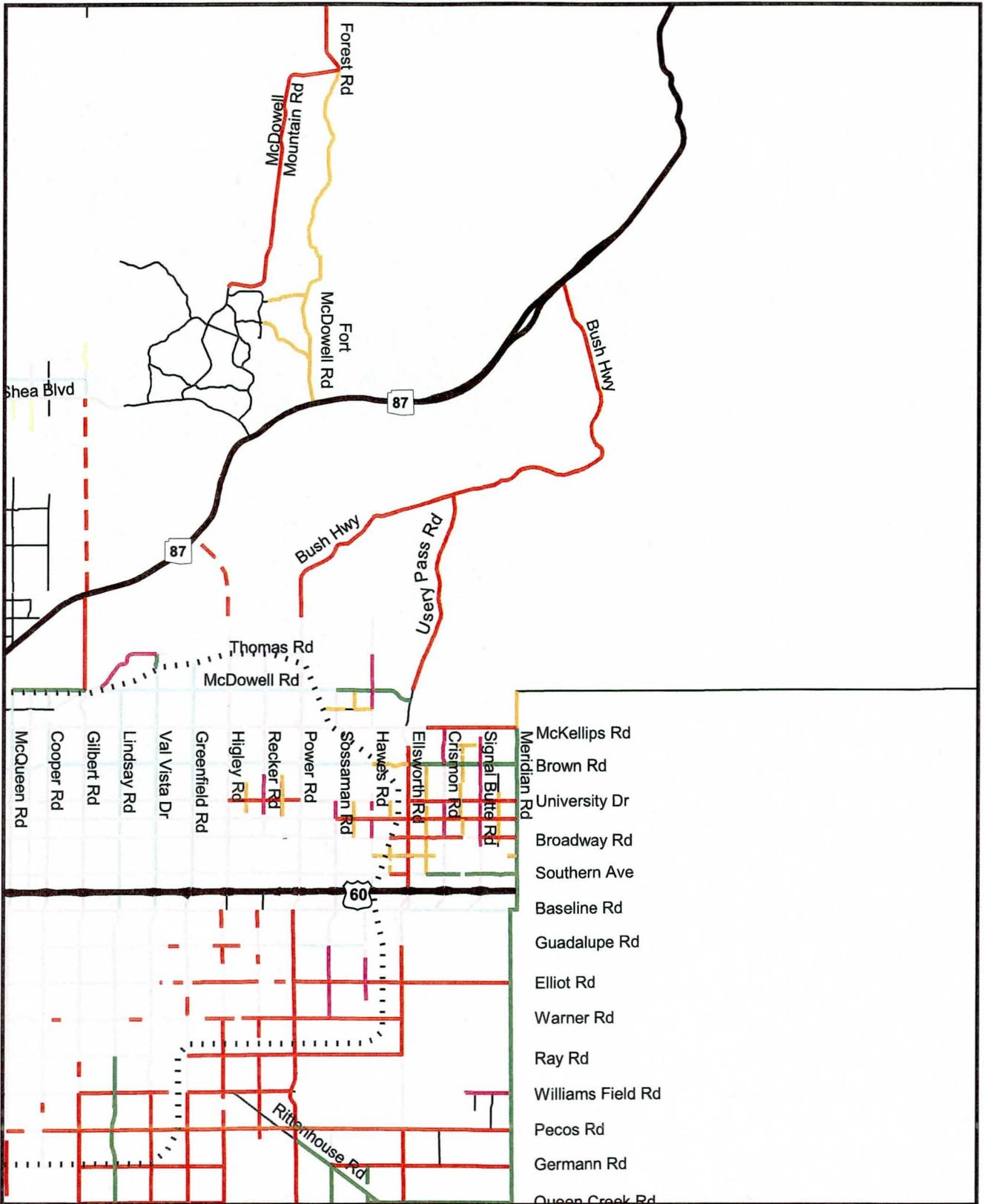
CITY CLASSIFICATION

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector



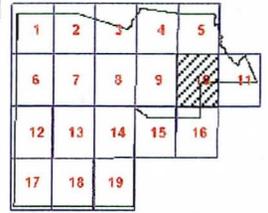
Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 10



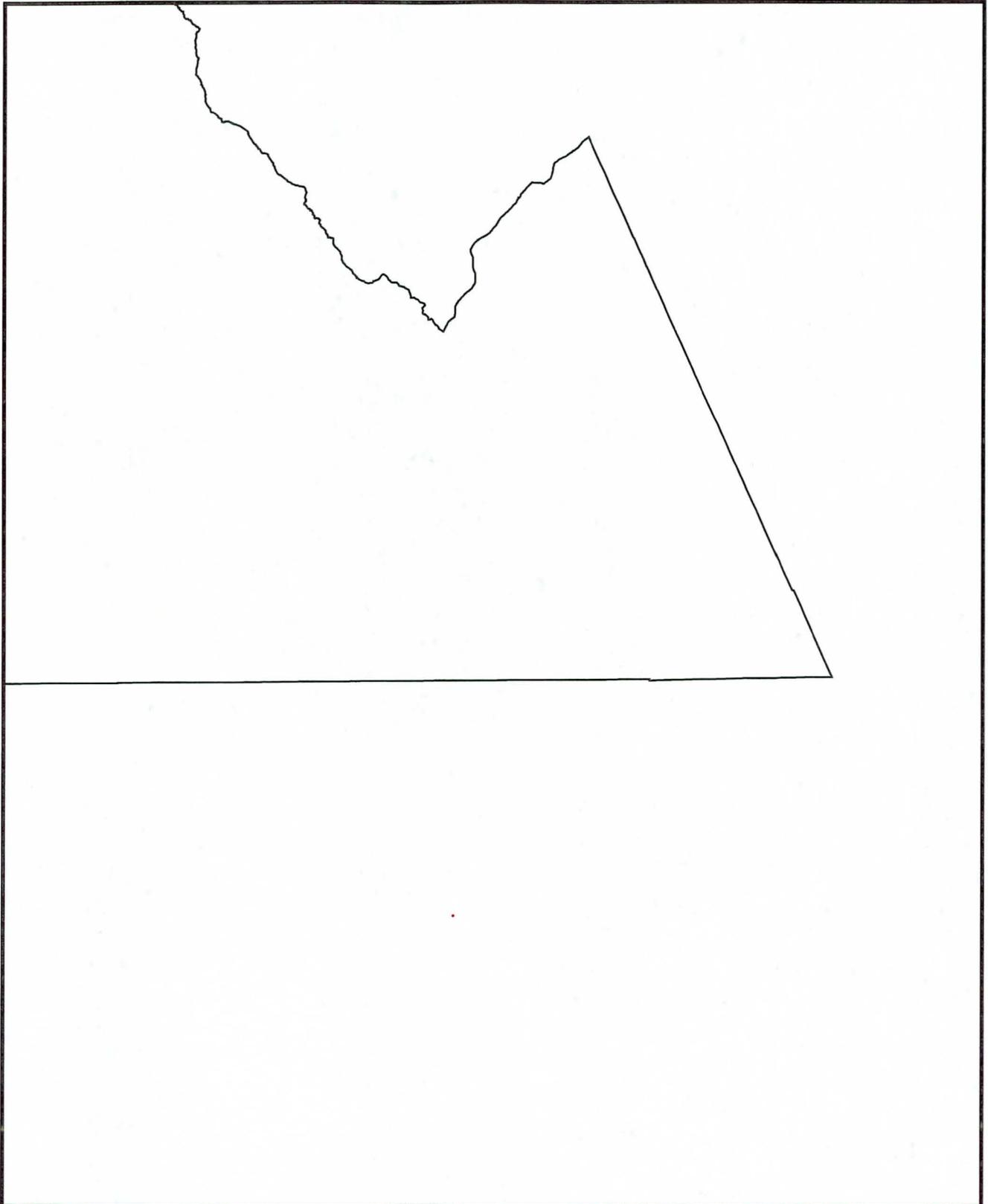
- MCDOT CLASSIFICATION**
- Freeway/Expressway
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Incorporated
 - Freeway/Expressway (Future)
 - Principal Arterial (Future)
 - Minor Arterial (Future)

- CITY CLASSIFICATION**
- Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

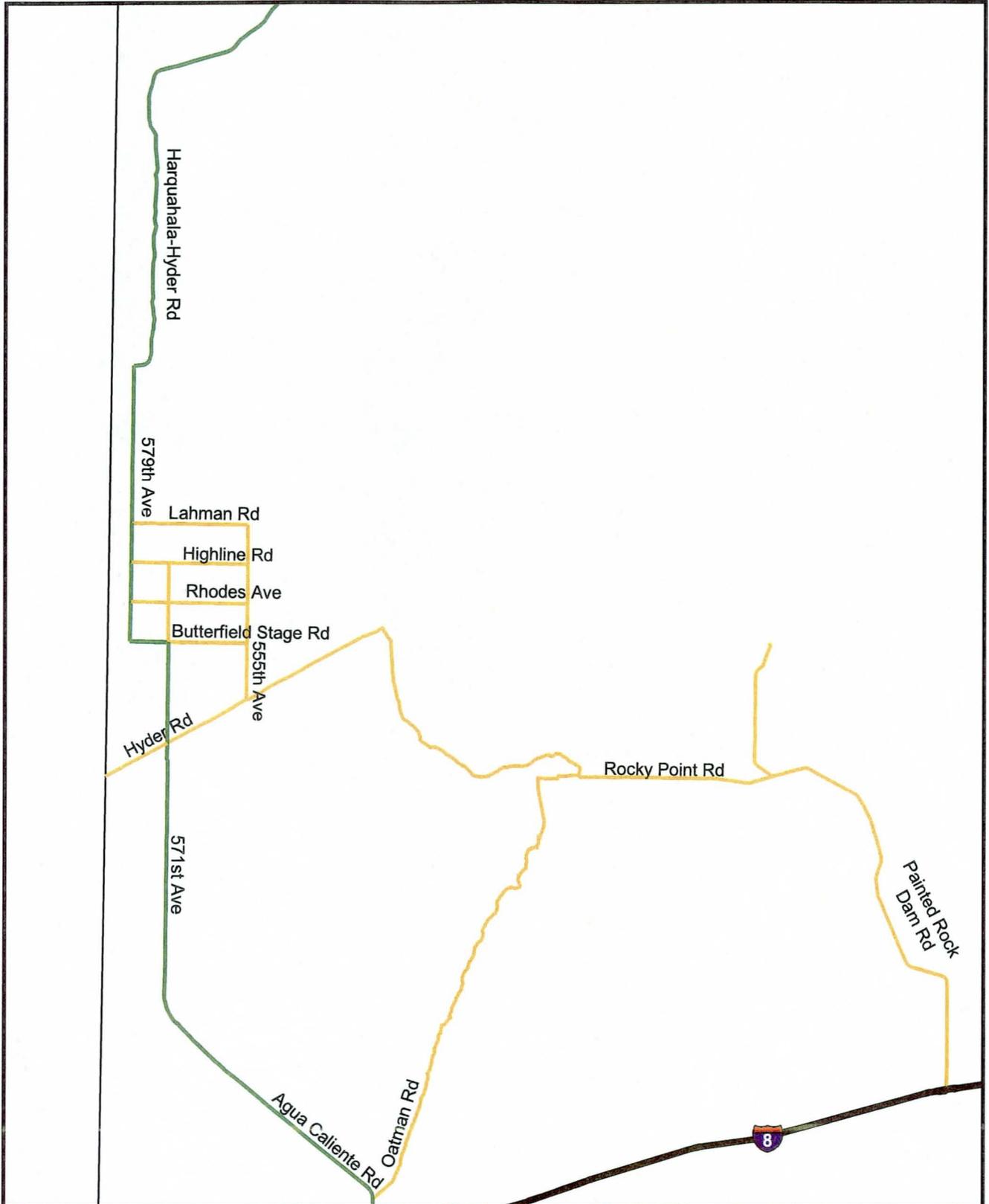
MAP 11



MCDOT CLASSIFICATION		CITY CLASSIFICATION	
 Freeway/Expressway	 Freeway/Expressway (Future)	 Principal Arterial	
 Principal Arterial	 Principal Arterial (Future)	 Minor Arterial	
 Minor Arterial	 Minor Arterial (Future)	 Major Collector	
 Major Collector		 Minor Collector	
 Minor Collector			
Incorporated			

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 12



MCDOT CLASSIFICATION

- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Incorporated
- Freeway/Expressway (Future)
- Principal Arterial (Future)
- Minor Arterial (Future)

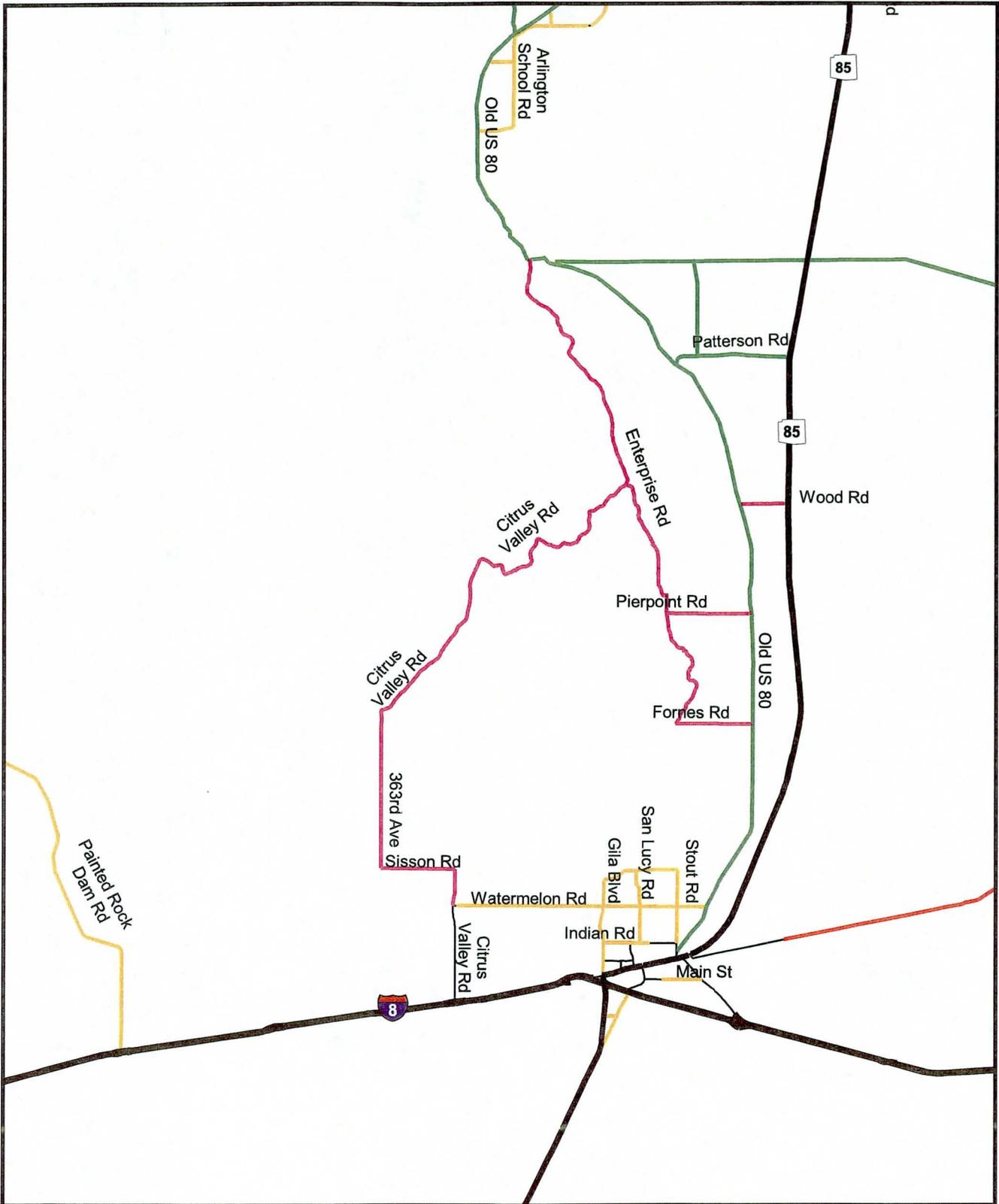
CITY CLASSIFICATION

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

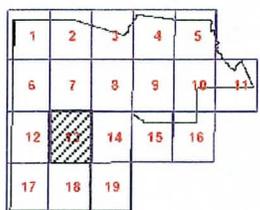


Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 13

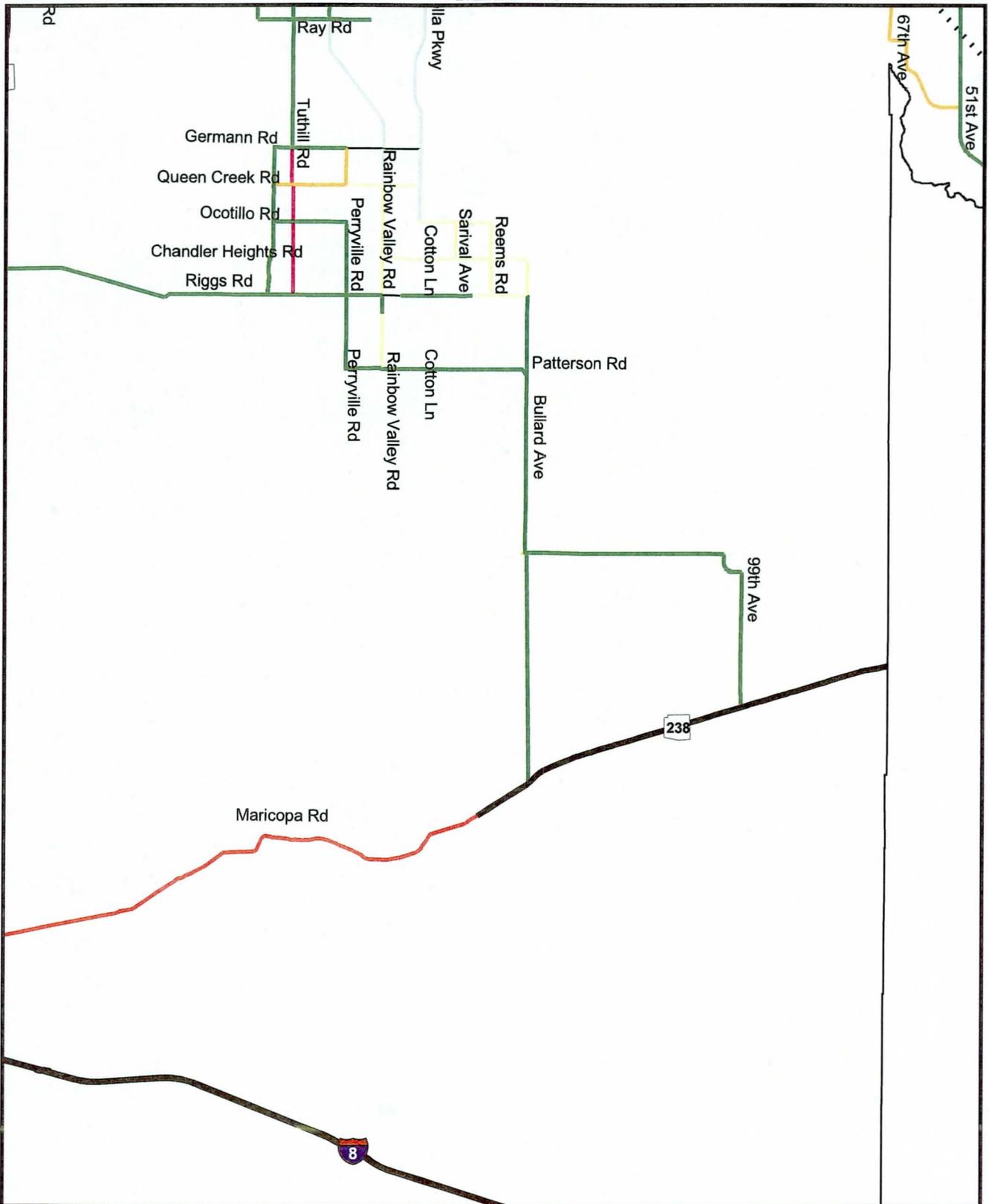


MCDOT CLASSIFICATION		CITY CLASSIFICATION	
	Freeway/Expressway		Freeway/Expressway (Future)
	Principal Arterial		Principal Arterial (Future)
	Minor Arterial		Minor Arterial (Future)
	Major Collector		Principal Arterial
	Minor Collector		Minor Arterial
	Incorporated		Major Collector
			Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

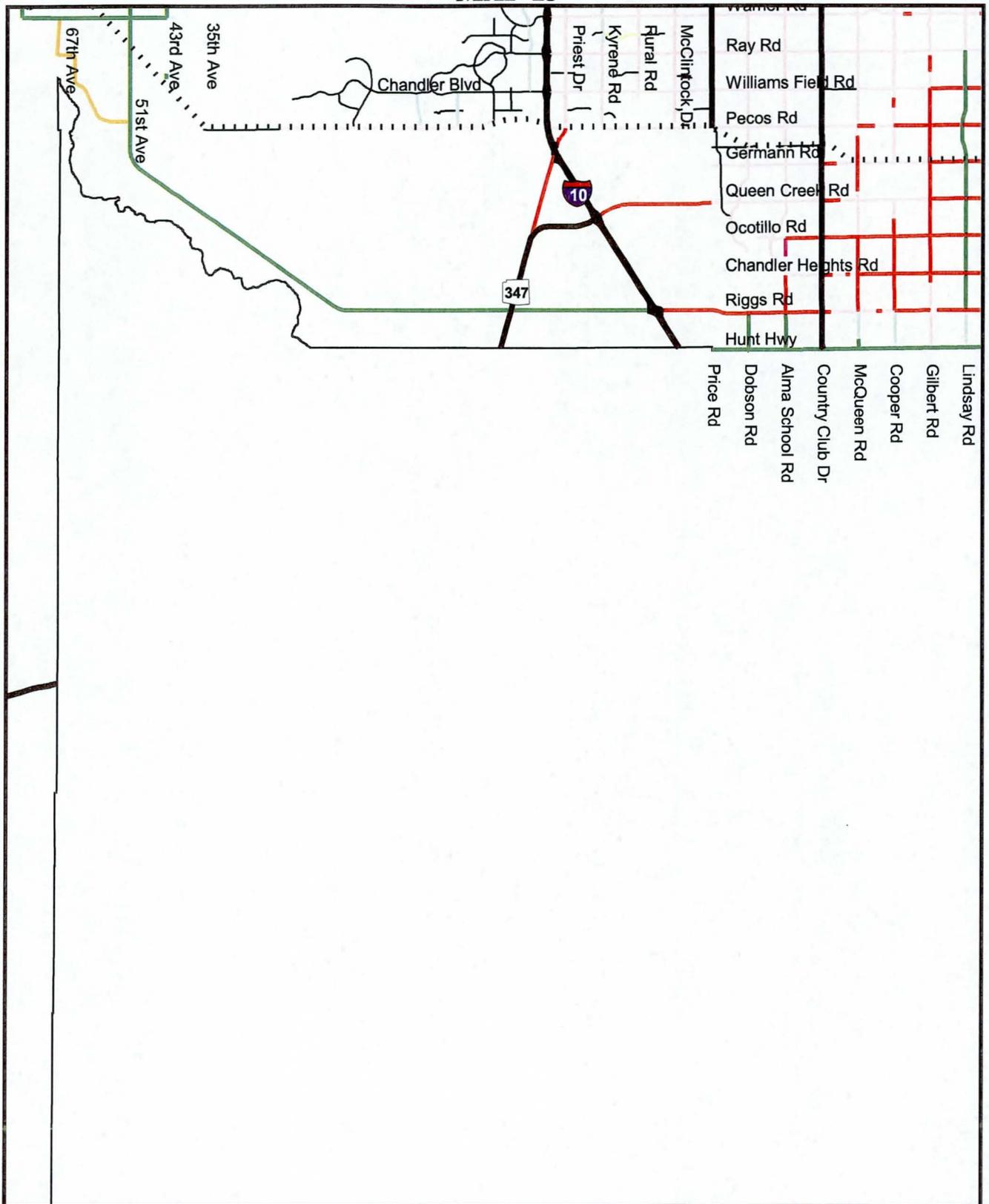
MAP 14



MCDOT CLASSIFICATION		CITY CLASSIFICATION	
Freeway/Expressway	Freeway/Expressway (Future)	Principal Arterial	
Principal Arterial	Principal Arterial (Future)	Minor Arterial	
Minor Arterial	Minor Arterial (Future)	Major Collector	
Major Collector		Minor Collector	
Minor Collector			
Major Collector Incorporated			

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 15



MCDOT CLASSIFICATION

- | | | | |
|--|--------------------|--|-----------------------------|
| | Freeway/Expressway | | Freeway/Expressway (Future) |
| | Principal Arterial | | Principal Arterial (Future) |
| | Minor Arterial | | Minor Arterial (Future) |
| | Major Collector | | |
| | Minor Collector | | |
| | Incorporated | | |

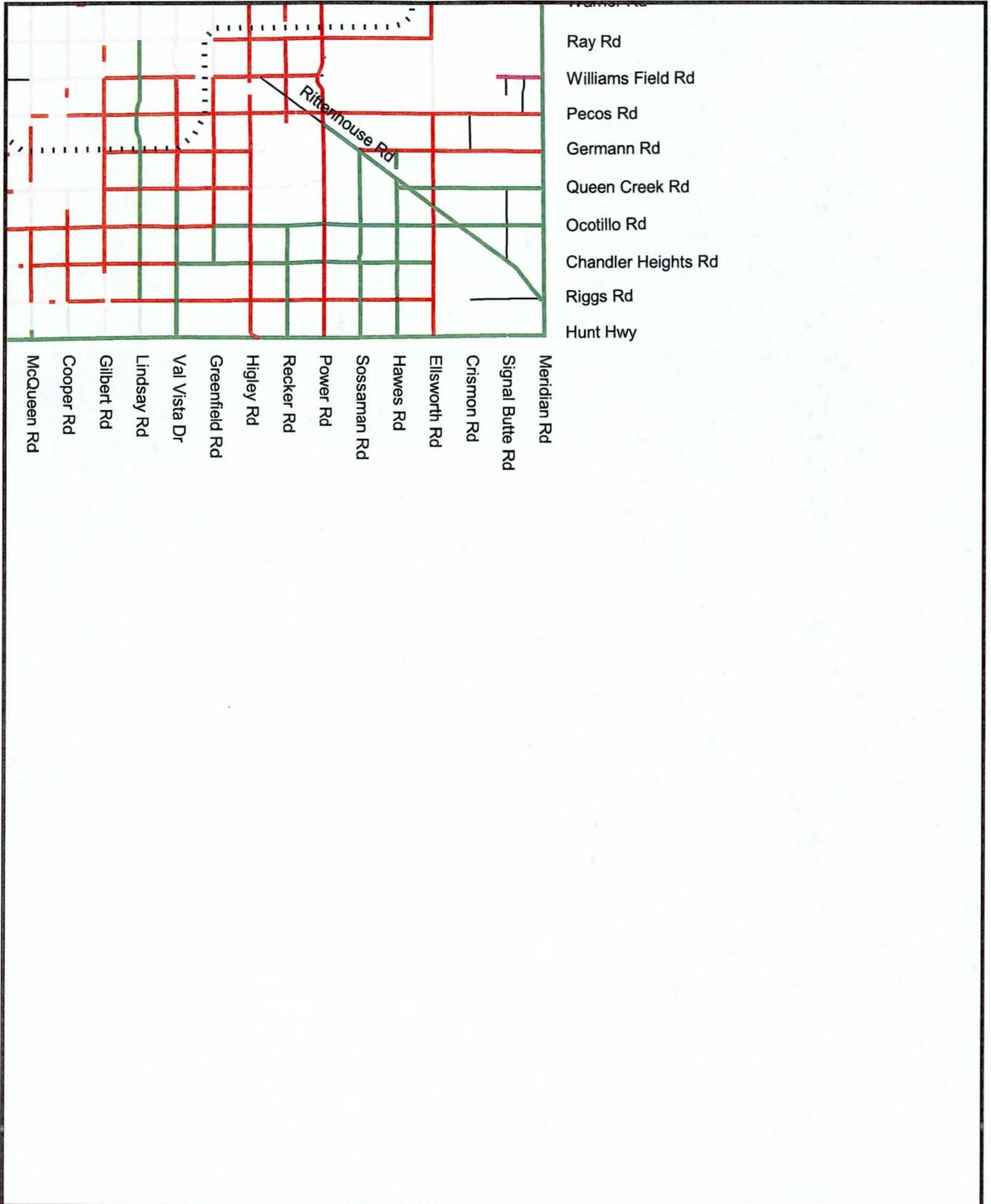
CITY CLASSIFICATION

- | | |
|--|--------------------|
| | Principal Arterial |
| | Minor Arterial |
| | Major Collector |
| | Minor Collector |



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 16



MCDOT CLASSIFICATION

-  Freeway/Expressway
-  Freeway/Expressway (Future)
-  Principal Arterial
-  Principal Arterial (Future)
-  Minor Arterial
-  Minor Arterial (Future)
-  Major Collector
-  Major Collector (Future)
-  Minor Collector
-  Minor Collector (Future)
-  Incorporated

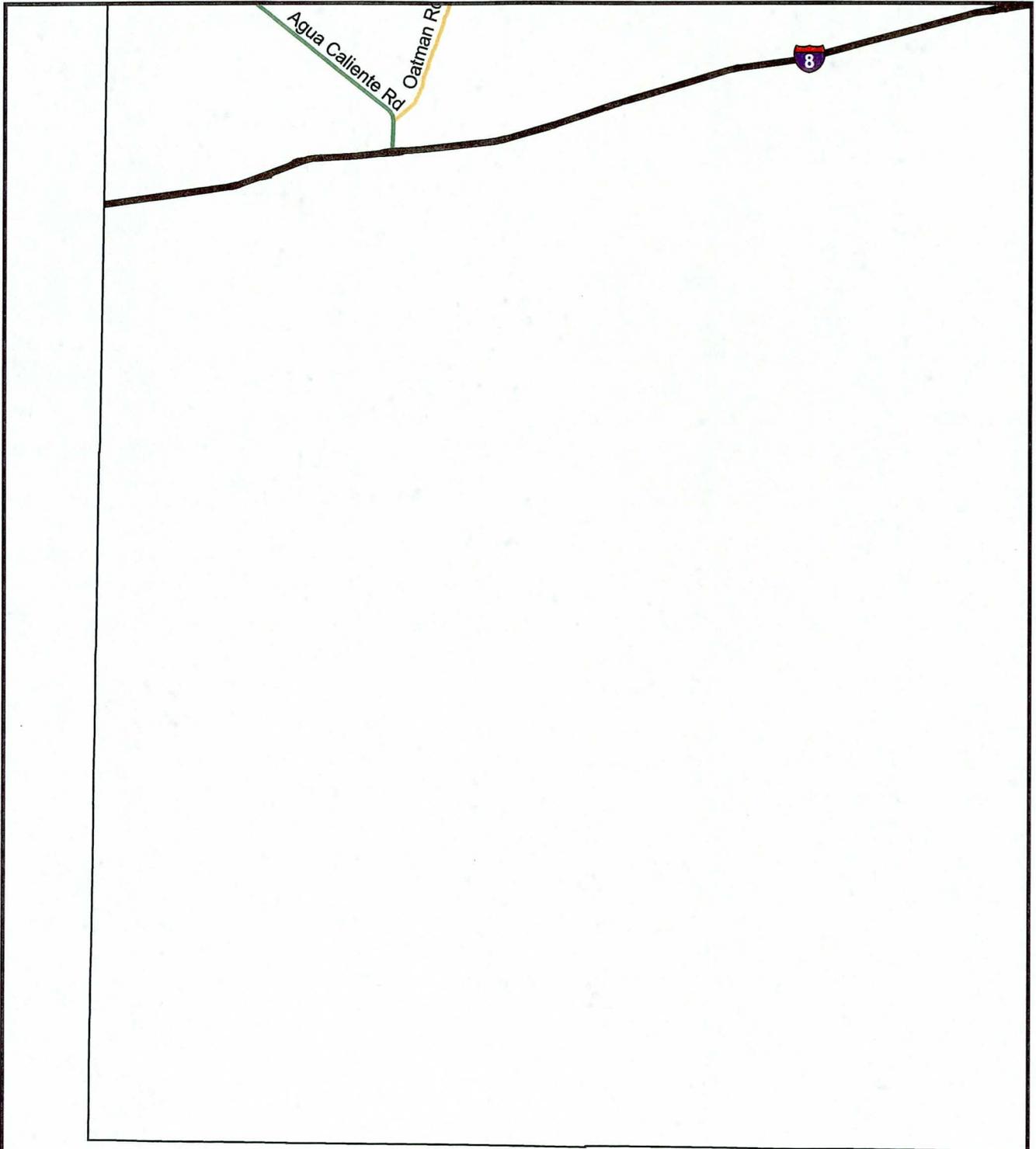
CITY CLASSIFICATION

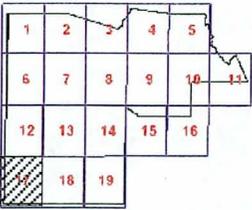
-  Principal Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector



Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

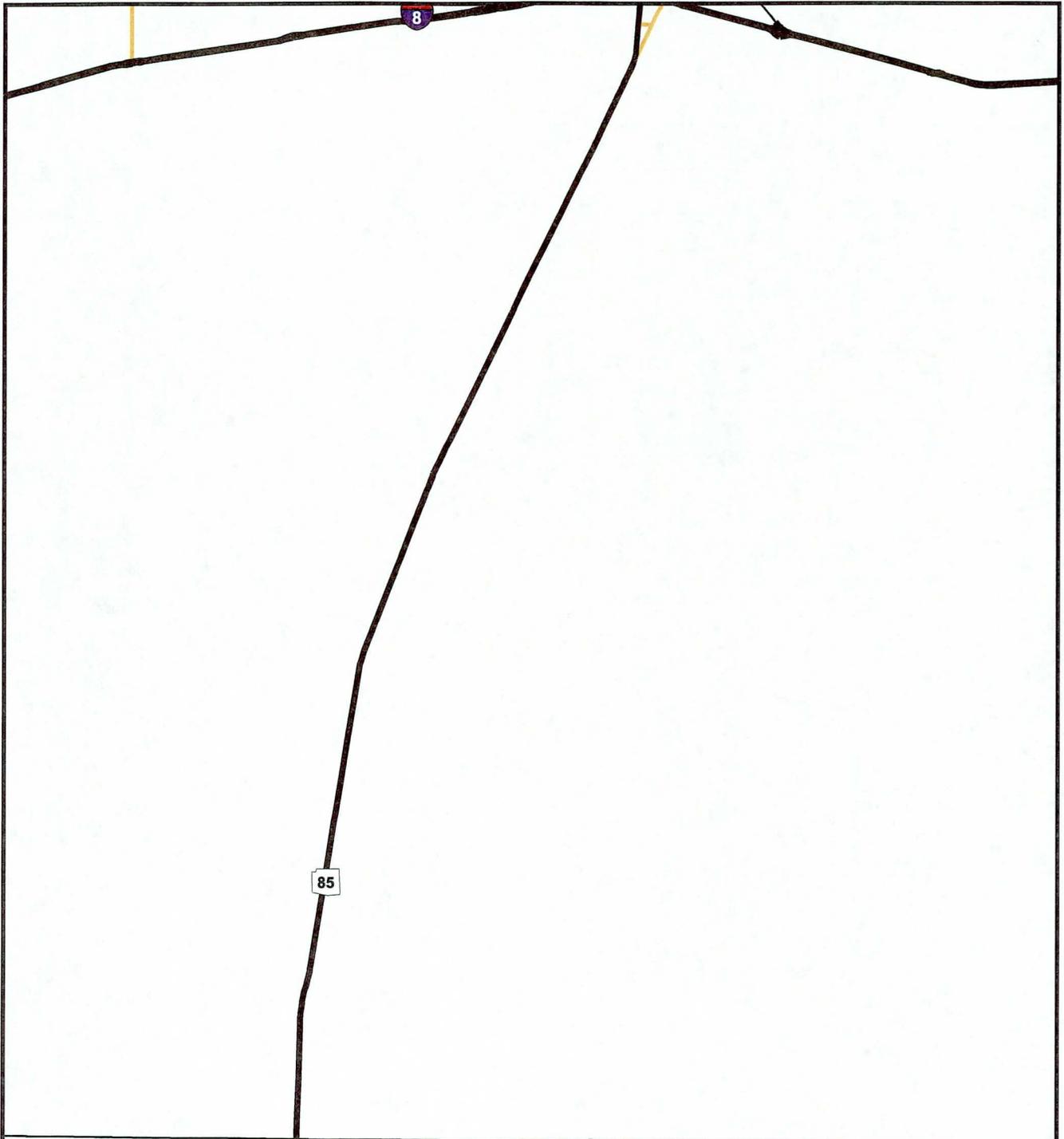
MAP 17



MCDOT CLASSIFICATION		CITY CLASSIFICATION	
 Freeway/Expressway	 Freeway/Expressway (Future)	 Principal Arterial	
 Principal Arterial	 Principal Arterial (Future)	 Minor Arterial	
 Minor Arterial	 Minor Arterial (Future)	 Major Collector	
 Major Collector	 Major Collector (Future)	 Minor Collector	
 Minor Collector	 Minor Collector (Future)		
Incorporated			

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

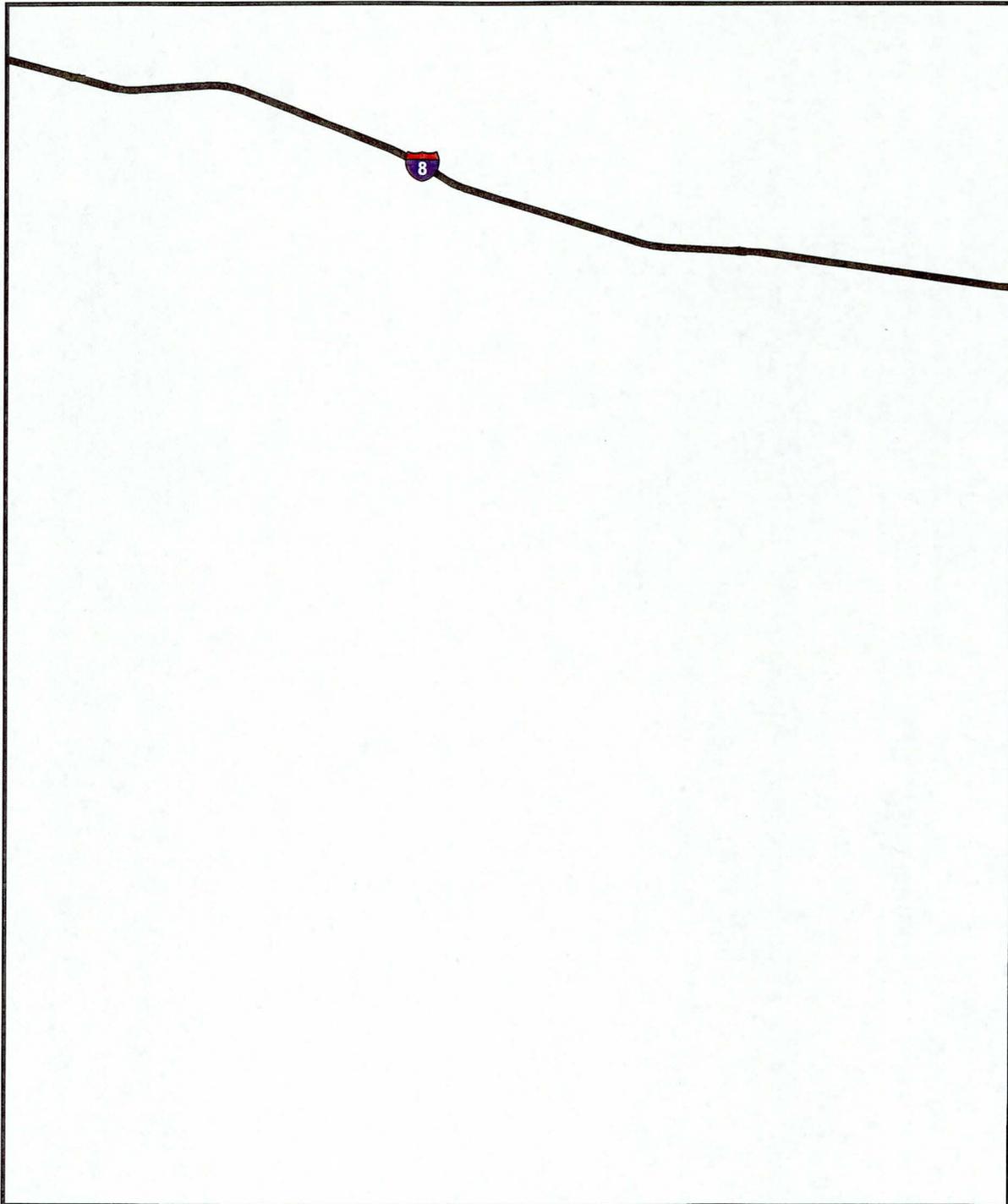
MAP 18



MCDOT CLASSIFICATION		CITY CLASSIFICATION	
Freeway/Expressway	Freeway/Expressway (Future)	Principal Arterial	
Principal Arterial	Principal Arterial (Future)	Minor Arterial	
Minor Arterial	Minor Arterial (Future)	Major Collector	
Major Collector		Minor Collector	
Minor Collector Incorporated			

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 19

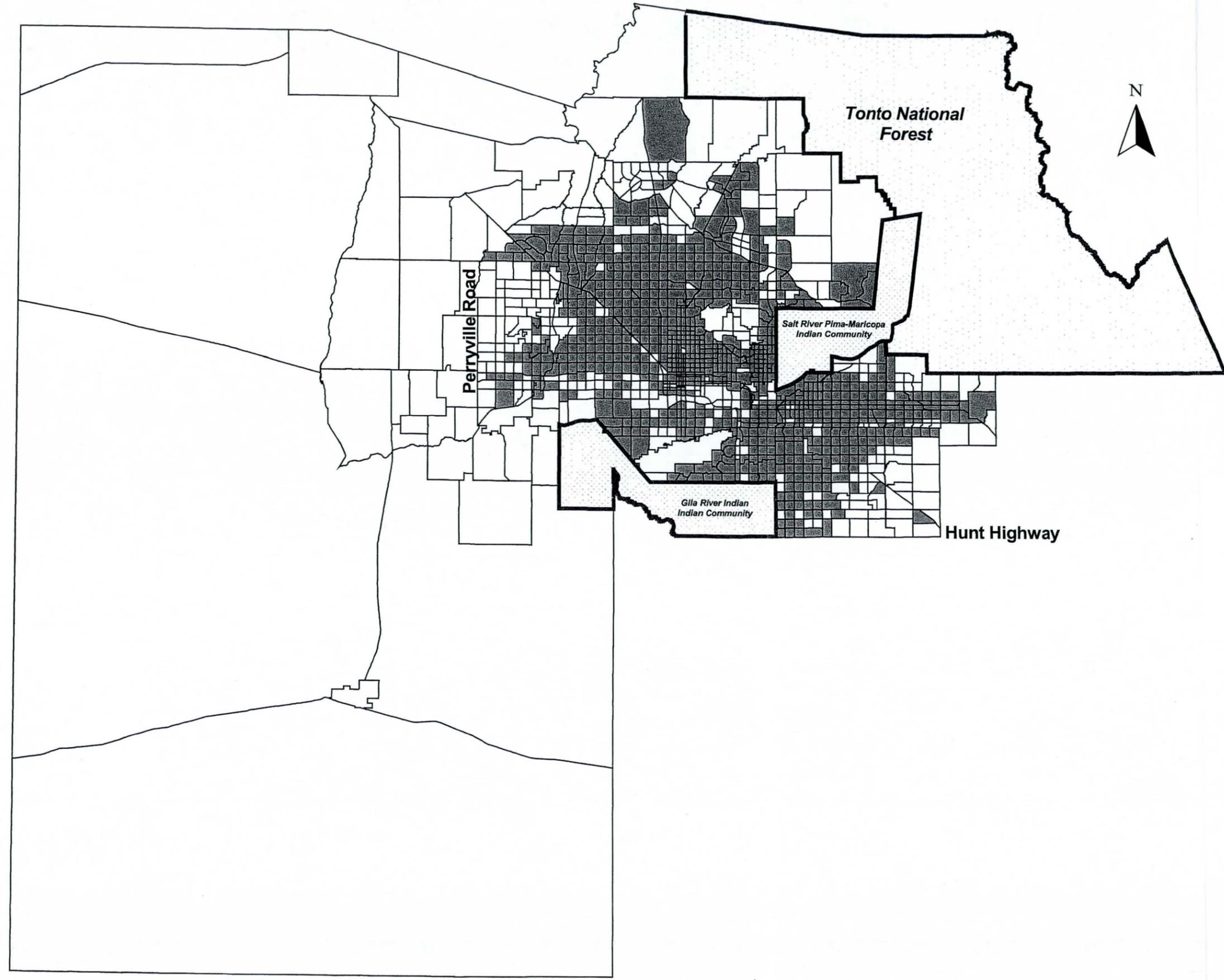
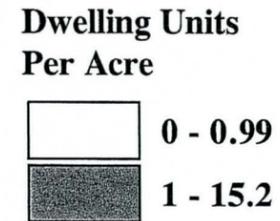


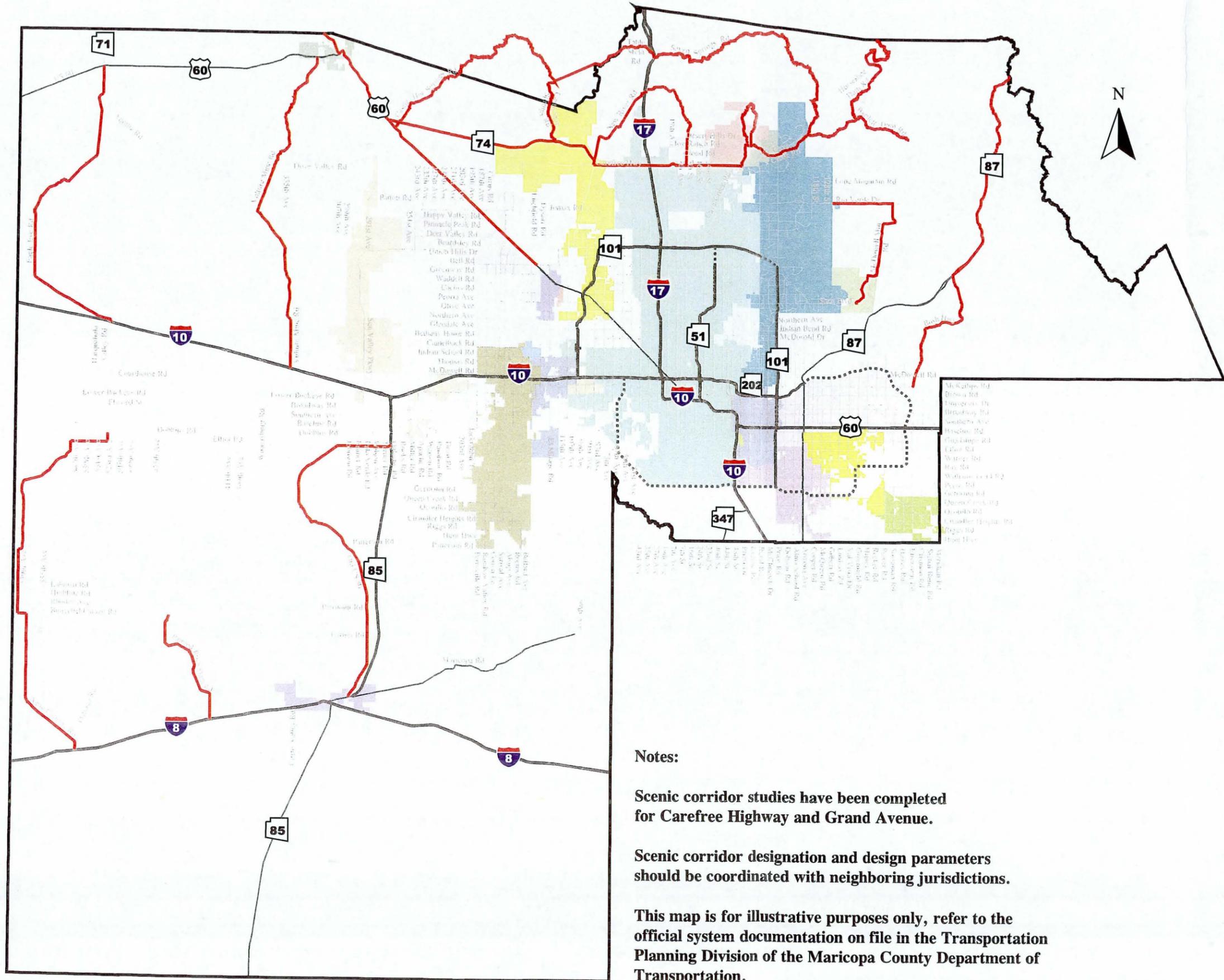
MCDOT CLASSIFICATION		CITY CLASSIFICATION	
	Freeway/Expressway		Freeway/Expressway (Future)
	Principal Arterial		Principal Arterial (Future)
	Minor Arterial		Minor Arterial (Future)
	Major Collector		Principal Arterial
	Minor Collector		Minor Arterial
	Incorporated		Major Collector
			Minor Collector

Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

APPENDIX. OVERLAY MAPS

**ESTIMATED DWELLING
UNIT DENSITY IN 2020**





SCENIC/RECREATIONAL OVERLAY

To protect the scenic environment and to provide access to recreational facilities

-  Overlay Route
-  County Boundary

DESIGN PARAMETERS

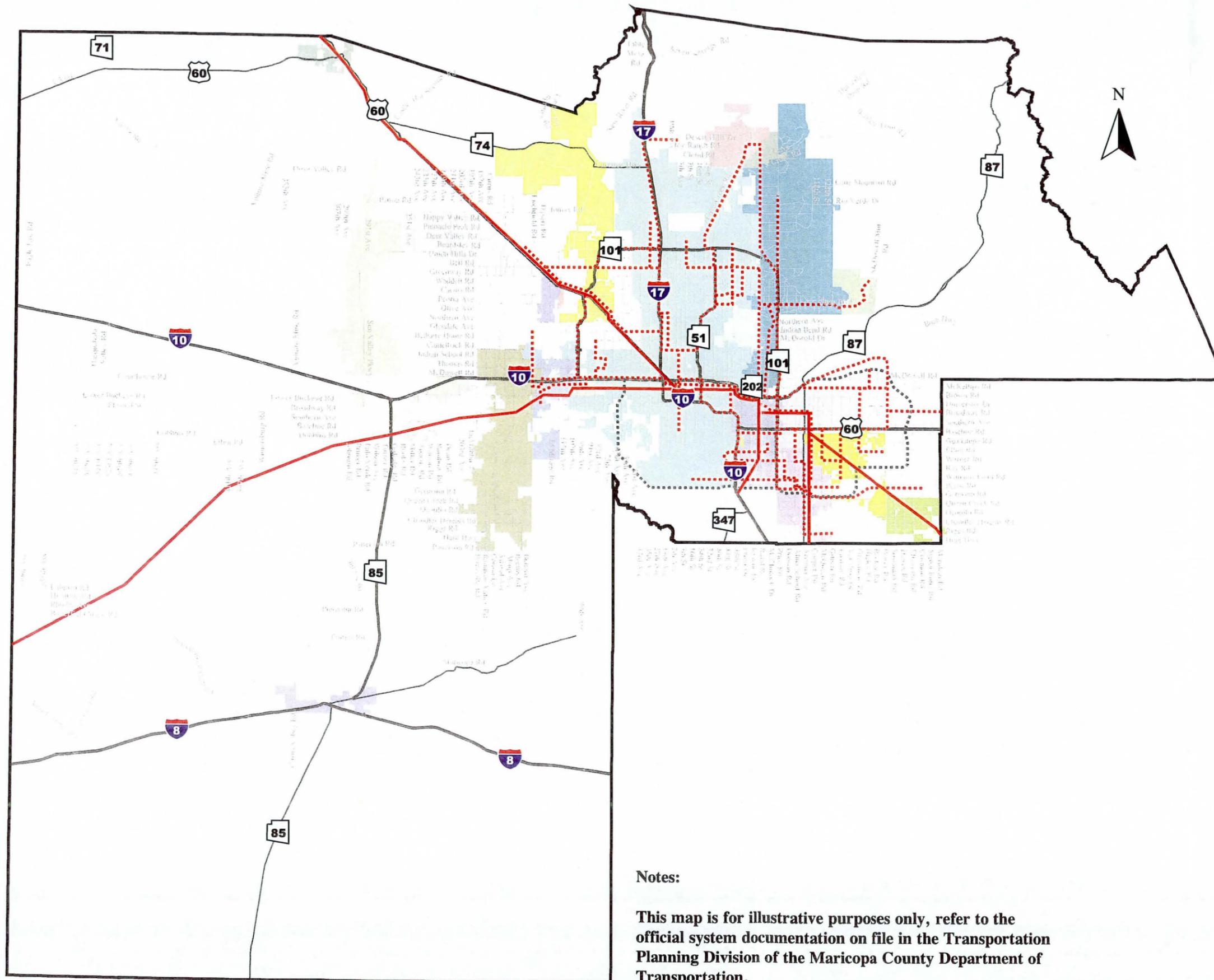
- * A scenic easement of 15.1 meters (50 feet) shall be added on each side of the right-of-way to provide for a wider corridor of natural habitat preservation.
- * Special signage identifying the roadway as a scenic corridor shall be included.

Notes:

Scenic corridor studies have been completed for Carefree Highway and Grand Avenue.

Scenic corridor designation and design parameters should be coordinated with neighboring jurisdictions.

This map is for illustrative purposes only, refer to the official system documentation on file in the Transportation Planning Division of the Maricopa County Department of Transportation.



PUBLIC TRANSPORTATION OVERLAY

To identify potential regional rail or bus transit corridors

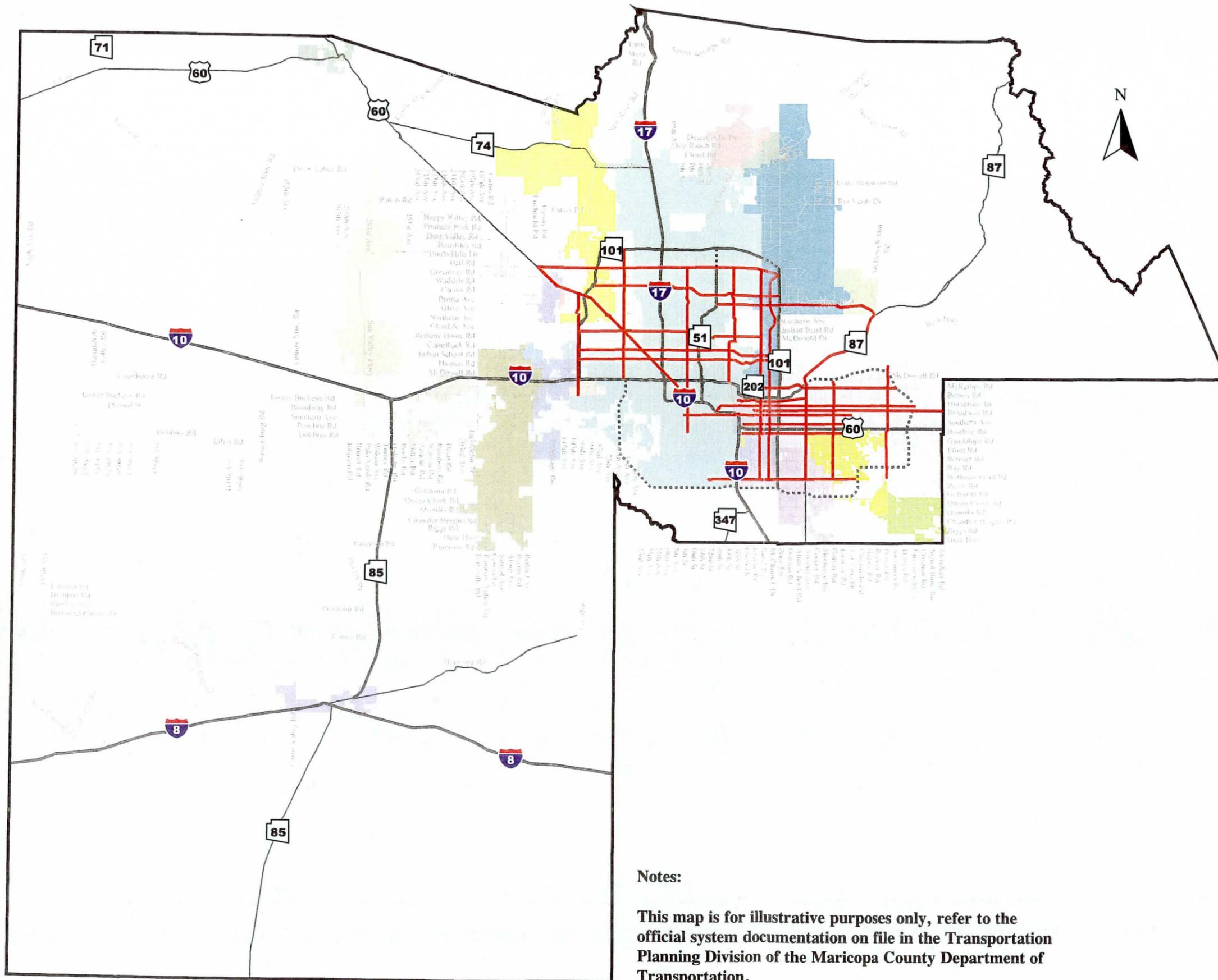
-  Existing Railroad Lines
Potential Commuter Rail Corridors
-  Potential Rapid Transit Corridors Identified in MAG Fixed Guideway Plan
-  County Boundary

DESIGN PARAMETERS

- * The right-of-way shall be increased by 9.1 meters (30 feet) to provide for rail or rapid bus transportation.
- * The right-of-way shall be increased by an additional 6.1 meters (20 feet) for 90.9 meters (300 feet) on approach to major intersections.
- * RPTA should be contacted prior to reserving any additional right-of-way.

Notes:

This map is for illustrative purposes only, refer to the official system documentation on file in the Transportation Planning Division of the Maricopa County Department of Transportation.



AZTECH OVERLAY

To identify corridors where technology will be incorporated to improve transportation service

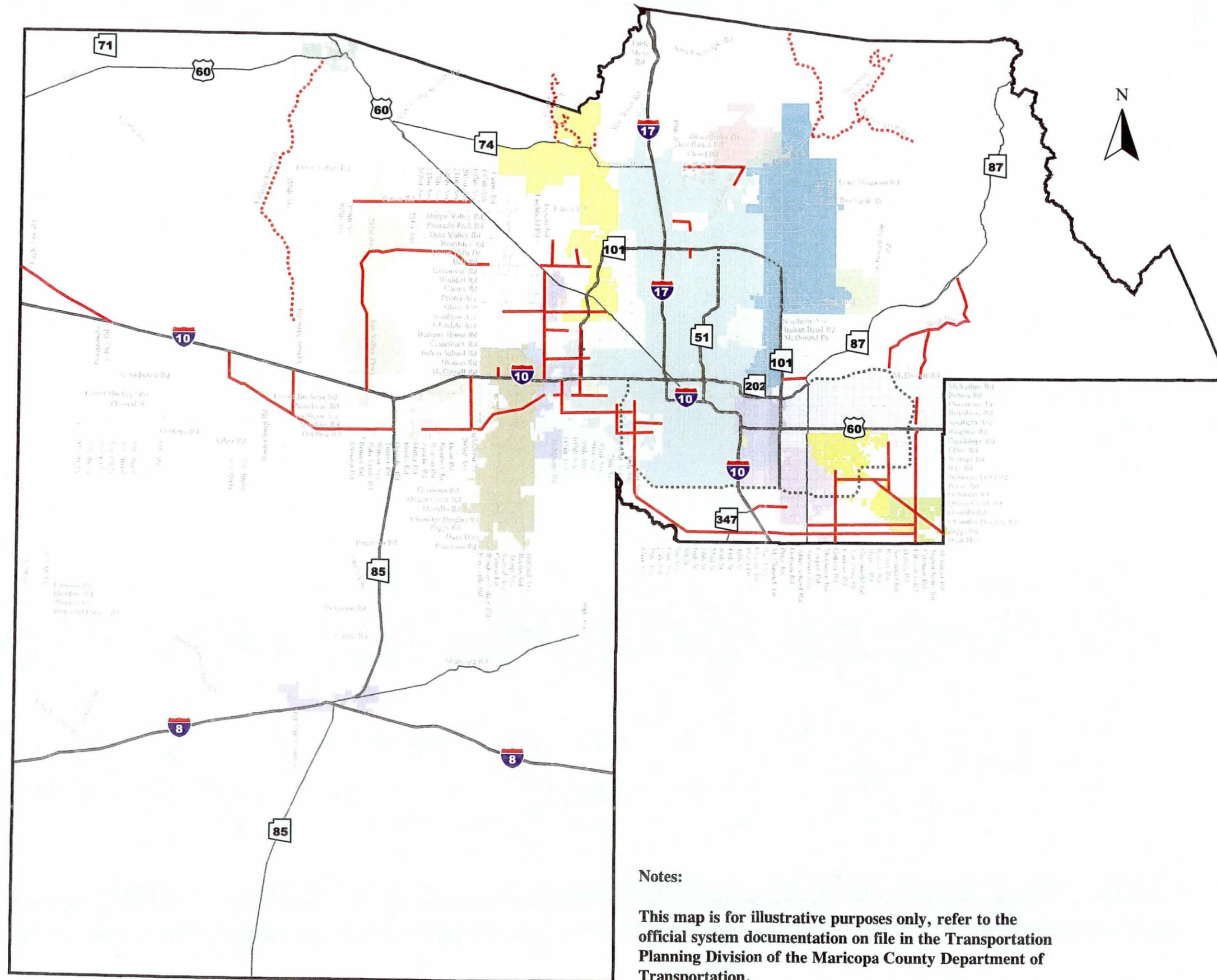
-  Overlay Route
-  County Boundary

DESIGN PARAMETERS

*** AZTech should be consulted regarding ITS needs during the design concept phase of a project.**

Notes:

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OVERSIZE LOAD OVERLAY

To identify routes designed for use by oversized vehicles or routes on which usage is restricted

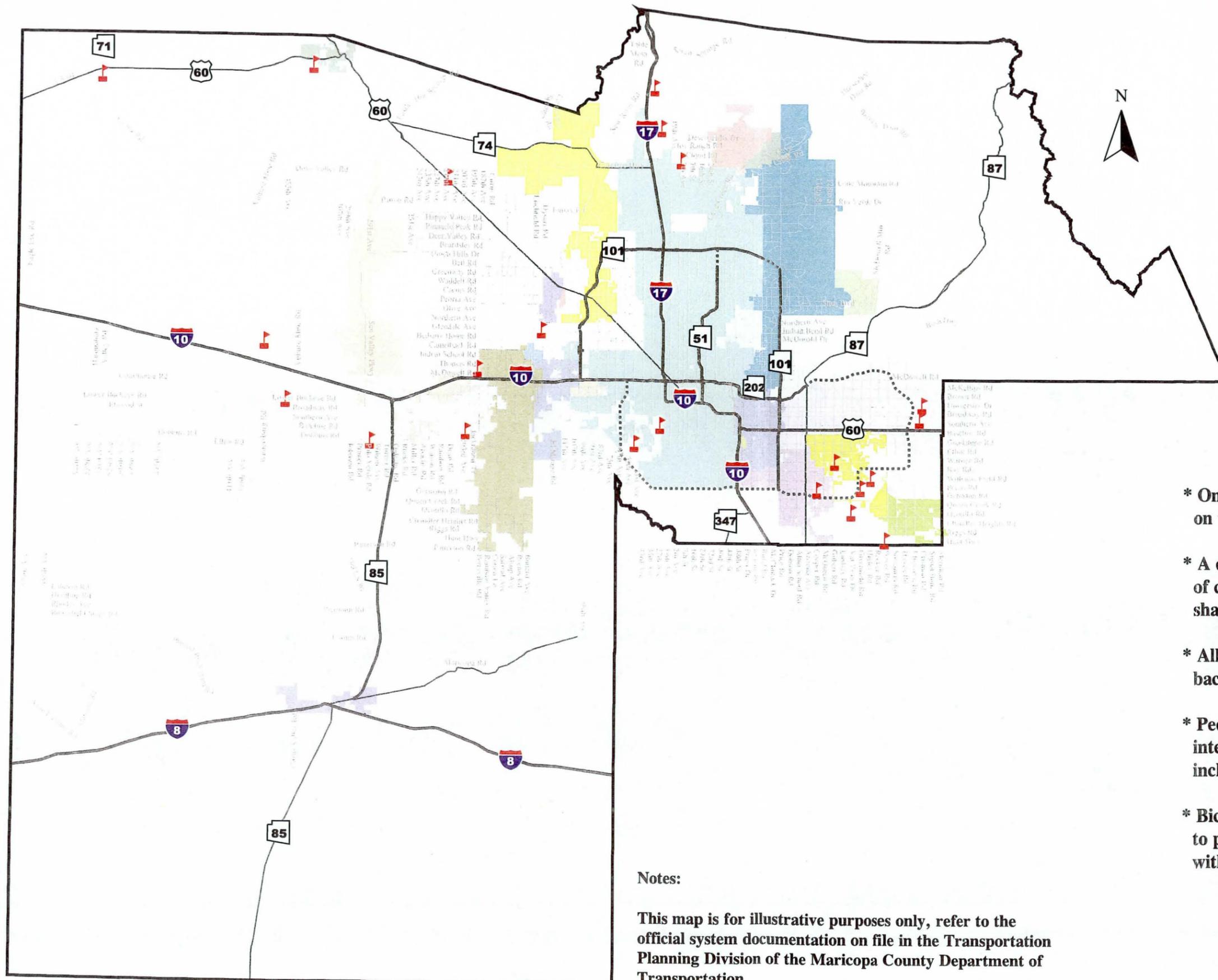
-  Preferred Routes
-  Restricted Routes (Usage Discouraged)
-  County Boundary

DESIGN PARAMETERS

- * Overhead equipment shall have a minimum clearance of 17 feet.
- * Overhead equipment shall be supported from one side of the roadway only to allow for overheight vehicles to move around obstructions.
- * Raised medians shall be located so as not to obstruct the movement of oversized loads.

Notes:

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SCHOOL SAFETY OVERLAY

To identify sites where special design or operational criteria will be implemented to provide for safety

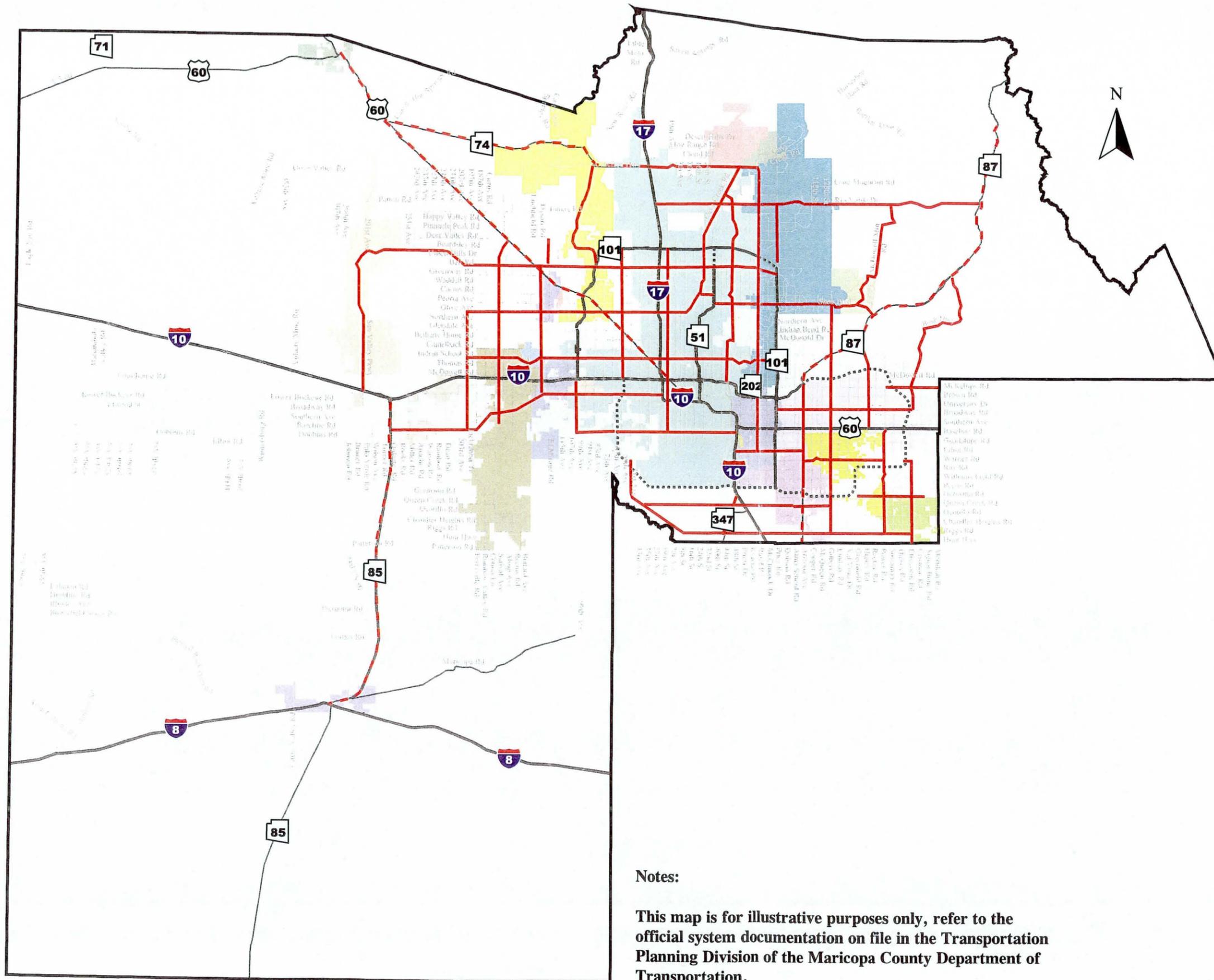
-  School
-  County Boundary

DESIGN PARAMETERS

- * On-street parking, including angle parking on the shoulder, shall be eliminated
- * A driveway for the loading and unloading of children by both buses and private vehicles shall be provided.
- * All access shall be designed to eliminate backing into the roadway.
- * Pedestrian crosswalks shall be located at intersections if possible. Flashers shall be included at unsignalized locations.
- * Bicycle path and/or lanes shall be incorporated to provide access to all residential developments within the school service area as practicable.

Notes:

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ROADS OF REGIONAL SIGNIFICANCE

To improve mobility in the region by providing a system of streets and roads

-  Existing Urban RRS
-  Existing Gateway RRS (Approved 4/28/99)
-  County Boundary

DESIGN PARAMETERS

- * The right-of-way width shall be 42.4 meters (140 feet).
- * See the MSRP Policy Document for other design parameters.

Notes:

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