



2024

Working Paper 3: Mesa Tomorrow

CITY OF MESA

TRANSPORTATION

MASTER PLAN



The following section presents projected socioeconomic and traffic conditions within the Mesa Metropolitan Planning Area (MPA) for the near-, mid-, and long-term planning horizons.

1. FUTURE GROWTH

The Mesa General Plan, which is being updated in conjunction with the Transportation Master Plan, is used to shape the future of the City by guiding growth and land development in accordance with the City's goals. As part of the General Plan's process, future land use designations and growth strategies were identified to ensure preservation of the unique character of Mesa while setting the stage for its future. Figure 1-1 illustrates future land use designations that describe the land uses, densities, intensities, and the character of residential, commercial, and industrial areas within the MPA. These future land use designations offer guidance for City staff, elected officials, residents, business owners, and developers for navigating and reviewing development proposals.

Future Growth Strategy

Figure 1-2 outlines the Growth Strategy from the General Plan. The Growth Strategy depicts where growth should be focused, and the level of transition envisioned for these areas. The General Plan identifies four distinctive growth categories:

CONSERVE

Areas that should be preserved and protected and remain largely in their current condition. These areas include land with significant development constraints, historic resources, neighborhoods with a significant heritage, school sites, public lands, and parklands.

SUSTAIN

Areas of stability that are encouraged to remain generally in their current condition but may see mild redevelopment and transition of use over time.

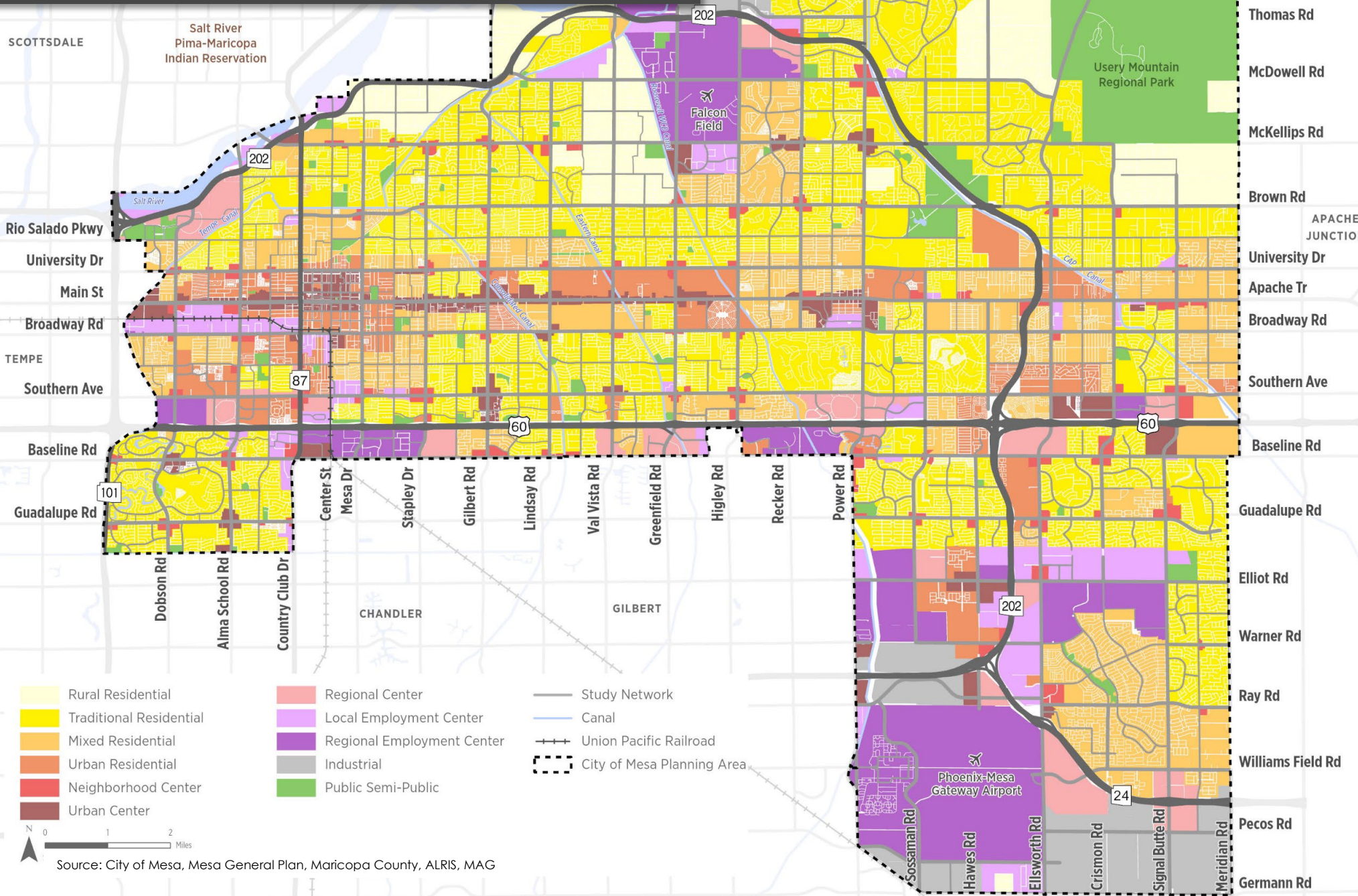
ENHANCE

Developed areas that are in good condition but are encouraged to continue to develop or reuse existing land and buildings as development ages.

TRANSFORM

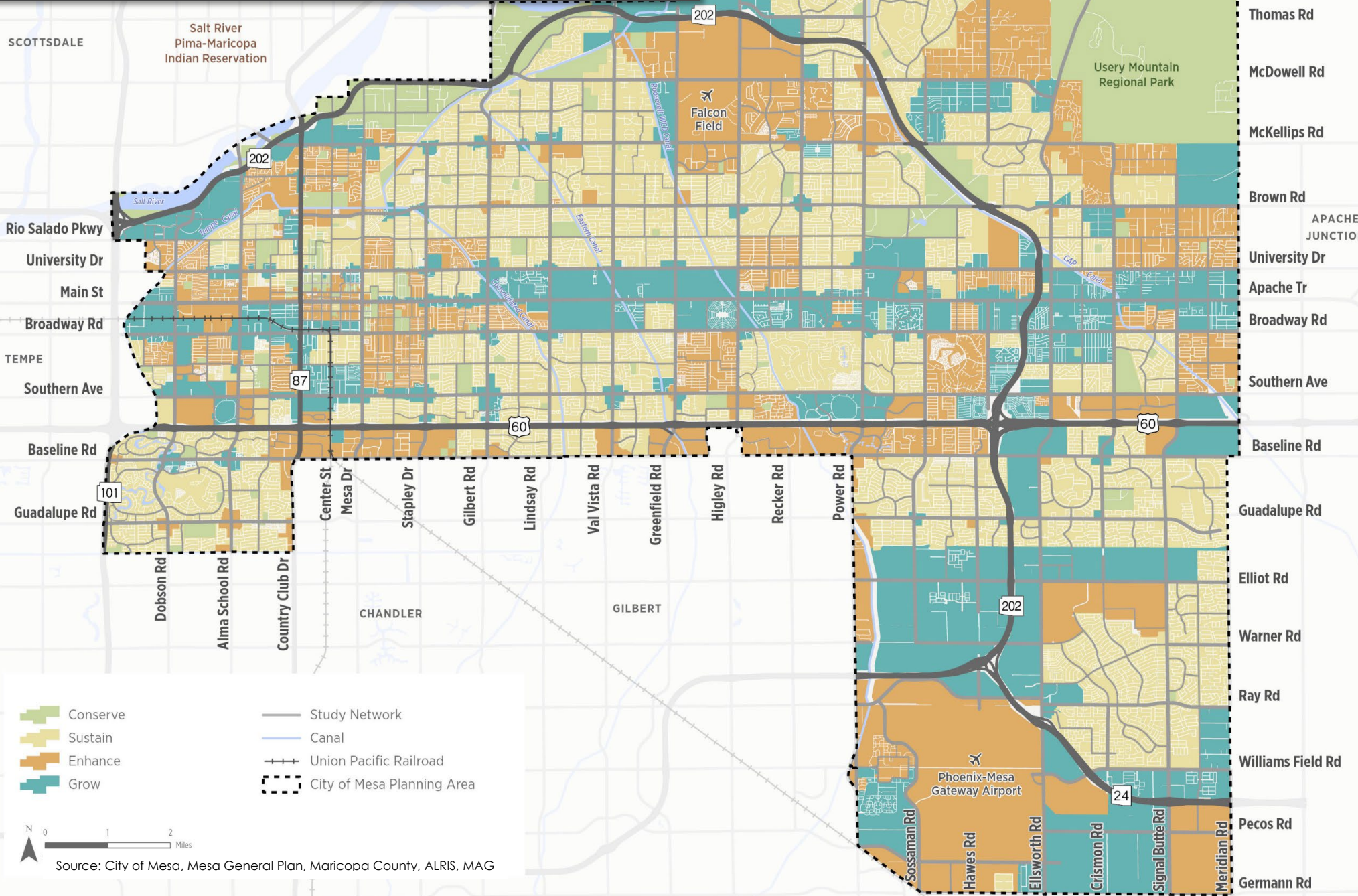
Vacant, transitioning, blighted, or underutilized land capable of supporting new development and/or redevelopment. These areas will transform with land uses and development patterns that align with the City's land use objectives.

FIGURE 1-1. GENERAL PLAN FUTURE LAND USE



Source: City of Mesa, Mesa General Plan, Maricopa County, ALRIS, MAG

FIGURE 1-2. GENERAL PLAN GROWTH SCENARIO



Source: City of Mesa, Mesa General Plan, Maricopa County, ALRIS, MAG

2. PROJECTED SOCIOECONOMIC CONDITIONS

Forecasting future socioeconomic conditions allows us to anticipate changes in future travel demand and to envision potential solutions. Development of rational projections for population, housing units, and employment for each horizon year is vital to the process of forecasting realistic traffic volumes. The Maricopa Association of Governments' (MAG) regional travel demand model projects future population, housing units, and various types of employment categories for each Traffic Analysis Zone (TAZ) within the model. TAZs are geographic subdivisions of the study area bounded by roads, political boundaries, natural and man-made geographical constraints (such as rivers, washes, etc.). Table 2-1 shows a tabular summary of the projected population, employment, and the number of housing units within Mesa. By the long-term (2050) horizon, population and housing unit projections are reflective of mostly build-out conditions for Mesa.

TABLE 2-1: PROJECTED SOCIOECONOMIC CONDITIONS FOR MPA

	Current (2021)	Near-Term (2030)	Mid-Term (2035)	Long-Term (2050)
Total Population ¹	544,976	589,900	609,800	645,500
Total Housing Units	243,003	263,017	279,982	285,254
Total Employment	208,200	237,500	259,600	308,900

Source: MAG Socioeconomic Projections 2023

¹ includes resident population and group quarter (correction, institutional, and military) population

Projected Population Growth

Figures 2-2, 2-3, and 2-4, illustrate the projected population for the near-, mid-, and long-term horizon years, respectively. As illustrated in the figures, the majority of population growth is infill development in Downtown Mesa, Central Mesa, and along US 60. Southeast Mesa is also projected to have a significant increase in new growth and development.

Projected Employment Growth

Figures 2-5, 2-6, and 2-7, illustrate the projected employment for the near-, mid-, and long-term horizon years, respectively. As illustrated in the figures, Southeast Mesa is projected to have significant employment growth surrounding the Phoenix-Mesa Gateway airport. In addition, pockets of in-fill development are projected to occur in Downtown Mesa, along SR 202 east of Alma School Road, in Central Mesa, and north of Falcon Field.

Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 2-2. PROJECTED NEAR-TERM (2030) POPULATION

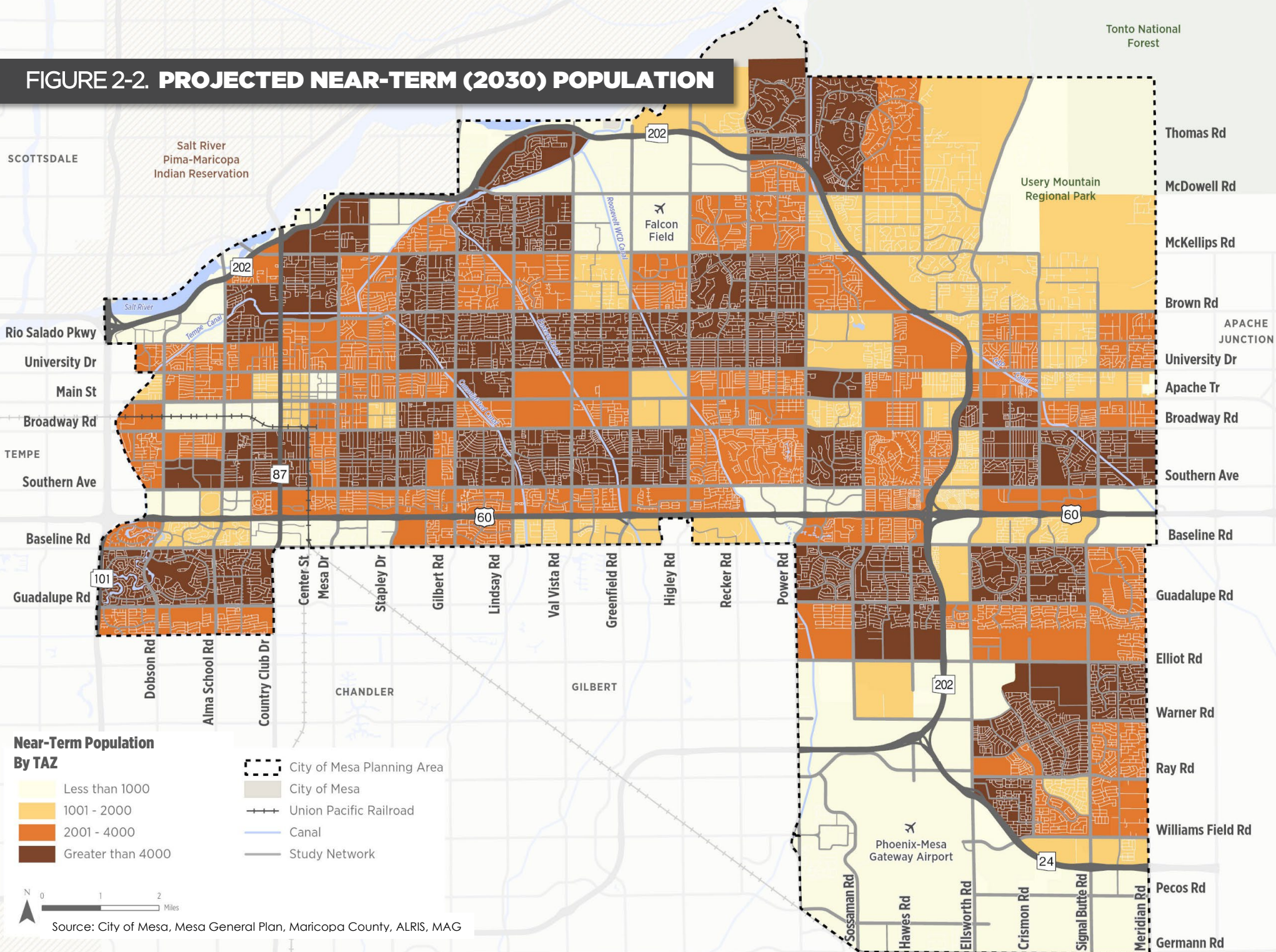


FIGURE 2-3. PROJECTED MID-TERM (2035) POPULATION

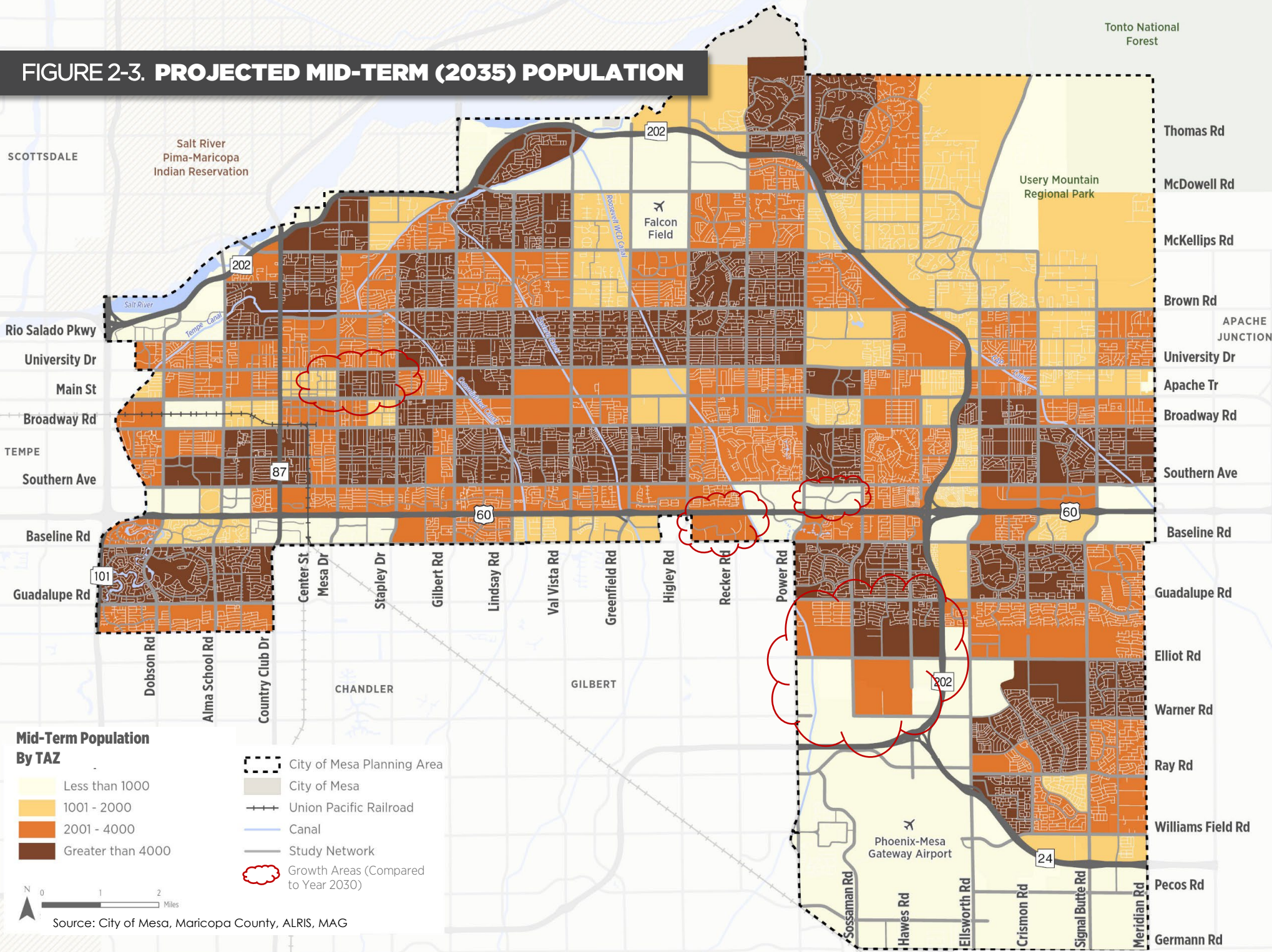
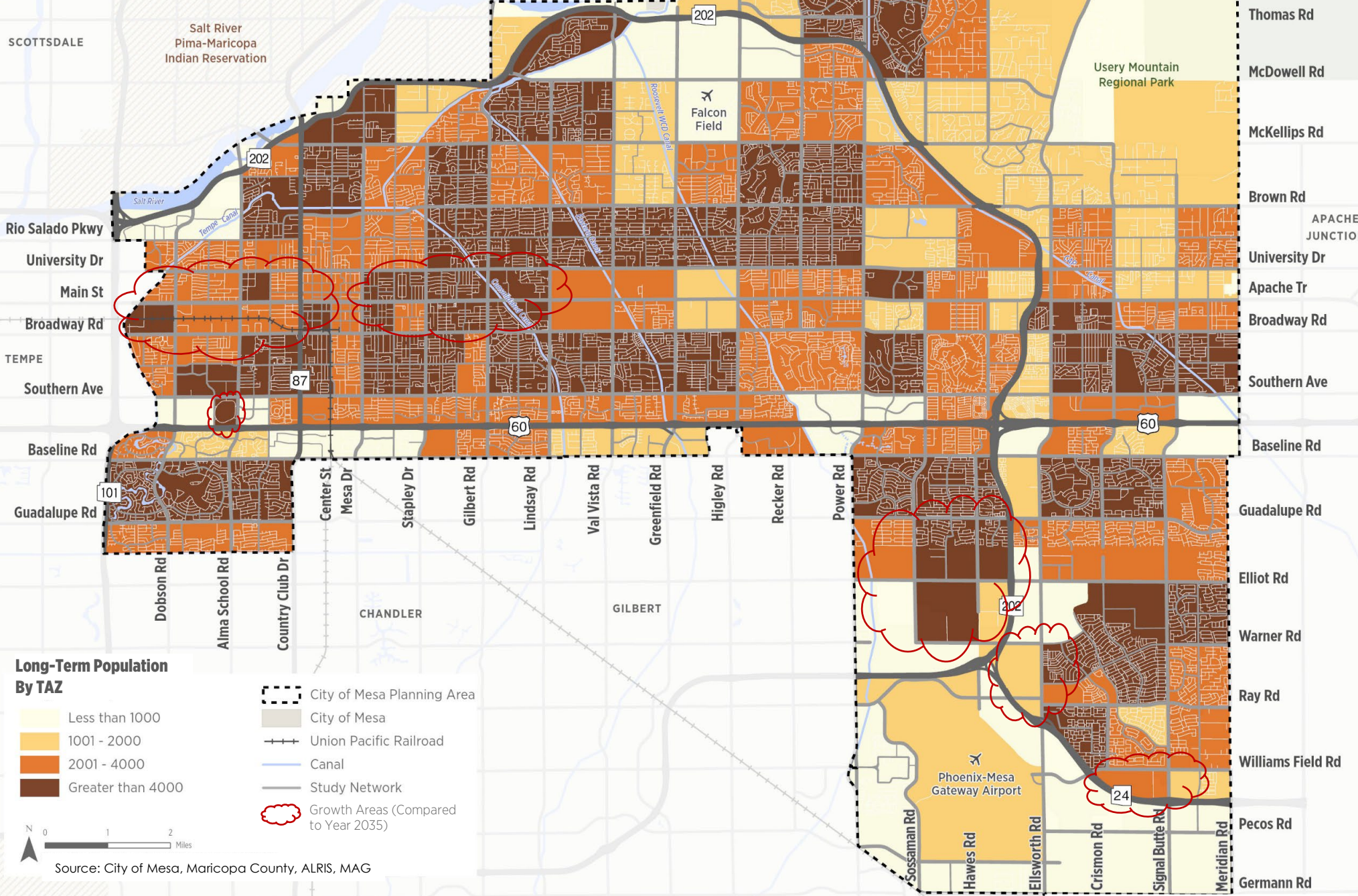


FIGURE 2-4. PROJECTED LONG-TERM (2050) POPULATION



**Long-Term Population
By TAZ**

- Less than 1000
- 1001 - 2000
- 2001 - 4000
- Greater than 4000

- City of Mesa Planning Area
- City of Mesa
- Union Pacific Railroad
- Canal
- Study Network
- Growth Areas (Compared to Year 2035)



Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 2-5. PROJECTED NEAR-TERM (2030) EMPLOYMENT

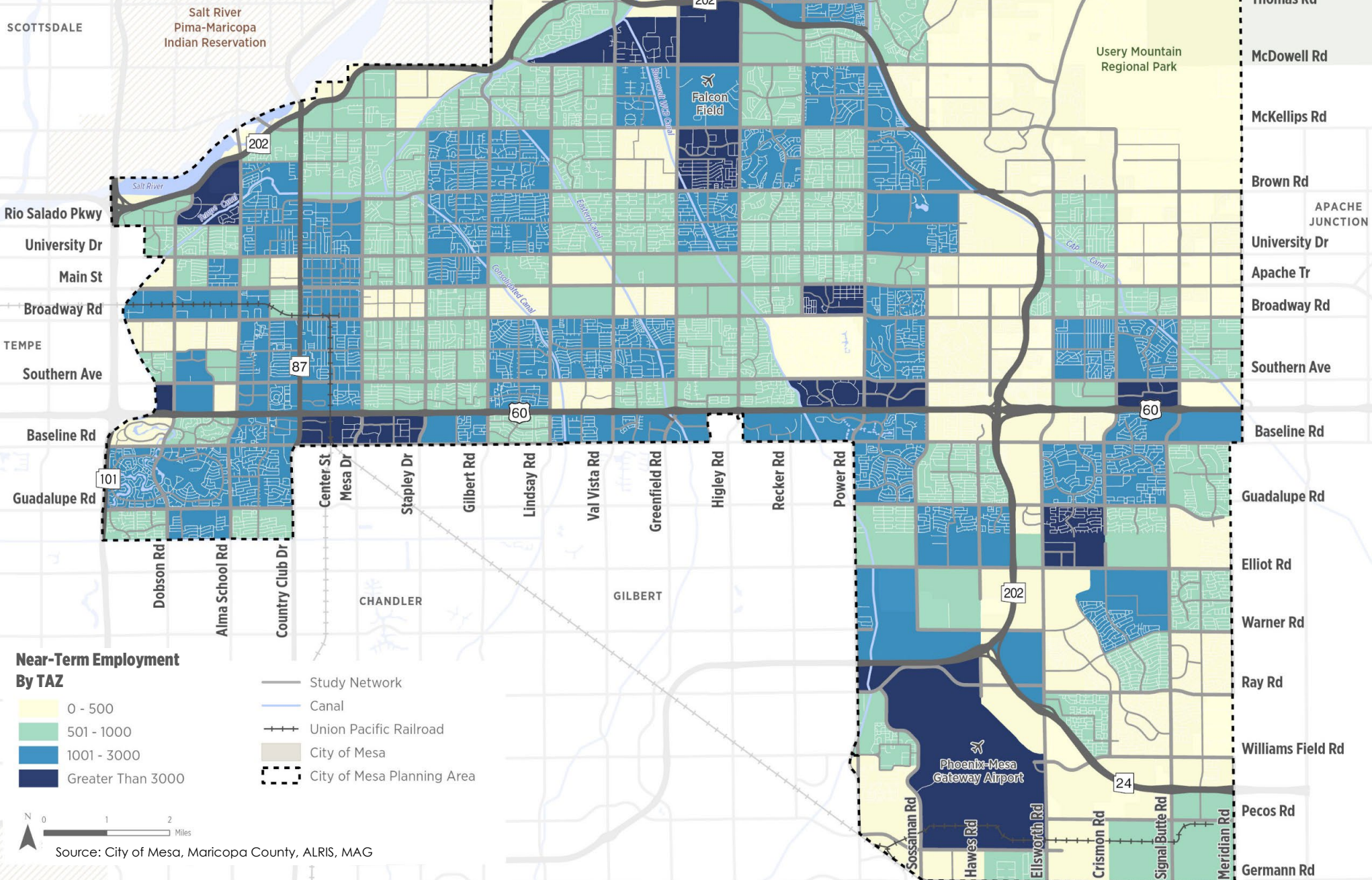


FIGURE 2-6. PROJECTED MID-TERM (2035) EMPLOYMENT

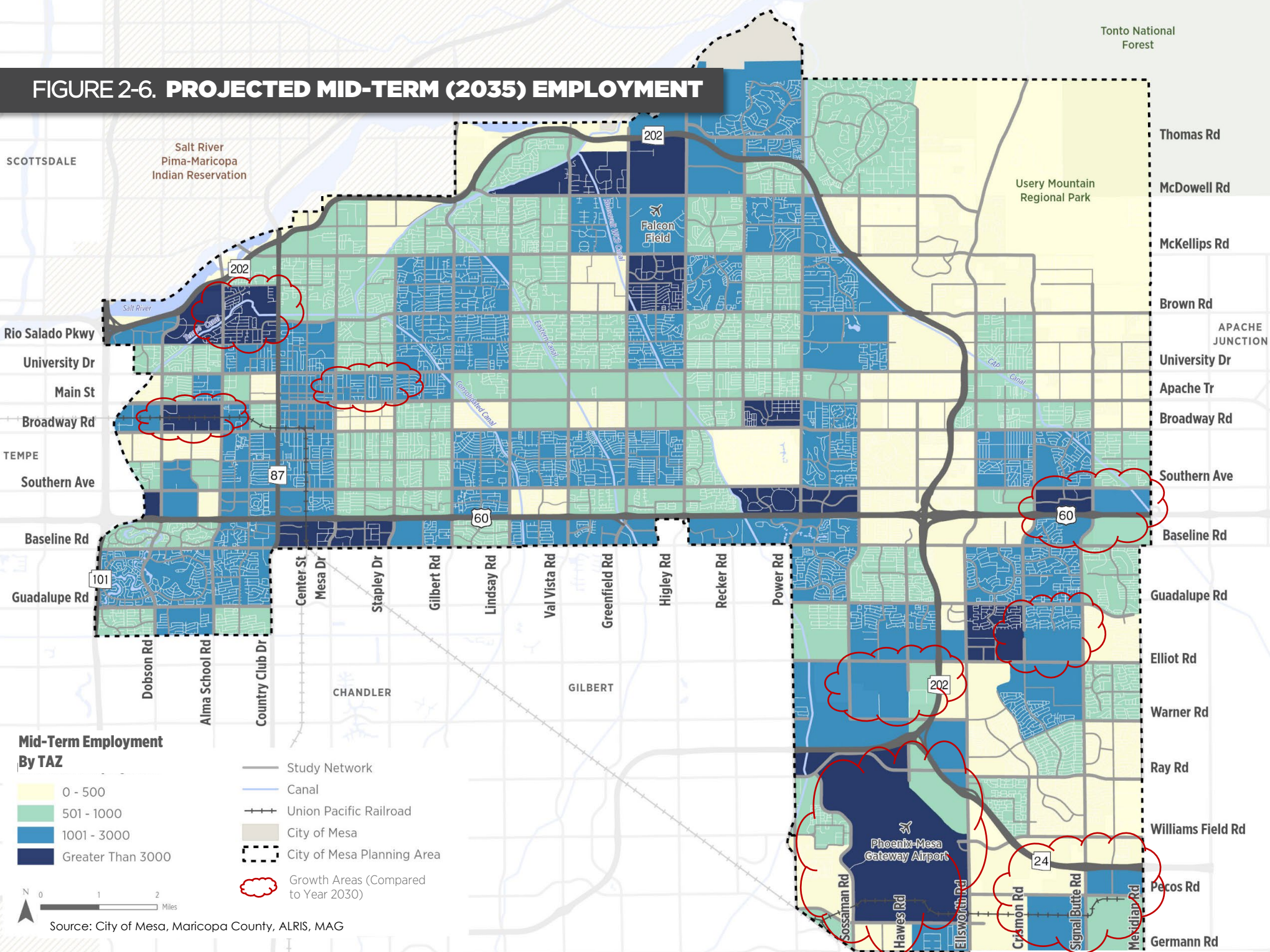
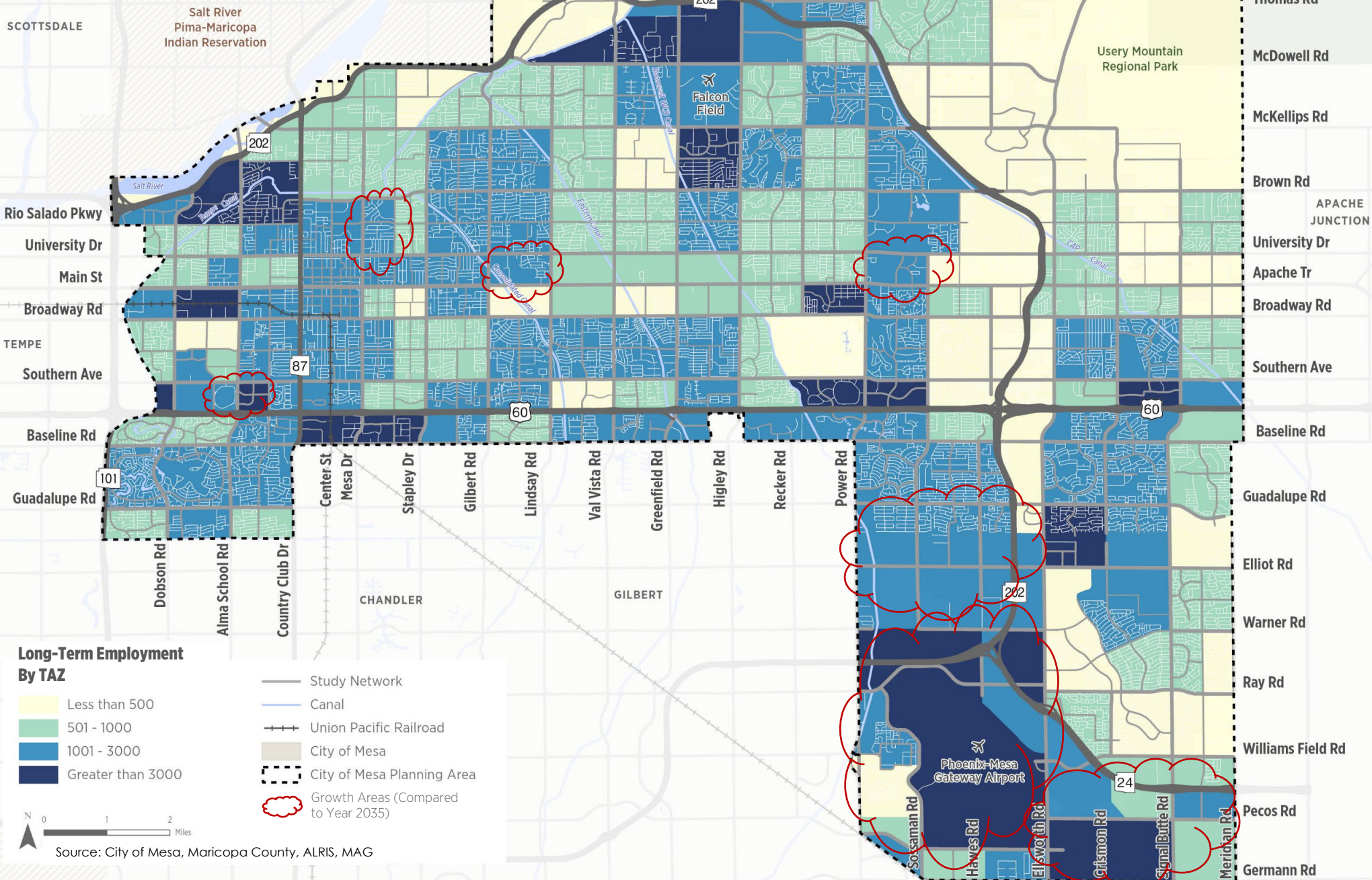


FIGURE 2-7. PROJECTED LONG-TERM (2050) EMPLOYMENT



Source: City of Mesa, Maricopa County, ALRIS, MAG

3. FUTURE TRAFFIC CONDITIONS

The primary purpose of forecasting future traffic volumes is to estimate the additional travel demand added to **existing** roadways and to forecast congestion levels due to projected growth in population and employment. This analysis also provides valuable insight into potential transportation solutions. The following section presents corridor traffic volumes and levels of service/congestion, if no roadway improvements are made (No-Build).

Level of service (LOS) values were determined for each roadway segment using a ratio of volume to capacity (V/C). V/C ratios for each LOS type and the typical level of congestion it represents are listed below:

- LOS A to LOS C (little or no congestion): v/c ratio less than or equal to 0.7
- LOS D (moderate congestion): v/c ratio greater than 0.7 and less than or equal to 0.85
- LOS E (At or nearing capacity): v/c ratio greater than 0.85 and less than or equal to 1.0
- LOS F (Over capacity): v/c ratio greater than 1.0

It is important to note that all future no-build analysis results presented in this section do not incorporate projects in Mesa's Capital Improvement Program (CIP). Figure 3-1 illustrates the baseline roadway network and number of travel lanes.

Near-Term (2030) Projected Traffic Conditions

Figure 3-2 displays the projected traffic volumes and Figure 3-3 illustrates the Level of Service for the near-term planning horizon, *if no roadway improvements are made*. As illustrated in the figures, several corridors start to operate at LOS E and F with the additional demand, including: University Drive, Main Street, and Broadway Road in downtown Mesa; the majority of US 60 interchanges; and several arterials in southeast Mesa (including portions of Sossaman Road, Ellsworth Road, and Ray Road).

Mid-Term (2035) Projected Traffic Conditions

Figure 3-4 displays the projected traffic volumes and Figure 3-5 illustrates the Level of Service for the mid-term planning horizon, *if no roadway improvements are made*. As illustrated in the figures, congestion levels continue to increase from the near-term levels with significantly more corridors operating at LOS E and F.

Long-Term (2050) Projected Traffic Conditions

Figure 3-6 displays the projected traffic volumes and Figure 3-7 illustrates the Level of Service for the long-term planning horizon, *if no roadway improvements are made*. Listed in no particular order, the following are some of the key roadways in the City of Mesa that are projected to operate at LOS E or worse by 2050:

- McKellips Road: west of Center Street
- University Drive, Main Street and Broadway Road west of Gilbert Road
- Guadalupe Road: west of Dobson Road
- Elliot Road: portions west of Ellsworth Road
- Warner Road: west of Sossaman Road
- Ray Road: west of Ellsworth Road and east of Signal Butte Road
- Pecos Road: west of Signal Butte Road and portions west of Ellsworth Road
- Dobson Road: north of US 60 and north of Broadway Road
- Alma School Road: portions north of the MPA boundary to Rio Salado Parkway
- Country Club Drive: north of the MPA boundary to University Drive
- Mesa Drive: Baseline Road to Adobe Street
- Stapley Drive: Baseline Road to University Drive
- Gilbert Road: Baseline Road to Main Street
- Val Vista Road: Baseline Road to Pueblo Avenue
- Higley Road: Baseline Road to Broadway Road
- Sossaman Road: north of Germann Road and north of Warner Road
- Ellsworth Road: north of Germann Road

Mesa's Capital Improvement Program (CIP)

The study team evaluated existing funded capacity-related projects in Mesa's CIP to confirm the need for the projects. Results of the analysis show that without the following CIP projects, these segments would operate at failing LOS levels.

Val Vista Drive widening from Pueblo Avenue to US 60 (CIP# CP0062). This project will widen Val Vista Drive to include three through lanes in each direction.

- **No-build Analysis:** As indicated in Figure 3-3, this segment would operate at LOS E and F in Y2030 if the CIP project is not completed.

Ray Road connections at Ellsworth Road (CIP# CP0983). This project will connect the two offset alignments of Ray Road at Ellsworth Road and widen the segment to include 3 travel lanes on Ray Road in each direction from SR 24 to the existing Ray Road east leg alignment at Ellsworth Road. At the same time, the existing "north" leg of Ray Road will be reduced to one lane in each direction from Ellsworth to the new Ray Road.

- **No-build Analysis:** As indicated in Figure 3-3, Ray Road west of Ellsworth Road would operate at LOS E and F in Y2030 if the CIP project is not completed.

The study team also evaluated unfunded capacity-related projects in Mesa's CIP to confirm the need for the projects. Results of the analysis show that without the following unfunded CIP projects, these segments would also operate at failing LOS levels.

- Broadway Road: Country Club to Mesa Drive (CIP# CP0029)
- Power Road Improvements: East Maricopa Floodway to Loop 202 (CIP# CP0104)
- Mesa Drive; Main Street to Brown Road (CIP# CP0664)
- Broadway Road: Lesueur to Spur (CIP# CP0666)
- Sossaman Road from Velocity Way to South City Limits (CIP# CP1133)
- Pecos Road Improvements: Ellsworth Road to Meridian Road (CIP# C06040)
- Ellsworth Road from City Limits to Ray Road (CIP# CP0969)
- Elliot Road: Ellsworth to Sossaman (CIP# CP0982)

FIGURE 3-1. BASE YEAR NUMBER OF LANES

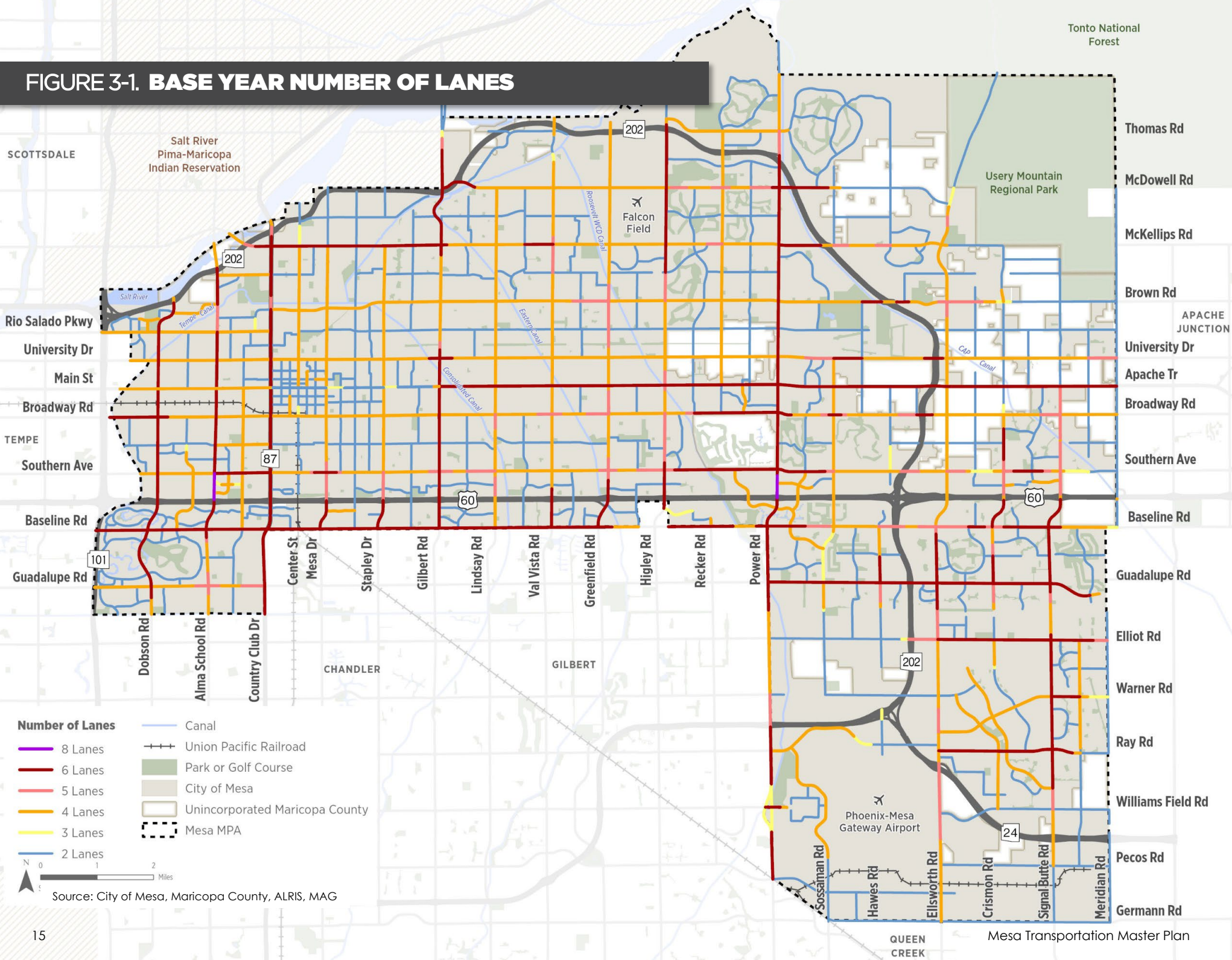
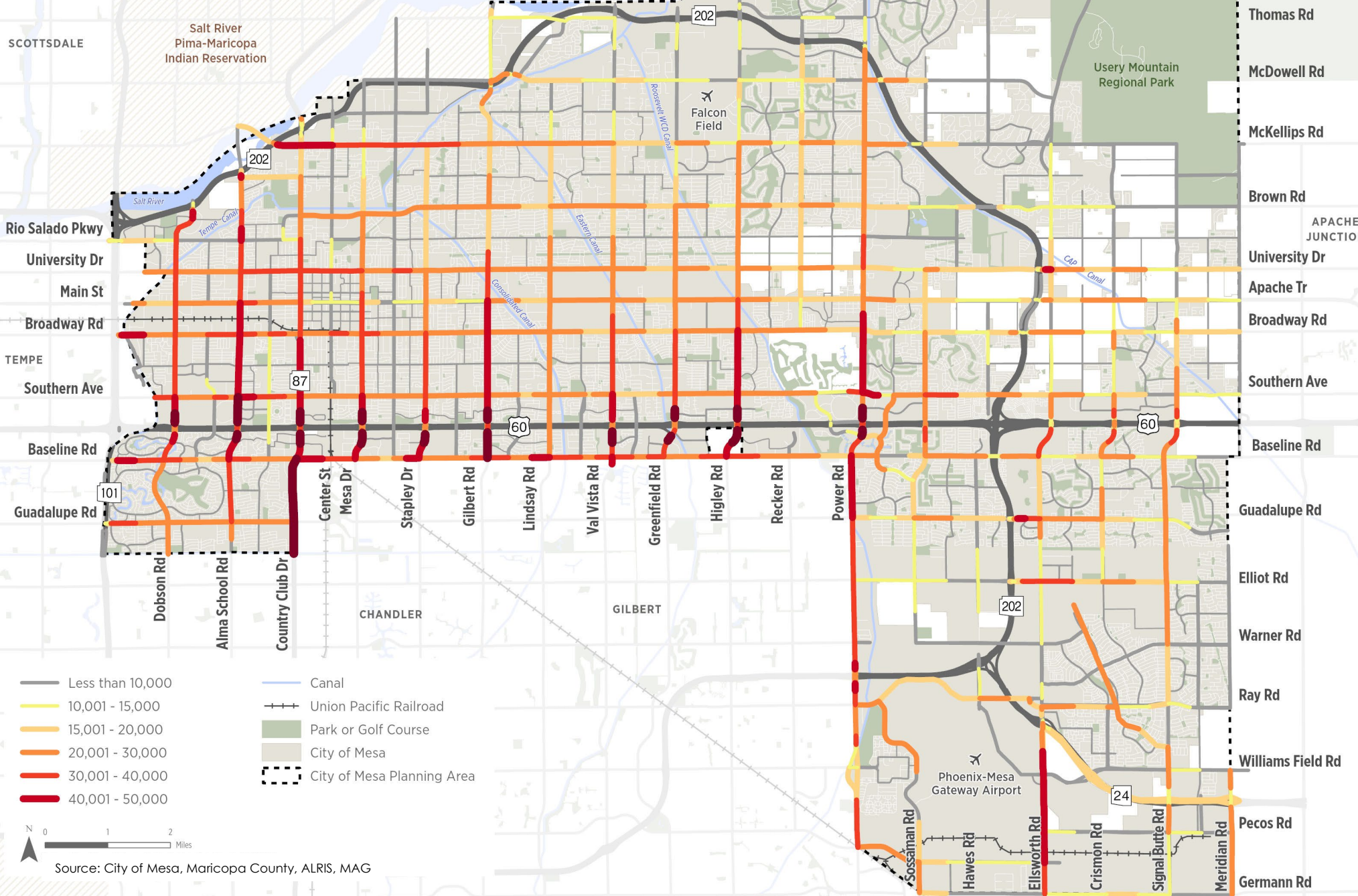
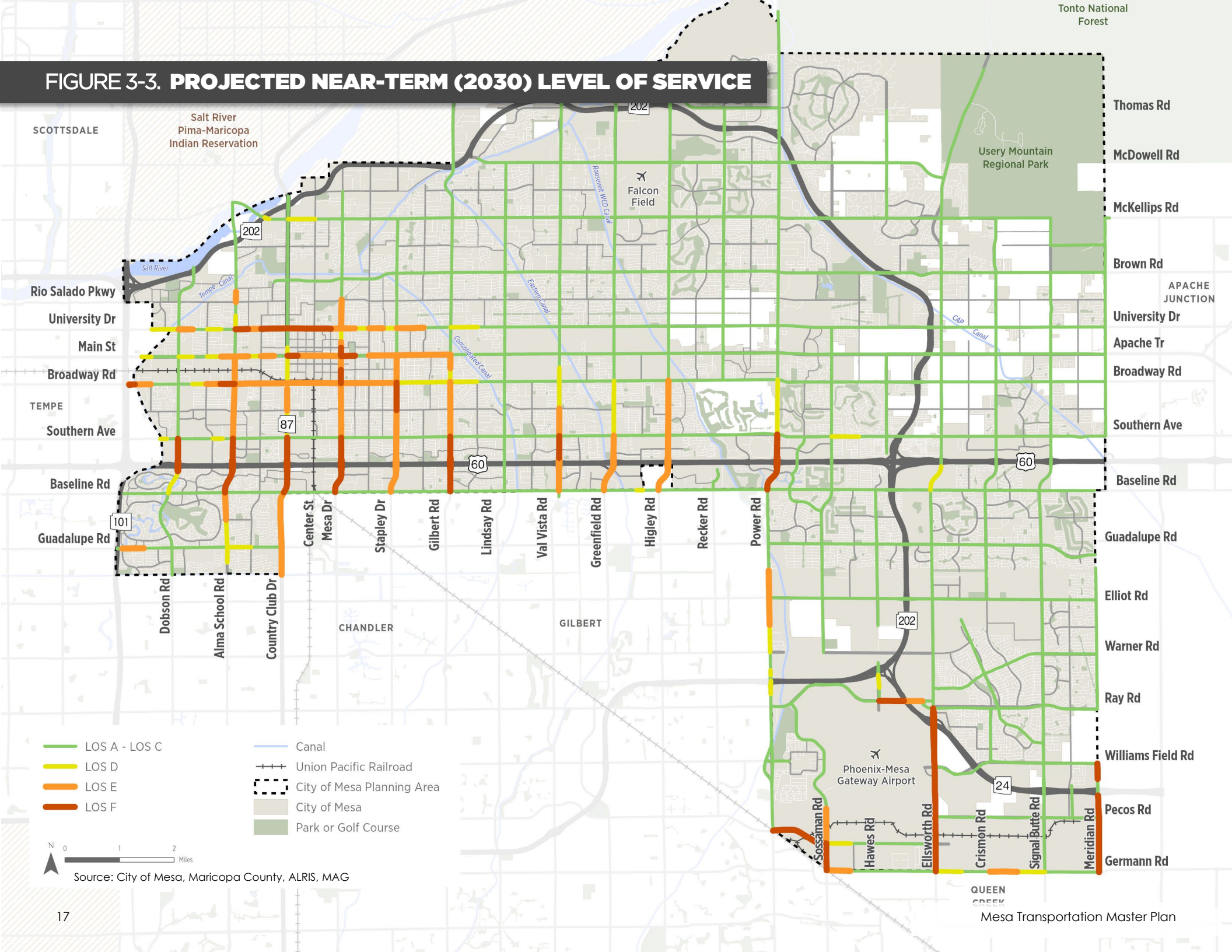


FIGURE 3-2. PROJECTED NEAR-TERM (2030) TRAFFIC VOLUMES



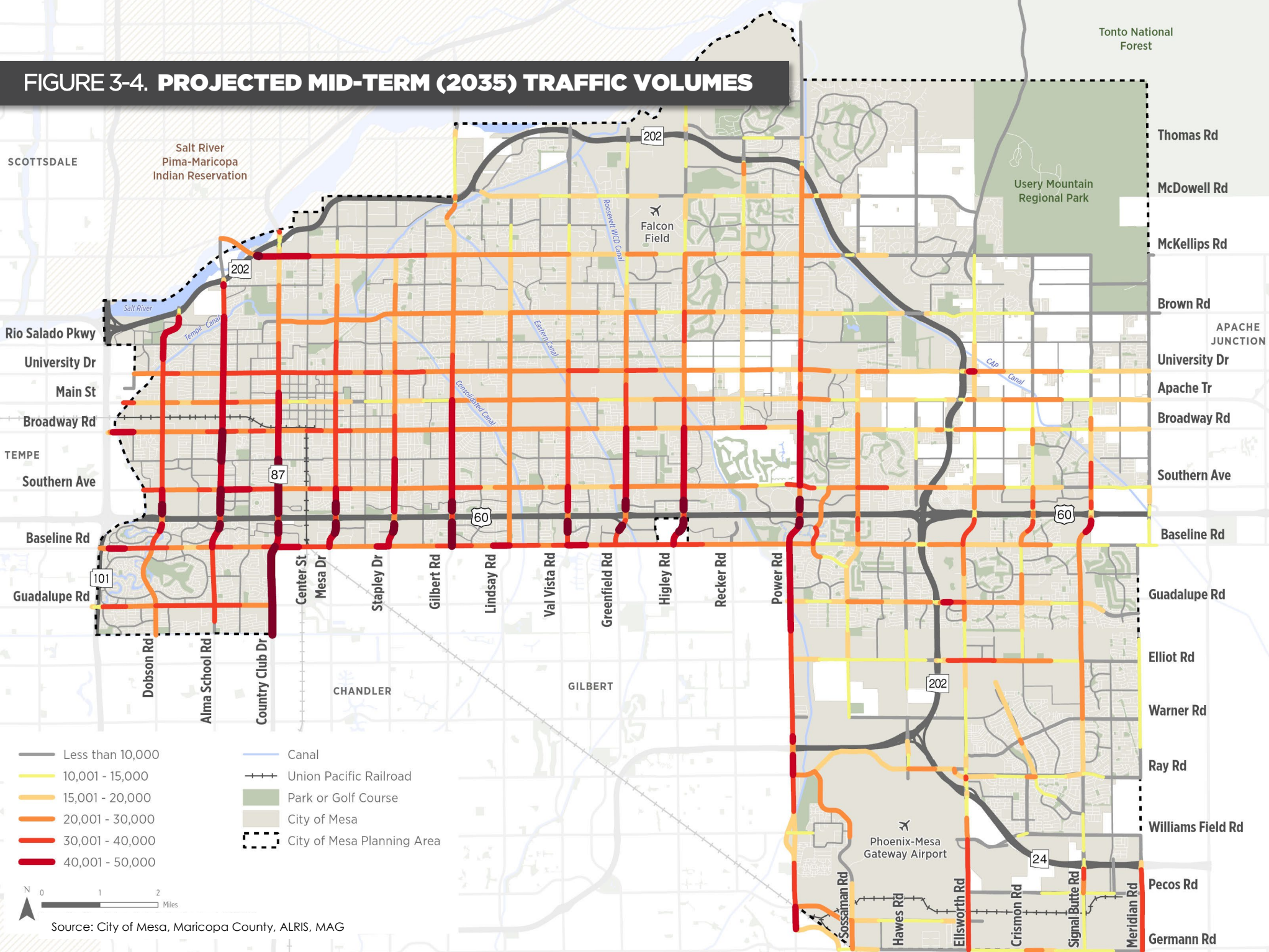
Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 3-3. PROJECTED NEAR-TERM (2030) LEVEL OF SERVICE



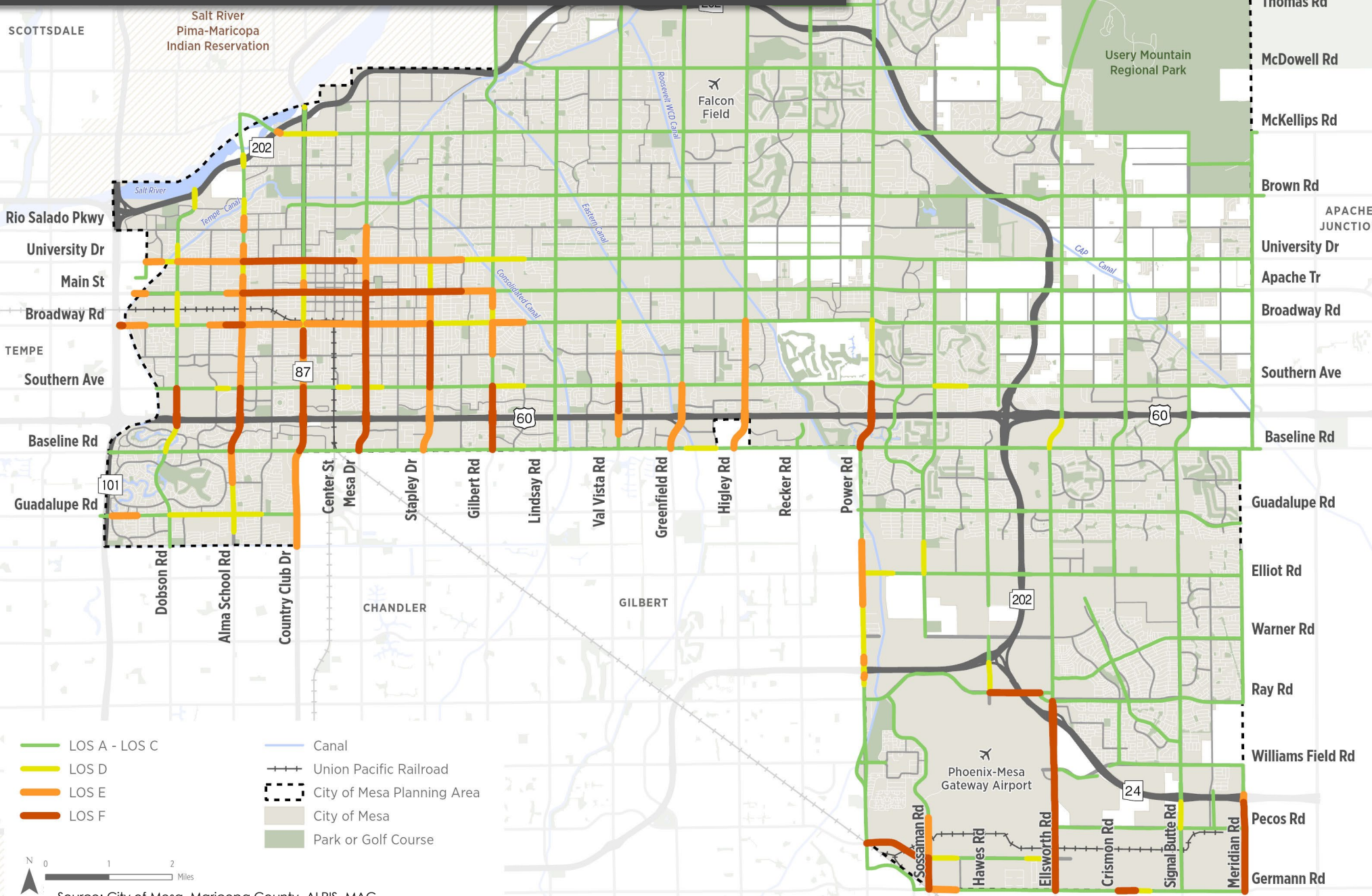
Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 3-4. PROJECTED MID-TERM (2035) TRAFFIC VOLUMES



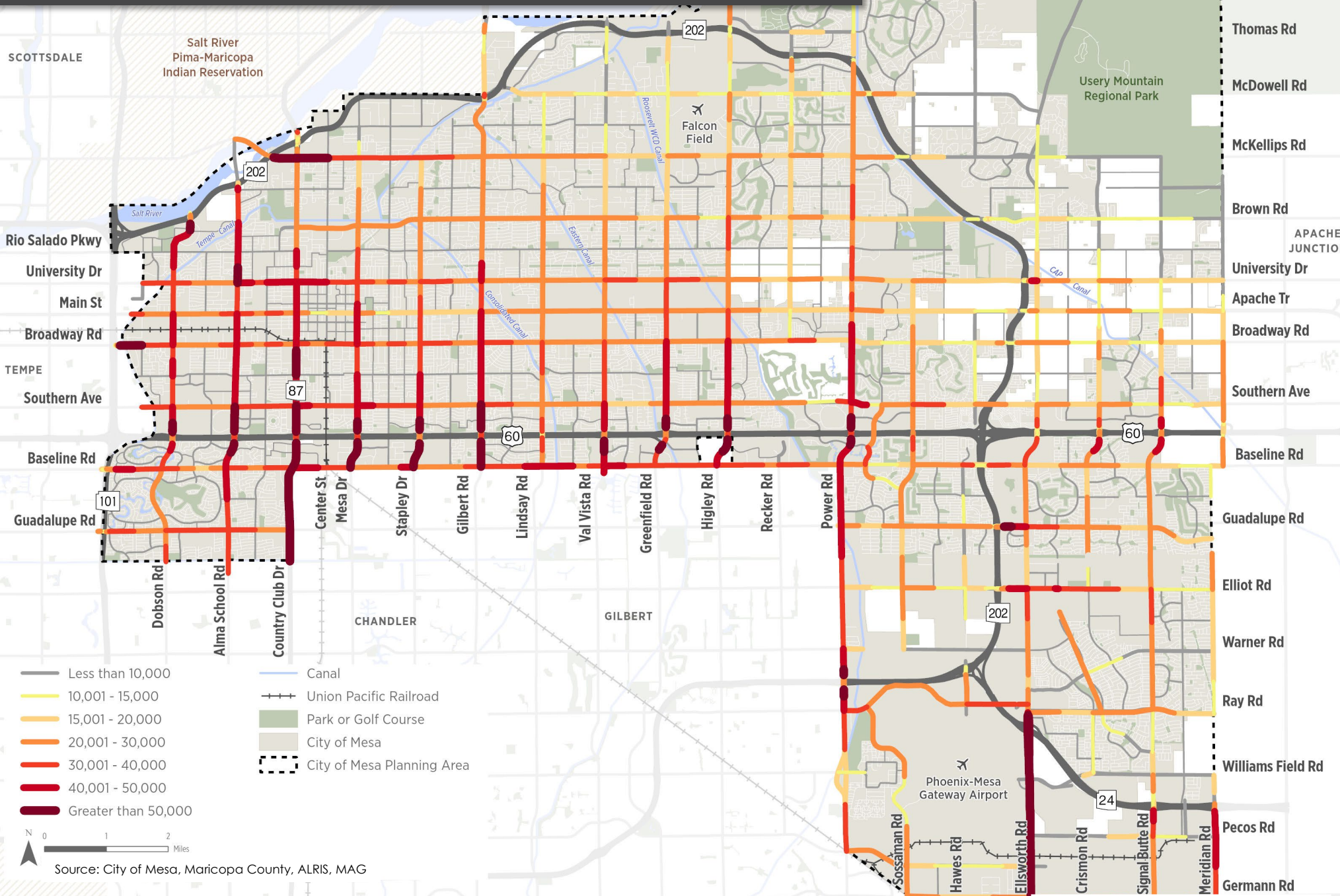
Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 3-5. PROJECTED MID-TERM (2035) LEVEL OF SERVICE



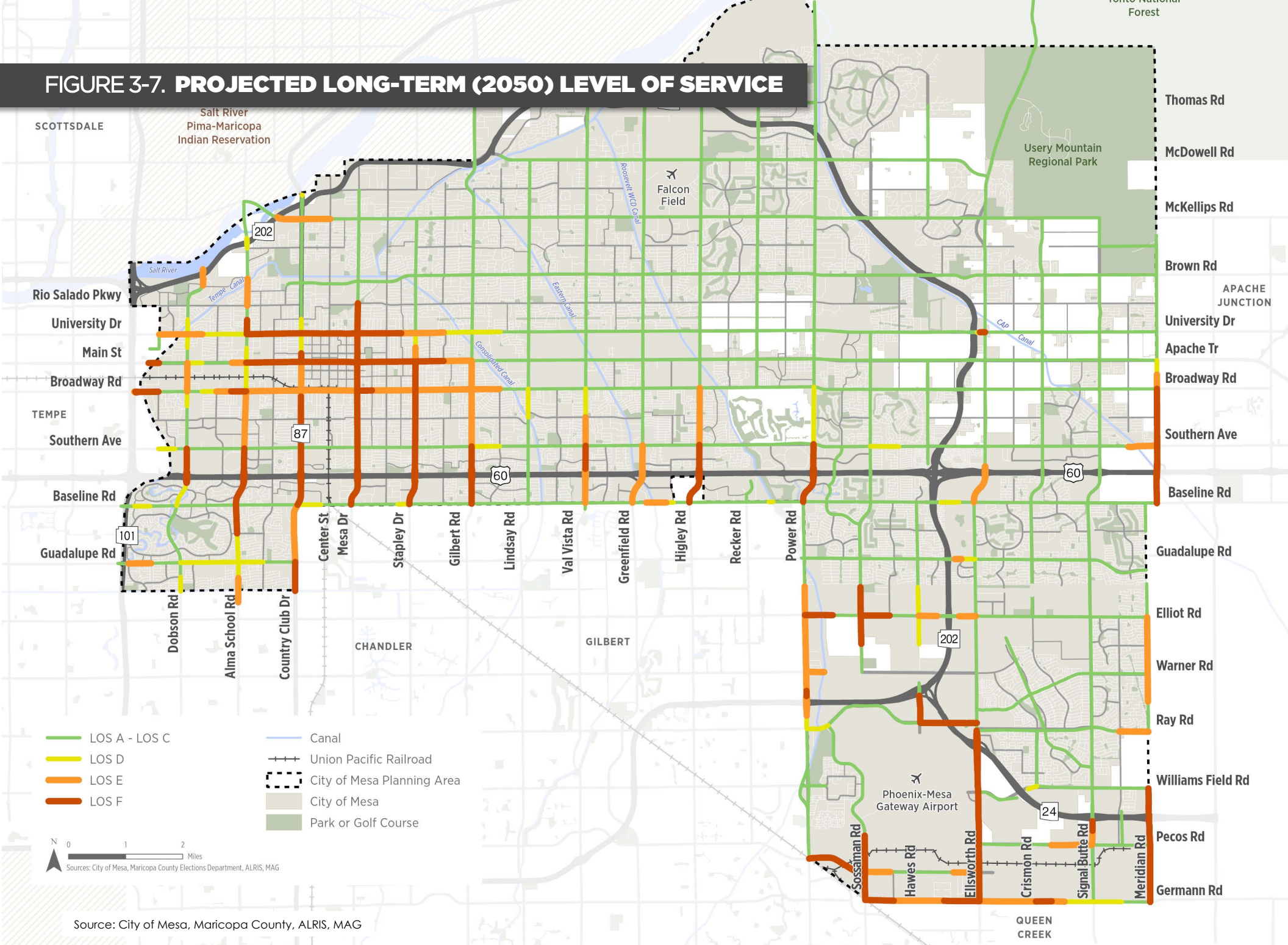
Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 3-6. PROJECTED LONG-TERM (2050) TRAFFIC VOLUMES



0 1 2 Miles
 N
 Source: City of Mesa, Maricopa County, ALRIS, MAG

FIGURE 3-7. PROJECTED LONG-TERM (2050) LEVEL OF SERVICE



0 1 2 Miles
Sources: City of Mesa, Maricopa County Elections Department, ALRIS, MAG

Source: City of Mesa, Maricopa County, ALRIS, MAG