

CHAPTER 4 - ENVIRONMENTAL

The following chapter will summarize the existing cultural and environmental conditions within the study area. Field observations and research of available data have been conducted to provide this summary and will be used in analysis of potential alternatives to determine environmental impacts.

4.1 Community

4.1.1 Cultural Resources

A cultural resource file search was conducted for the US 550 study area. Cultural resource data was obtained from the New Mexico Cultural Resources Information System (NMCRIS) managed by the Archaeological Resource Management Section (ARMS) of the New Mexico Historic Preservation Division (HPD) for a 0.5-kilometer (km) (0.3-mile [mi]) search radius was generated around the study area. Previously recorded sites within this search radius are provided in **Table 4.1**. As this is within Bernalillo, New Mexico, which is a community with a rich prehistory and history, many resources are within the 0.5-km (0.3-mi) radius area. Forty-nine previously recorded sites are within the radius area, and 11 are within the study area. These sites include LA 500, LA 45229, LA 51730, LA 80871, LA 112420, LA 112421, LA 113992, LA 114200, LA 126235, LA 143448 and LA 143449.

In addition, 11 previously recorded historic buildings, one acequia, and two properties are listed on both the State Register of Cultural Properties and the National Register of Historic Places, and one property is listed on the State Register of Cultural Properties (See Tables in **Appendix E**). One previously recorded historic building is adjacent to the study area. A cemetery and portions of the Coronado State Monument are also within the 0.5-km (0.3-mi) radius. Also, 56 previous cultural resource surveys were identified within 0.5 km (0.3 mi) of the study area. The surveys were conducted from 1976 to 2012.

4.1.2 Socioeconomics and Environmental Justice

The study area is located within Bernalillo, Rio Rancho, and the Pueblo of Santa Ana, all within Sandoval County. Based on the 2010 Census, Sandoval County had a population of 131,561 (see **Table 4.1**). Sandoval County is experiencing strong growth with a projected growth rate of 2.70 percent for the years 2015-2020.

Four Census Tracts provide local socioeconomic data for the study area and show the diverse socioeconomic conditions near the study area. Census Tract 105.03 includes northern Bernalillo east of the Rio Grande. Tract 105.03 has a population with a median age of 39.6 years and a large Hispanic/Latino population (72.4%). Census Tract 107.02 includes portions of Bernalillo and Rio Rancho on the south side of US 550 between NM 528 and the Rio Grande. Tract 107.02 has a

median age of 45.3 years and slightly smaller than average Hispanic/Latino population (31.0%). Census Tract 107.17 includes northern Rio Rancho on the south side of US 550 west of NM 528. Tract 107.17 has median age of 33.7 years and a typical proportion of Hispanic/Latino residents (44.0%) for New Mexico. Census Tract 110 covers Santa Ana Pueblo including areas north of US 550 and west of the Rio Grande. Tract 110 has a median age of 43.4 years and a large Native American population (41.9 percent).

Tracts 105.03 and 110 have relatively low incomes and high poverty rates when compared with the state median family income (\$53,956) and state family poverty rate (14.4%). In Tract 105.03, the median family income is \$49,539 and the poverty rate is 18.5%. In Tract 110, the median family income is \$51,731 and the poverty rate is 15.4%. Based on these statistics and their minority representation, Tract 105.03 in northern Bernalillo and Tract 110 in the Pueblo of Santa Ana should be considered communities of concern for environmental justice evaluation.

The Albuquerque metropolitan area is New Mexico's largest economic center. A variety of employment opportunities are provided in the region. The largest employers include Sandia National Laboratories, Kirtland Air Force Base, Intel, Albuquerque Public Schools, City of Albuquerque, and Bernalillo County. State agencies in Santa Fe also employ Albuquerque area residents. These employers are commuter destinations for workers living in Bernalillo and Rio Rancho. Worker commuter traffic uses US 550 on a daily basis. US 550 also provides a truck route for regional and statewide freight traffic. Sandoval County had a civilian labor force of 52,783 with an unemployment rate of 7.2% as of April 2013. Sandoval County's unemployment rate was slightly higher than the state unemployment rate of 6.4% (New Mexico Department of Workforce Solutions, 2013). Areas near the project area have vibrant economic activity. Santa Ana Star Casino is the largest business along the corridor. A variety of restaurants and retail establishments operate along US 550 including a Giant service station, Chevron service station, Subway, I-Hop, Tractor Supply, Home Depot, Auto Zone auto parts, O'Reilly auto parts, U.S. Bank, Wells Fargo Bank, Wicked Auto Sales, a laundromat, and other establishments.

Table 4.1 Demographic Characteristics of Areas Near US 550 Study Area

Characteristics	New Mexico	Sandoval County	Census Tract 105.03	Census Tract 107.02	Census Tract 107.17	Census Tract 110
Location Description	Statewide	Countywide	Northern Bernalillo East of Rio Grande	South of US 550 Between Rio Grande and NM 528	South of US 550 West of NM 528	Pueblo of Santa Ana – North of US 550 and West of Rio Grande
2010 Population:						
- Total Population	2,059,179	131,561	3,425	6,522	8,996	1,963
- Median Age – years	36.7	37.9	39.6	45.3	33.7	43.4
- Percent Under 18	25.2%	26.7%	24.6%	19.7%	31.3%	23.6%
- Percent Over 64	13.2%	12.1%	14.1%	16.0%	6.9%	17.4%
- Percent Population Growth 2010-2015	1.34%	3.02%	--	--	--	--
- Percent Population Growth 2015-2020	1.26%	2.70%	--	--	--	--
2010 Race Status:						
- White	68.3%	68.0%	70.7%	79.8%	71.8%	32.3%
- Black/African American	2.1%	2.1%	0.7%	2.8%	3.1%	0.6%
- Native American	9.4%	12.9%	4.8%	3.1%	5.3%	41.9%
- Asian	1.4%	1.5%	0.3%	1.8%	1.7%	0.4%
- Hawaiian / Pacific Islander	0.1%	0.1%	0.0%	0.1%	0.3%	0.1%
- Some other race	15.0%	11.5%	21.5%	8.8%	13.5%	21.0%
- Two or more races	3.7%	3.9%	2.0%	3.6%	4.3%	3.8%
2010 Hispanic / Latino	46.3%	35.1%	72.4%	31.0%	44.0%	32.0%
2010 Housing Units:						
- Owner-occupied Units	68.5%	81.0%	72.8%	89.4%	75.8%	85.2%
- Renter-occupied Units	31.5%	19.0%	27.2%	10.6%	24.2%	14.8%
2007-2011 Income and Poverty:						
- Median Family Income	\$53,956	\$67,050	\$49,539	\$82,336	\$85,539	\$51,731
- Family Poverty Rate	14.4%	9.3%	18.5%	5.2%	4.6%	15.4%
- Per Capita Income	\$23,537	\$26,757	\$21,279	\$34,404	\$29,130	\$24,308
- Per Capita Poverty Rate	19.0%	12.4%	22.3%	4.7%	4.2%	18.6%

Sources: Bureau of Business and Economic Research (2012); U.S. Census Bureau (2013)

4.2 Land Use

Three distinct communities border US 550. The Pueblo of Santa Ana is a Native American community with a history that predates the arrival of the Spanish in New Mexico. Bernalillo was for many years a community that served farmers and travelers in Sandoval County; but in the last 50 years, it has started to resemble a suburban community. Rio Rancho is the youngest of the three communities, but it has experienced the fastest growth of any New Mexico city during the last 30 years.

Lands near the study area have a long history of human occupation. The Pueblo peoples are descended from the Anasazi and possibly other groups such as the Mogollon. The Pueblo of Santa Ana, also known as Tamaya, was established by the 16th Century. After participating in the 1680 pueblo revolt, the residents of Santa Ana abandoned the pueblo and moved to the Jemez Mountains. They reestablished the pueblo in 1693. Since Bernalillo and Pueblo of Santa Ana are located near the Rio Grande, early Spanish explorers passed through the area. Coronado's expedition crossed the study area in 1540, near Coronado State Park north of US 550, followed by the Oñate expedition in 1598. Historians attribute the name Bernalillo to the Gonzales-Bernal family. There were settlements in the area by 1680, and Las Cocinitas neighborhood, west of downtown Bernalillo, was established by the 1690s. In contrast, Rio Rancho is a much newer community. In 1962, Rio Rancho Estates began developing residential lots on open land in southern Sandoval County. The City of Rio Rancho was incorporated in 1981. By the 2010 Census, Rio Rancho had become the third largest city in New Mexico, increasing in population by 67 percent during the 2000-2010 decade (Bureau of Business and Economic Research, 2011; Julyan, 1998; and Pritzker, 2000).

US 550 is mostly a commercial corridor. The Town of Bernalillo manages development through the town's Planning and Zoning Department. Town of Bernalillo lands along US 550 are zoned for commercial use except for two areas on the north side of US 550 zoned as special use (Mid-Region Council of Governments [MRCOG], 2005; Town of Bernalillo, 2013). The commercial uses consist of restaurants, service stations, and retail establishments. The Pueblo of Santa Ana manages development through its Planning and Building Services Department (Pueblo of Santa Ana, 2013). The pueblo's principal development along US 550 is the Santa Ana Star Casino complex on the north side of US 550 east of Tamaya Boulevard. Pueblo lands on the north side of US 550 west of Tamaya Boulevard are undeveloped rangeland. The City of Rio Rancho manages development through the city's Development Services Department. According to the Rio Rancho Comprehensive Plan, the southwest corner of US 550 and NM 528 is planned for office and mixed-use commercial use; and lands to the west of this area on the south side of US 550 are planned for low- and medium-

density residential use. The comprehensive plans contain two land use policies related to transportation (City of Rio Rancho, 2010):

Policy L-3: Promote and support development that supports walkability.

Policy L-4: Encourage adequate pedestrian connections to future transit facilities in all residential site development.

4.2.1 Farmland

Farmers in the Rio Grande valley depend on Rio Grande waters for successful harvests. Irrigated agriculture has a long history in the valley and retains an important role in the economy and culture. The Albuquerque Main Canal is located on the east side of the Rio Grande and provides water to many farmers in the Middle Rio Grande Valley. All but one of the soil mapping units in the study area are classified as “not prime farmland” (see **Table 4.2**). The only farmland soil mapping unit is Gilco clay loam (0-1% slopes), which is classified as “prime farmland if irrigated.” The extent of Gilco clay loam is limited to the south and east sides of the US 550/NM 313 intersection. None of this area is currently cultivated or irrigated.

Table 4.2 Farmland Soils

Soil Mapping Unit	Farmland Classification
Gilco clay loam, 0-1% slopes	Prime farmland if irrigated
Gilco loam, 1-4% slopes	Not prime farmland
Sheppard loamy fine sand, 3-8% slopes	Not prime farmland
Trail fine sandy loam, 3-8% slopes	Not prime farmland
Trail silty clay loam, 0-1% slopes	Not prime farmland

Source: Natural Resources Conservation Service, 2014

4.2.2 Visual Resources

The views near the study area consist of an urban landscape. From US 550, the Sandia Mountains are visible to the east and provide a scenic background (see **Figure 4.1**). To the west of NM 528, rolling hills are visible to the north. Trees and river views are present at the Rio Grande Bridge. Most of the corridor consists of an urban area streetscape (see **Figure 4.1**). West of NM 528, homes and

businesses are visible on the south side of US 550, and rangeland is visible on the north side of US 550. East of NM 528, one-story commercial buildings and adjoining parking lots are the predominant view.

Figure 4.1 US 550 Streetscapes



4.1.6 Section 4(f)

As part of the Section 4(f) requirements, FHWA evaluates projects for impacts on public parks, recreation areas, wildlife and waterfowl refuges, and historic sites. FHWA projects are required to avoid such properties unless there is no prudent and feasible alternative to using that property. If a 4(f) property is used, the project must take steps to minimize harm to that property. No parks, recreation areas, or wildlife/waterfowl refuges are located within the study area. Coronado State Monument is located north of the study area on Kuaua Road, but it is located outside of the areas that would be impacted by proposed alternatives. Several of the historic properties may qualify as Section 4(f) properties (see **Appendix E**). Further investigation will be needed to determine if any of the historic properties qualify as Section 4(f) properties.

4.1.7 Hazardous Materials

Based on a preliminary review, hazardous materials sites along the corridor are associated with leaking underground storage tanks at service stations. Historical leaking underground storage tanks occurred near the NM 313 intersection, along the US 550 section from 0.1 to 0.4 miles west of NM 313, and on the southwest corner of the Camino Don Tomas intersection. An Initial Site Assessment (ISA) will be conducted in a subsequent project phase to identify recognized environmental conditions.