



Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation

Section 3.5, Community Resources, Title VI, and Environmental Justice

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1 **3.5 Community Resources, Title VI, and Environmental Justice**

2 This section addresses general community characteristics, community resources (major public
 3 services and amenities), and environmental justice. It provides an overview of the minority and
 4 low-income populations present within the Interstate 11 (I-11) Corridor Study Area (Study Area)
 5 and discusses the potential for disproportionate adverse effects on those populations.
 6 Strategies for mitigation and continuing targeted public engagement efforts are recommended
 7 for the future Tier 2 environmental review process.

8 Employment and other economic issues also are discussed in Section 3.6, Economics. In
 9 addition, this Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f)
 10 Evaluation (Draft Tier 1 EIS) also considered potential impacts on traditional cultural properties,
 11 which are sites that have an association with cultural practices or beliefs of a living community,
 12 are rooted in the community’s history, and are important to maintaining the continuing cultural
 13 identity of the community. Traditional cultural properties are addressed in Section 3.7, Cultural
 14 Resources.

15 **3.5.1 Regulatory Setting**

16 **3.5.1.1 Community Characteristics and Resources**

17 This section addresses how potential effects of the Build Corridor Alternatives and No Build
 18 Alternative relate to the people and communities within the Study Area. The evaluation followed
 19 the guidelines provided in the Federal Highway Administration’s (FHWA’s) *Community Impact*
 20 *Assessment: A Quick Reference for Transportation, 2018 Update* (United States Department of
 21 Transportation [USDOT] 2018).

22 **3.5.1.2 Title VI and Environmental Justice**

23 Arizona Department of Transportation (ADOT) and FHWA must comply with Title VI of the Civil
 24 Rights Act of 1964, which prohibits discrimination based upon race, color, and national
 25 origin. Specifically, 42 United States Code 2000d states that “*No person in the United States*
 26 *shall, on the ground of race, color, or national origin, be excluded from participation in, be*
 27 *denied the benefits of, or be subjected to discrimination under any program or activity receiving*
 28 *Federal financial assistance.*”

29 Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority*
 30 *Populations and Low-Income Populations*, signed by the President on February 11, 1994 directs
 31 federal agencies to take the appropriate and necessary steps to identify and address
 32 disproportionately high and adverse effects of federal projects on the human health or
 33 environment of low-income and minority populations to the greatest extent practicable and
 34 permitted by law (Federal Register 59, 1994).

35 Relevant laws, EOs, and guidance include:

- 36 • Title VI of the Civil Rights Act of 1964, the federal law that protects individuals and groups
 37 from discrimination on the basis of their race, color, and national origin in programs and
 38 activities that receive federal financial assistance.
- 39 • USDOT Order 5610.2 (a) *Final DOT Environmental Justice Order* (USDOT 2012).

- 1 • FHWA Order 6640.23A *FHWA Actions to Address Environmental Justice in Minority*
- 2 *Populations and Low-Income Populations* (FHWA 2012).
- 3 • FHWA *Environmental Justice Reference Guide* (FHWA 2015).
- 4 • USDOT *Environmental Justice Strategy* (USDOT 2016).

5 There are three fundamental environmental justice principles: (1) avoid, minimize, or mitigate
6 disproportionately high and adverse human health and environmental effects, including social
7 and economic effects, on minority populations and low-income populations; (2) ensure the full
8 and fair participation by all potentially affected communities in the transportation decision-
9 making process; and (3) prevent the denial of, reduction in, or significant delay in the receipt of
10 benefits by minority and low-income populations.

11 In accordance with FHWA Order 6640.23A, a disproportionately high and adverse effect on a
12 minority or low-income population means the adverse effect is predominantly borne by such
13 population or is appreciably more severe or greater in magnitude on the minority or low-income
14 populations than the adverse effect suffered by the non-minority or non-low-income population.
15 Fair distribution of the beneficial and adverse effects of the proposed action is the desired
16 outcome.

17 **3.5.1.3 Limited English Proficiency**

18 EO 13166 *Improving Access to Services for Persons with Limited English Proficiency* provides
19 guidance for ensuring adequate opportunities for participation in project processes by LEP
20 populations in accordance with Department of Justice obligations (Federal Register 65, 2000).
21 LEP populations include individuals who do not speak English as their primary language and
22 who have a limited ability to read, speak, write, or understand English. Identifying LEP
23 populations helps ensure that everyone has an equal opportunity to participate in the public
24 process and that language barriers do not prevent certain groups from being able to provide
25 their input about the Study Area.

26 **3.5.2 Methodology**

27 **3.5.2.1 Community Characteristics and Resources**

28 Communities were identified using Census Designated Places (CDPs), which are delineated by
29 the US Census Bureau and defined as settled concentrations of populations in both
30 incorporated and unincorporated areas that usually coincide with visible features or boundaries
31 of an adjacent incorporated place (US Census Bureau 2017). The geographic extent of a CDP
32 does not always correspond with the local understanding of the area or community with the
33 same name. For example, the Avra Valley CDP is a smaller area than the 50-mile-long
34 northwest-southeast valley at the foot of the Tucson Mountains that is sometimes referred to as
35 Avra Valley. The analysis addresses community cohesion through the identification of CDPs
36 that intersect with the Build Corridor Alternatives. Community cohesion and the potential for
37 impacts were used as indicators in the evaluation of potential for disproportionate impacts.

38 The inventory of community resources, such as places of worship, libraries, and hospitals,
39 indicates areas where clusters of these facilities occur. Community resources were identified
40 within an Analysis Area encompassing the 2,000-foot-wide Project Area as well as a 2-mile
41 buffer surrounding the centerline of the Corridor Options, and inventoried based upon the US
42 Geological Survey Geographic Names Information System database with some spot checking



1 conducted using Google Earth. The effects analysis focused on identifying locations where the
2 Corridor Options intersect or are relatively close to community resources. Use impacts to
3 community resources are location specific, an inventory of individual facilities and their locations
4 would not yield meaningful information until a specific alignment is identified, and details
5 involving impacts of the actual construction footprint will be provided in Tier 2 analyses.
6 Therefore, potential impacts to community facilities are described in a more generalized
7 manner.

8 **3.5.2.2 Title VI and Environmental Justice**

9 US Census Bureau 2010 Decennial Census data was used to characterize the total population,
10 race, and ethnicity demographics of the Study Area (US Census Bureau 2010). American
11 Community Survey 5-year estimates for 2011 to 2015 were used to characterize income levels
12 in the Study Area (US Census Bureau 2015a). County-level and statewide data were collected
13 to provide a regional comparison, and data on both Census Tracts (CTs) and CDPs were
14 evaluated. CTs are larger geographic county subdivisions that provide complete coverage of the
15 Study Area and its populations. CDPs correspond better to the communities and geographies
16 where people live. The combination of both data points provides complete statistical coverage of
17 the Study Area, with the CDP data complimenting the CT data to provide information on the
18 more densely populated areas.

19 The minority groups addressed in this study include Hispanic, Black or African American,
20 American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, some other
21 race, and two or more races. Additional sub-categories based on national origin or primary
22 language spoken may have been used, where appropriate, on either a national or a regional
23 basis. Populations were defined as a group or groups of individuals who live in geographic
24 proximity. Low-income individuals are people whose household income is at or below the
25 poverty thresholds established by the US Census Bureau. The US Census Bureau thresholds
26 provide the basis for the Department of Health and Human Services poverty guidelines, which
27 are simplified and rounded from the US Census Bureau thresholds.

28 This Tier 1 programmatic analysis followed a more qualitative approach than a project-level
29 environmental justice analysis by identifying locations where the Corridor Options extend
30 through communities with a high concentration of minority or low-income individuals and the
31 potential for the Build Corridor Alternatives to affect those communities. The potential for
32 disproportionately high and adverse effects was evaluated by calculating the percentage of the
33 Build Corridor Alternative which passes through those communities. Disproportionate effects
34 can arise from any type of environmental impact, and no hard threshold was used to identify
35 these areas. A full evaluation of adverse and potentially disproportionate impacts to minority and
36 low-income populations requires detailed design information, such as specific alignment and a
37 construction footprint, than is available during the Tier 1 analysis. Therefore, a comprehensive
38 impact evaluation to identify and address disproportionate benefits and burdens in the various
39 communities along the corridor, as well as their demographic character, will be necessary
40 during Tier 2 analyses. Requirements for a full Environmental Justice analysis are described in
41 more detail in Section 3.5.2 (Tier 2 Analyses).

42 **3.5.2.3 Limited English Proficiency**

43 In compliance with EO 13166, census data were consulted to identify to determine which
44 languages are spoken in the Study Area. The American Community Survey gathers data on
45 English proficiency by household. Persons with LEP are defined as individuals for whom English
46 is not their primary language and who have a limited ability to read, write, speak, or understand



1 English. It includes people who reported to the US Census Bureau that they speak English less
2 than very well, not well, or not at all (US Census Bureau 2015b).

3 3.5.3 Affected Environment

4 3.5.3.1 Community Characteristics and Resources

5 Community cohesion is generated and maintained by local residents and businesses. Cohesion
6 can be increased through the creation of facilities that bring residents together such as a school,
7 park, or social neighborhood businesses like a coffee shop. Cohesion can be lost when
8 longtime residents or businesses move away or are displaced, or if a physical barrier is built,
9 such as a new road or noise wall that divides a community.

10 Some communities may already be intersected by an existing roadway and may have already
11 experienced a change in their community cohesion due to that existing roadway. The following
12 descriptions are used to clarify how existing conditions in a community may relate to the
13 potential for future community cohesion impacts within the Corridor Options of the Build Corridor
14 Alternatives:

- 15 • **Corridor Option follows an existing major roadway:** This condition identifies
16 communities that are already divided by an existing interstate or state highway. Due to the
17 existing roadway and the characteristics of that roadway, a new barrier would not be created
18 so new community cohesion impacts caused by a Build Corridor Alternative would be
19 limited. However, other kinds of cohesion impacts could be caused by new roadway
20 construction that displaces existing residences or businesses. These effects would be
21 caused by the future construction footprint, which cannot be determined in detail at this time.
- 22 • **Corridor Option follows an existing regional or local roadway:** This category captures
23 communities divided or bordered by all other roadway types such as local roads, county
24 roads or two-lane state highways. Local community characteristics may be impacted to a
25 greater degree by the barrier created by the Build Corridor Alternatives and there is potential
26 for minimal to moderate impacts to community cohesion from displacement of residences
27 and businesses.
- 28 • **Corridor Option does not follow an existing roadway:** In some locations, the Build
29 Corridor Alternatives would create new transportation infrastructure. Impacts on adjacent
30 communities would be based on whether residential areas are divided by the roadway or if
31 the proximity to the new roadway creates neighborhood impacts such as displacement.

32 Incorporated communities within the South Section consist of the cities of Nogales, Tucson, and
33 Eloy, and the towns of Sahuarita and Marana. Portions of the City of Eloy also are located within
34 the Central Section, but most of the city lies within the South Section. As shown in **Figure 3.5-1**
35 (Communities and Community Facilities – South Section Corridor Options), there are 28 CDPs
36 within this area, which includes both incorporated and unincorporated areas. The five largest
37 unincorporated communities (in land area) intersecting Build Corridor Alternatives in the South
38 Section are Picture Rocks, Rio Rico, Red Rock, Three Points, and Green Valley.

39 The Avra Valley area is referred to in several sections throughout this Draft Tier 1 EIS.
40 **Figure 3.5-1** (Communities and Community Facilities – South Section Corridor Options) also
41 shows the extents of the valley landform referred to as Avra Valley, which extends as far north
42 as the Samamiego Hills near Marana. The Avra Valley CDP, also shown in **Figure 3.5-1**
43 (Communities and Community Facilities – South Section Corridor Options) and referenced

1 throughout this section of the Draft Tier 1 EIS is a smaller geographic area with boundaries
2 defined by the US Census Bureau for statistical purposes only.

3 Tribal communities in the South Section consist of the Tohono O’odham Nation and the Pascua
4 Yaqui Tribe. Tohono O’odham Nation Tribal land within the Study Area includes both the San
5 Xavier District and the Schuk Toak District. Resources or places of traditional cultural
6 importance to tribal communities are located beyond their reservation boundaries. For example,
7 the National Park Service (NPS) has identified ethnographic resources of importance to Tribes
8 within the Saguaro National Monument, and FHWA and ADOT consultations with tribes
9 identified other traditional cultural properties (see Section 3.7.3.3).

10 The downtown Tucson area is home to a number of historic neighborhoods. More detail on the
11 history of these neighborhoods and specific historic resources within them can be found in
12 Section 3.7, Archaeological, Historical, Architectural, and Cultural Resources. This analysis
13 focuses on the neighborhoods that are located along I-10 and abut Option B. East of I-10 is
14 Barrio El Membrillo, Barrio Santa Rosa, Barrio Viejo, El Presidio, and Barrio Anita. West of I-10
15 is Barrio Kroeger Lane, Menlo Park, and Barrio Hollywood (Downtown Tucson Partnership
16 2017).

17 **Table 3.5-1** (Communities Intersected by the Build Corridor Alternatives in the South Section)
18 identifies communities that are intersected by the Corridor Options in the South Section.
19 Because Options A, B, and G follow I-19 and I-10, the communities along these Options are
20 already bounded and divided by an existing interstate facility. The greatest concentration of
21 community facilities is located near Options A and B along I-10 in the urban Tucson area. Public
22 facilities along new Corridor Options C, D, and F are sparse due to the rural nature of those
23 areas.

24 Incorporated communities within the Central Section consist of the cities of Casa Grande,
25 Goodyear, Gila Bend, and Buckeye. As shown in **Figure 3.5-2** (Communities and Community
26 Facilities – Central Section Corridor Option), there are three additional CDPs within the Central
27 Section representing unincorporated areas: Arlington, Stanfield, and Tonopah. There are no
28 Tribal communities located within the Central Section of the Study Area, although the Gila River
29 Indian Community, Ak-Chin Indian Community, and Tohono O’odham Nation are located in
30 close proximity to the Study Area, and resources or places of traditional cultural importance to
31 those tribal communities are located beyond their reservation boundaries.

32 **Table 3.5-2** (CDPs Intersected by the Build Corridor Alternatives in the Central Section)
33 identifies communities and CDPs that are intersected by the Corridor Options in the Central
34 Section. Because Options A, B, and G follow I-19 and I-10, the communities along these
35 Options are already bordered or divided by an existing interstate facility.

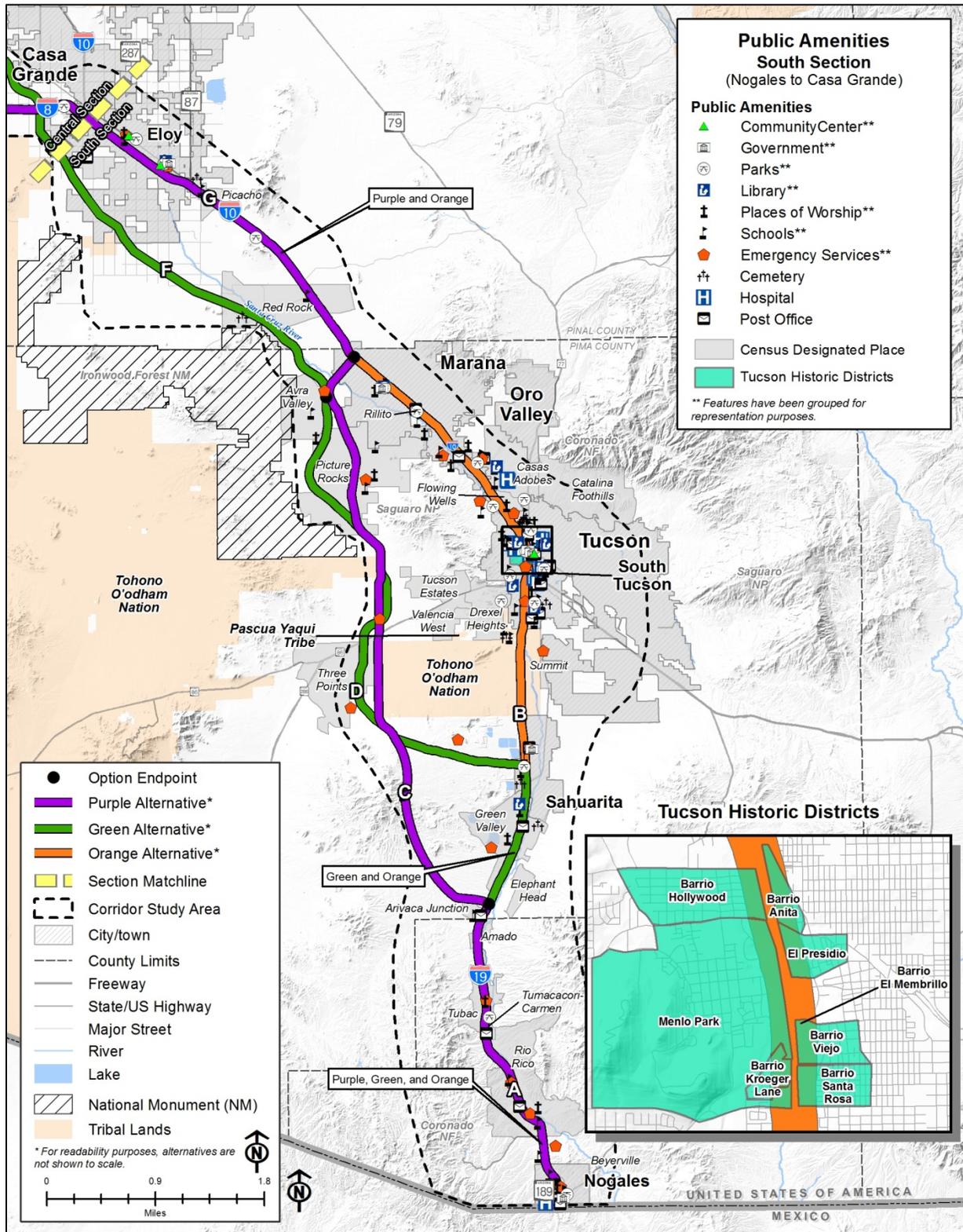


Figure 3.5-1 Communities and Community Facilities – South Section Corridor Options



Table 3.5-1 Communities Intersected by the Build Corridor Alternatives in the South Section

Option	Community or CDP	Build Corridor Alternative Description
A	Nogales City, Rio Rico CDP, Tumacacori-Carmen CDP, Tubac CDP, Amado CDP	Corridor follows existing roadway
A/C	Arivaca Junction CDP	Corridor follows existing roadway/does not follow existing roadway
B	Green Valley CDP, Sahuarita Town, South Tucson City, South Tucson City, Tucson City, Flowing Wells CDP, Casas Adobes CDP, Rillito CDP	Corridor follows existing roadway
B, G	Marana Town	Corridor follows existing roadway
C	Three Points CDP, Picture Rocks CDP	Corridor does not follow a roadway
C/G	Marana Town	Corridor does not follow a roadway
G	Red Rock CDP, Picacho CDP, Eloy City, Casa Grande City	Corridor follows existing roadway
D	Sahuarita Town, Three Points CDP, Picture Rocks CDP	Corridor does not follow a roadway
F	Avra Valley CDP, Red Rock CDP, Eloy City, Casa Grande City	Corridor does not follow a roadway
G	Red Rock CDP, Picacho CDP, Eloy City, Casa Grande City	Corridor follows existing roadway

SOURCE: US Census Bureau 2017.

Table 3.5-2 CDPs Intersected by the Build Corridor Alternatives in the Central Section

Option	Community or CDP	Build Corridor Alternative Description
I1, I2	Casa Grande City	Corridor follows existing roadway
K, Q1	Gila Bend	Corridor follows existing roadway
L, N	Goodyear City	Corridor does not follow a roadway
N, R	Buckeye City	Corridor does not follow a roadway
R	Arlington CDP	Corridor does not follow a roadway
L, M	Goodyear City	Corridor does not follow a roadway
M, Q2, R	Buckeye City	Corridor does not follow a roadway
Q1, Q2, Q3	Buckeye City	Corridor follows existing roadway

SOURCE: US Census Bureau 2017.

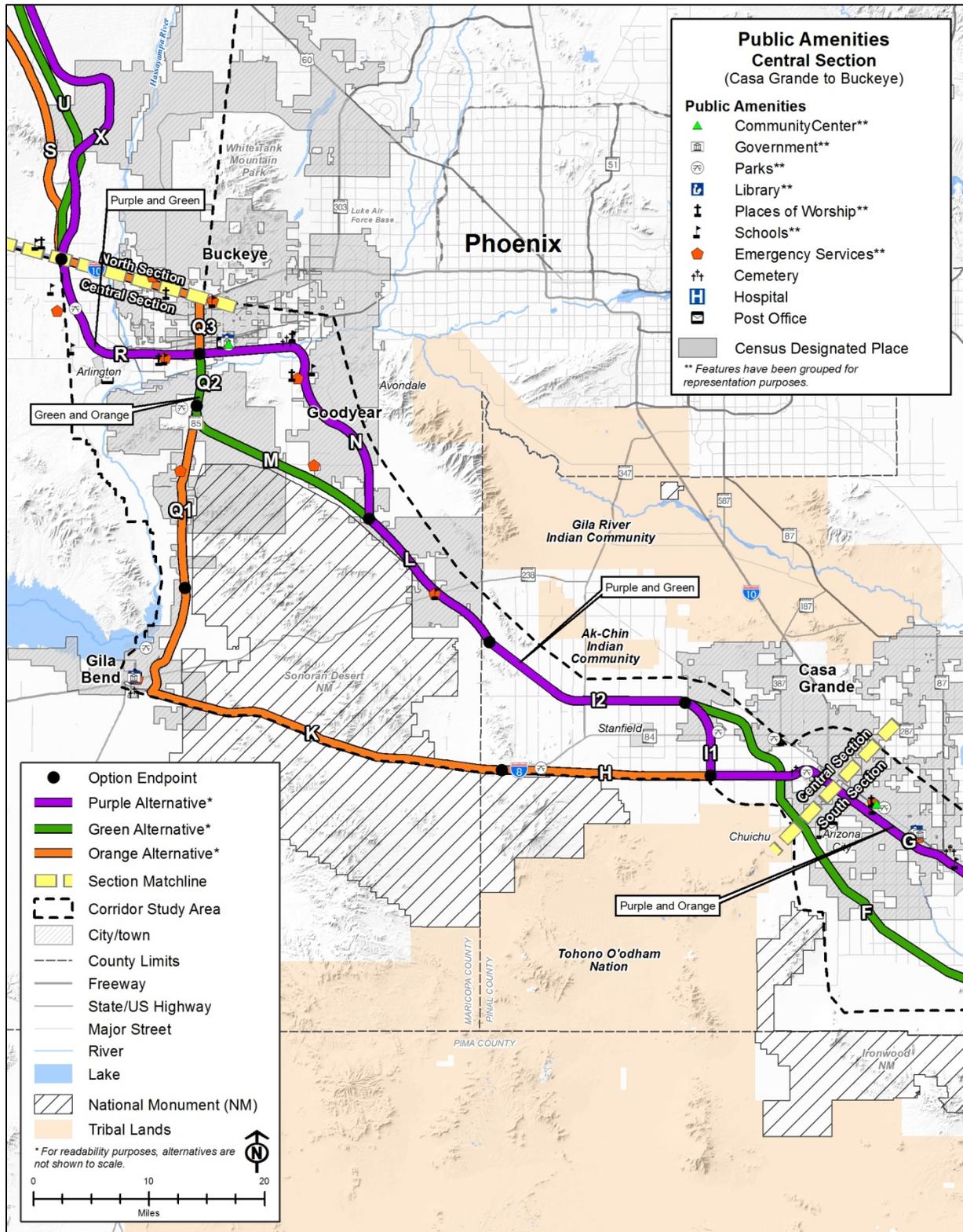


Figure 3.5-2 Communities and Community Facilities – Central Section Corridor Options

1 Community facilities located within the Central Section are concentrated along existing
 2 transportation facilities included in Options G, H, K, and Q. Community resources along the new
 3 Corridor Options F, I1, I2, M, N, and R are more sparse. Throughout the Central Section these
 4 resources occur at a lower density than in the South Section. There are no clustered
 5 concentrations of community facilities along the new Corridor Options H, I1, I2, and R, or along
 6 State Route (SR) 85 (Options Q1, Q2, and Q3).

7 There is a single clustered concentration of community facilities in Gila Bend near the
 8 intersection of Options K and Q1 consisting of several schools, emergency medical services,
 9 places of worship, a library, a cemetery, the town hall, and a post office. These facilities are not
 10 within the 2,000-foot-wide Project Area, but they are within 2 miles.

11 Along Option N, there are two clusters of community facilities west of Goodyear near Buckeye.
 12 The facilities include a school, an emergency medical services station, a place of worship, a
 13 sports center, a library, a park, and a post office. These facilities are located outside of the
 14 2,000-foot-wide Project Area, but within one mile of the perimeter.

15 As shown in **Figure 3.5-3** (Communities and Community Facilities – North Section Corridor
 16 Options), incorporated communities within the North Section include the City of Buckeye, City of
 17 Surprise, and the Town of Wickenburg. A small portion of the Congress CDP extends into the
 18 Study Area and is intersected by the Build Corridor Alternatives. There are no Tribal
 19 communities located within the North Section of the Study Area, but resources or places of
 20 traditional cultural importance to tribal communities are located beyond their reservation
 21 boundaries.

22 **Table 3.5-3** (Communities Intersected by the Build Corridor Alternatives in the North Section)
 23 identifies communities and CDPs that are intersected by the Corridor Options in the North
 24 Section. All three Build Corridor Alternatives in the North Section represent new transportation
 25 facilities north of I-10.

Table 3.5-3 Communities Intersected by the Build Corridor Alternatives in the North Section

Option	Community or CDP	Alignment Description
X	Congress CDP	Corridor follows existing roadway
U	Buckeye City	Corridor does not follow a roadway
U	Congress CDP	Corridor follows existing roadway
S	Buckeye City	Corridor does not follow a roadway
S	Congress CDP	Corridor follows existing roadway

SOURCE: US Census Bureau 2017.

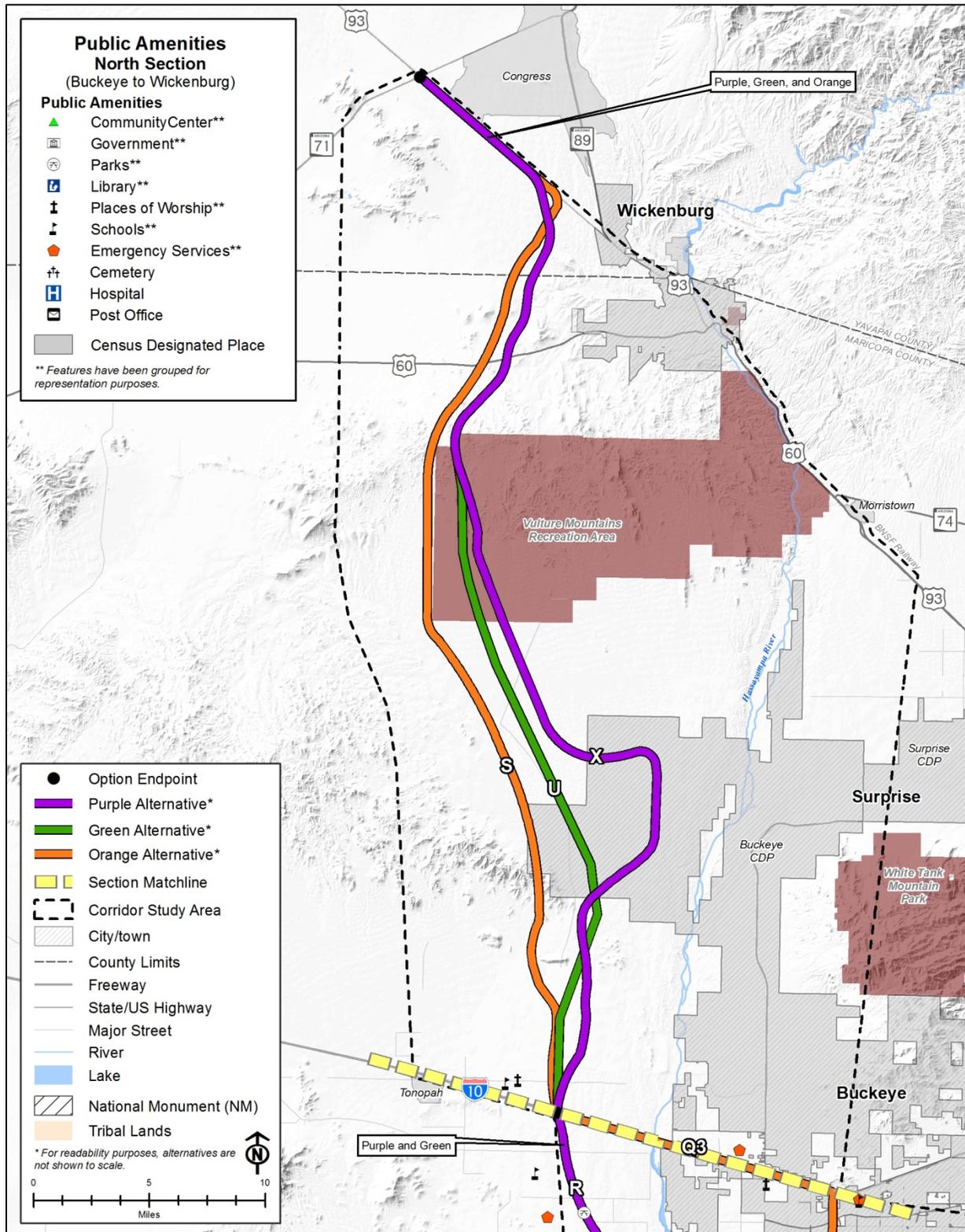


Figure 3.5-3 Communities and Community Facilities – North Section Corridor Options

1 There is one concentrated cluster of public amenities in this area, located immediately north of
 2 I-10 and approximately 1 to 2 miles west of the I-10 intersection of Options S, U, and X. These
 3 amenities are located outside of the 2,000-foot-wide Project Area of Options S, U, and X; there
 4 are no other public amenities located within 2 miles of these Options.

5 **3.5.3.2 Title VI**

6 **Table 3.5-4** (Race and Ethnicity in the Study Area, County and Statewide Averages) is a
 7 comprehensive table listing demographic data on the race and ethnicity of the population within
 8 the Study Area. The demographics for the CDPs can be compared to county and statewide
 9 averages listed in the last six rows of the table. A comprehensive table of demographic data for
 10 the Study Area is provided in **Appendix E5**, Demographic Data to Support Analysis of
 11 Environmental Justice.

12 Compared to the statewide average, many of the communities in the South Section have high
 13 percentages of Hispanic or Latino individuals in the population. The largest racial group in many
 14 of these communities identify as ‘some other race.’ The San Xavier and Shuck Toak districts of
 15 the Tohono O’odham Nation both have communities containing high percentage of individuals
 16 that identify as American Indian or Alaskan Native. The San Xavier District also contains a
 17 relatively high concentration of individuals that identify as ‘some other race.’

18 For minority individuals of Non-Hispanic or Latino races, there are high concentrations of Black
 19 and African Americans in Rillito, Eloy, and Coolidge City. The population in Eloy is diverse, with
 20 relatively high percentages of Black or African Americans and individuals that identify as ‘some
 21 other race.’ In nearby Casa Grande, there is a high percentage of minority individuals and
 22 Hispanic or Latinos in the population as well as pockets of other racial groups (Black or African
 23 American, American Indian or Alaska Native, some other race, and two or more races).

24 In the Central Section the minority population in Gila Bend includes a high percentage of
 25 Hispanic or Latino individuals as well as a pocket of American Indian or Alaskan Native, some
 26 other race, and two or more races. In the North Section the largest racial groups comprising the
 27 minority population in Buckeye are Black or African American, some other race, and two or
 28 more races.

29 **3.5.3.3 Environmental Justice**

30 Demographics showing concentrations of minority individuals within the Study Area are
 31 illustrated in **Figure 3.5-4** (Minority Populations – South Section), **Figure 3.5-5** (Minority
 32 Populations – Central Section), and **Figure 3.5-6** (Minority Populations – North Section).
 33 Concentrations of low-income individuals within the Study Area are illustrated in **Figure 3.5-7**
 34 (Low-Income Populations – South Section), **Figure 3.5-8** (Low-Income Populations – Central
 35 Section), and **Figure 3.5-9** (Low-Income Populations – North Section). The demographics
 36 illustrated in these figures can be compared to the county and statewide averages shown in
 37 **Table 3.5-4** (Race and Ethnicity in the Study Area, County and Statewide Averages). A
 38 comprehensive table of demographic data for the Study Area is provided in **Appendix E5**,
 39 Demographic Data to Support Analysis of Environmental Justice.

40 Much of the land within the Study Area is vacant or undeveloped. The US Census Bureau
 41 defined the geographic limits of the CDP’s shown in **Figures 3.5-4** through **3.5-9** based upon
 42 concentrations of settled populations. The highest population densities in the Study Area occur
 43 within the CDPs, while the areas outside of the CDPs are more sparsely populated or vacant.

Table 3.5-4 Race and Ethnicity in the Study Area, County and Statewide Averages

Geography	Total Population	White, Non-Hispanic or Latino	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minority
Amado CDP	295	144	143	2	10	2	0	67	16	151
	100%	48.8%	48.5%	0.6%	3.4%	0.6%	0.0%	22.7%	5.4%	51.2%
Arivaca Junction CDP	1,090	326	737	1	24	0	1	238	41	764
	100%	29.9%	67.6%	0.1%	2.2%	0.0%	0.1%	21.8%	3.8%	70.1%
Arizona City CDP	10,475	6,016	3,583	436	364	56	22	1,406	476	4,459
	100%	57.4%	34.2%	4.2%	3.5%	0.5%	0.2%	13.5%	4.6%	42.6%
Arlington CDP	194	125	58	1	3	0	0	47	9	69
	100%	64.4%	29.9%	0.5%	1.5%	0.0%	0.0%	24.2%	4.6%	35.6%
Avra Valley CDP	6,050	4,346	1,382	114	141	21	8	553	213	1,704
	100%	71.8%	22.8%	1.9%	2.3%	0.3%	0.2%	9.1%	3.5%	28.2%
Beyerville CDP	177	18	159	0	1	0	0	25	0	159
	100%	10.2%	89.9%	0.0%	0.6%	0.0%	0.0%	14.1%	0.0%	89.8%
Buckeye Town CDP	50,876	25,375	19,489	3,618	909	913	100	9,794	2,118	25,501
	100%	49.9%	38.3%	7.1%	1.8%	1.8%	0.2%	19.3%	4.2%	50.1%
Casa Grande CDP	48,571	24,226	18,932	2,245	2,232	875	87	7,953	2,492	24,345
	100%	49.9%	39.0%	4.6%	4.6%	1.8%	0.2%	16.3%	5.2%	50.1%
Casas Adobes CDP	66,795	47,575	13,956	1,406	637	2,155	78	3,713	2,363	19,220
	100%	71.2%	20.9%	2.1%	1.0%	3.2%	0.1%	5.5%	3.5%	28.8%
Catalina Foothills CDP	50,796	41,415	5,076	694	213	2,636	31	970	1,105	9,381
	100%	81.5%	10.0%	1.4%	0.4%	5.2%	0.1%	1.9%	2.2%	18.5%
Congress CDP	1,975	1,692	225	10	21	5	3	60	37	283
	100%	85.7%	11.4%	0.6%	1.1%	0.3%	0.2%	3.0%	1.9%	14.3%

Table 3.5-4 Race and Ethnicity in the Study Area, County and Statewide Averages (Continued)

Geography	Total Population	White, Non-Hispanic or Latino	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minority
Coolidge City CDP	11,825	5,153	4,962	928	670	115	13	2,095	586	6,672
	100%	43.6%	42.0%	7.8%	5.7%	1.0%	0.1%	17.7%	4.9%	56.4%
Drexel Heights CDP	27,749	6,271	19,586	691	1,470	201	20	7,918	1,188	21,478
	100%	22.6%	70.6%	2.5%	5.3%	0.7%	0.0%	28.5%	4.3%	77.4%
Elephant Head CDP	612	421	163	0	10	9	0	40	15	191
	100%	68.8%	26.6%	0.0%	1.7%	1.5%	0.0%	6.5%	2.4%	31.2%
Eloy CDP	16,631	3,144	9,648	1,685	571	755	958	5,302	504	13,487
	100%	18.9%	58.0%	10.1%	3.5%	4.5%	5.8%	31.9%	3.0%	81.1%
Flowing Wells CDP	16,419	9,564	5,953	287	335	200	17	2,219	607	6,855
	100%	58.2%	36.3%	1.8%	2.1%	1.3%	0.1%	13.5%	3.7%	41.8%
Gila Bend Town CDP	1,922	504	1,257	32	121	11	0	605	75	1,418
	100%	26.2%	65.4%	1.7%	6.3%	0.6%	0.0%	31.5%	3.9%	73.8%
Goodyear City CDP	65,275	38,064	18,136	4,375	848	2,830	110	7,625	2,564	27,211
	100%	58.3%	27.8%	6.7%	1.3%	4.4%	0.1%	11.7%	4.0%	41.7%
Green Valley CDP	21,391	19,953	1,049	92	66	149	9	218	147	1,438
	100%	93.3%	4.9%	0.4%	0.3%	0.7%	0.0%	1.0%	0.7%	6.7%
Littleton CDP	873	220	607	15	26	11	0	225	37	653
	100%	25.2%	69.5%	1.7%	2.9%	1.3%	0.0%	25.8%	4.3%	74.8%
Marana Town CDP	34,961	24,050	7,730	874	433	1,322	47	2,338	1,293	10,911
	100%	68.8%	22.1%	2.5%	1.2%	3.8%	0.1%	6.7%	3.7%	31.2%
Morristown CDP	227	214	11	0	1	0	0	5	2	13
	100%	94.3%	4.8%	0.0%	0.4%	0.0%	0.0%	2.2%	0.8%	5.7%
Nelson CDP	259	178	70	4	4	3	0	35	1	81
	100%	68.7%	27.0%	1.5%	1.6%	1.2%	0.0%	13.5%	0.4%	31.3%

Table 3.5-4 Race and Ethnicity in the Study Area, County and Statewide Averages (Continued)

Geography	Total Population	White, Non-Hispanic or Latino	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minority
Nogales City CDP	20,837	803	19,793	75	140	126	4	5,060	499	20,034
	100%	3.9%	95.0%	0.3%	0.6%	0.6%	0.0%	24.2%	2.3%	96.1%
Oro Valley Town CDP	41,011	33,605	4,731	617	179	1,284	54	1,070	982	7,406
	100%	81.9%	11.5%	1.5%	0.4%	3.2%	0.1%	2.6%	2.4%	18.1%
Picacho CDP	471	159	294	6	12	0	0	139	33	312
	100%	33.8%	62.4%	1.2%	2.6%	0.0%	0.0%	29.5%	7.0%	66.2%
Picture Rocks CDP	9,563	7,580	1,558	72	138	44	8	472	288	1,983
	100%	79.3%	16.3%	0.7%	1.4%	0.5%	0.1%	4.9%	3.0%	20.7%
Red Rock CDP	2,169	1,437	603	42	35	22	1	186	126	732
	100%	66.3%	27.8%	1.9%	1.7%	1.0%	0.0%	8.6%	5.8%	33.7%
Rillito CDP	97	14	43	37	2	0	0	26	5	83
	100%	14.4%	44.3%	38%	2%	0%	0%	27%	5%	86%
Rio Rico CDP	18,962	2,578	16,179	75	121	94	10	4,846	344	16,384
	100%	13.6%	85.3%	0.4%	0.7%	0.5%	0.0%	25.5%	1.8%	86.4%
Sahuarita Town CDP	25,259	15,249	8,077	742	334	499	31	2,309	1,064	10,010
	100%	60.4%	32.0%	2.9%	1.3%	1.9%	0.1%	9.2%	4.2%	39.6%
South Tucson City CDP	5,652	578	4,435	171	605	44	6	2,043	224	5,074
	100%	10.2%	78.5%	3.0%	10.7%	0.8%	0.2%	36.1%	3.9%	89.8%
Stanfield CDP	740	151	489	26	64	12	0	352	24	589
	100%	20.4%	66.1%	3.5%	8.6%	1.7%	0.0%	47.6%	3.2%	79.6%
Summit CDP	5,372	898	4,313	32	98	24	1	1,593	174	4,474
	100%	16.7%	80.3%	0.6%	1.8%	0.4%	0.0%	29.6%	3.2%	83.3%
Surprise City CDP	117,517	83,677	21,724	6,018	801	3,020	233	8,212	4,486	33,840
	100%	71.2%	18.5%	5.1%	0.7%	2.6%	0.2%	7.0%	3.8%	28.8%

Table 3.5-4 Race and Ethnicity in the Study Area, County and Statewide Averages (Continued)

Geography	Total Population	White, Non-Hispanic or Latino	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minority
Three Points CDP	5,581	3,122	2,120	52	212	30	13	1,003	165	2,459
	100%	55.9%	38.0%	0.9%	3.8%	0.5%	0.2%	17.9%	3.0%	44.1%
Tohono O'odham Nation, Schuk Toak District (CT 9408)	4,462	40	227	3	4321	16	0	16	56	4422
	100%	0.9%	5.1%	0.1%	96.9%	0.3%	0.0%	0.4%	1.2%	99.10%
Tohono O'odham Nation, San Xavier District (CT 9409)	1,885	231	469	18	1184	6	3	374	30	1654
	100%	12.30%	24.9%	60.4%	62.8%	0.3%	1.1%	19.8%	1.6%	87.7%
Tonopah CDP	60	44	14	0	1	2	0	5	0	16
	100%	73.3%	23.3%	0.0%	1.7%	3.3%	0.0%	8.3%	0.0%	26.7%
Tubac CDP	1,191	922	246	5	7	7	0	77	13	269
	100%	77.4%	20.7%	0.4%	0.6%	0.6%	0.0%	6.5%	1.1%	22.6%
Tucson City CDP	520,116	245,323	216,308	26,000	14,154	14,920	1,147	79,239	22,007	274,793
	100%	47.2%	41.6%	5.0%	2.7%	2.8%	0.2%	15.3%	4.2%	52.8%
Tucson Estates CDP	12,192	7,643	3,948	193	250	130	14	1507	346	4549
	100%	62.7%	32.4%	1.6%	2.1%	1.1%	0.1%	12.4%	2.8%	37.3%
Tumacacori-Carmen	393	172	207	3	9	1	0	91	7	221
	100%	43.8%	52.7%	0.8%	2.3%	0.3%	0.0%	23.2%	1.8%	56.2%
Valencia West	9,355	2,527	6,089	305	389	146	20	2,453	371	6,828
	100%	27.0%	65.1%	3.2%	4.2%	1.6%	0.2%	26.2%	4.0%	73.0%

Table 3.5-4 Race and Ethnicity in the Study Area, County and Statewide Averages (Continued)

Geography	Total Population	White, Non-Hispanic or Latino	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minority
Wickenburg	6,363	5,324	854	15	88	35	2	371	96	1,039
	100%	83.7%	13.4%	0%	1%	0.5%	0.0%	5.9%	1.5%	16.3%
Maricopa County	3,817,117	2,240,055	1,128,741	190,519	78,329	132,225	7,790	489,705	131,768	1,577,062
	100.0%	58.7%	29.6%	4.9%	2.1%	3.5%	0.2%	12.8%	3.5%	41.3%
Pima County	980,263	541,700	338,802	34,674	32,605	25,731	1,624	120,639	36,239	438,563
	100%	55.3%	34.6%	3.6%	3.3%	2.6%	0.1%	12.3%	3.7%	44.7%
Pinal County	375,770	220,486	106,977	17,215	20,949	6,492	1,565	43,213	14,323	155,284
	100%	58.7%	28.5%	4.6%	5.5%	1.7%	0.4%	11.5%	3.8%	41.3%
Santa Cruz County	47,420	7,564	39,273	179	328	255	15	10,855	953	39,856
	100%	16.0%	82.8%	0.4%	0.6%	0.5%	0.0%	22.9%	2.0%	84.0%
Yavapai County	211,033	172,968	28,728	1,267	3,549	1,785	213	10,346	5,358	38,065
	100%	82.0%	13.6%	0.6%	1.7%	0.8%	0.1%	4.9%	2.5%	18.0%
Arizona	6,392,017	3,695,647	1,895,149	259,008	296,529	176,695	12,648	761,716	218,300	2,696,370
	100%	57.8%	29.6%	4.0%	4.6%	2.8%	0.2%	11.9%	3.4%	42.2%

SOURCE: US Census Bureau 2010.

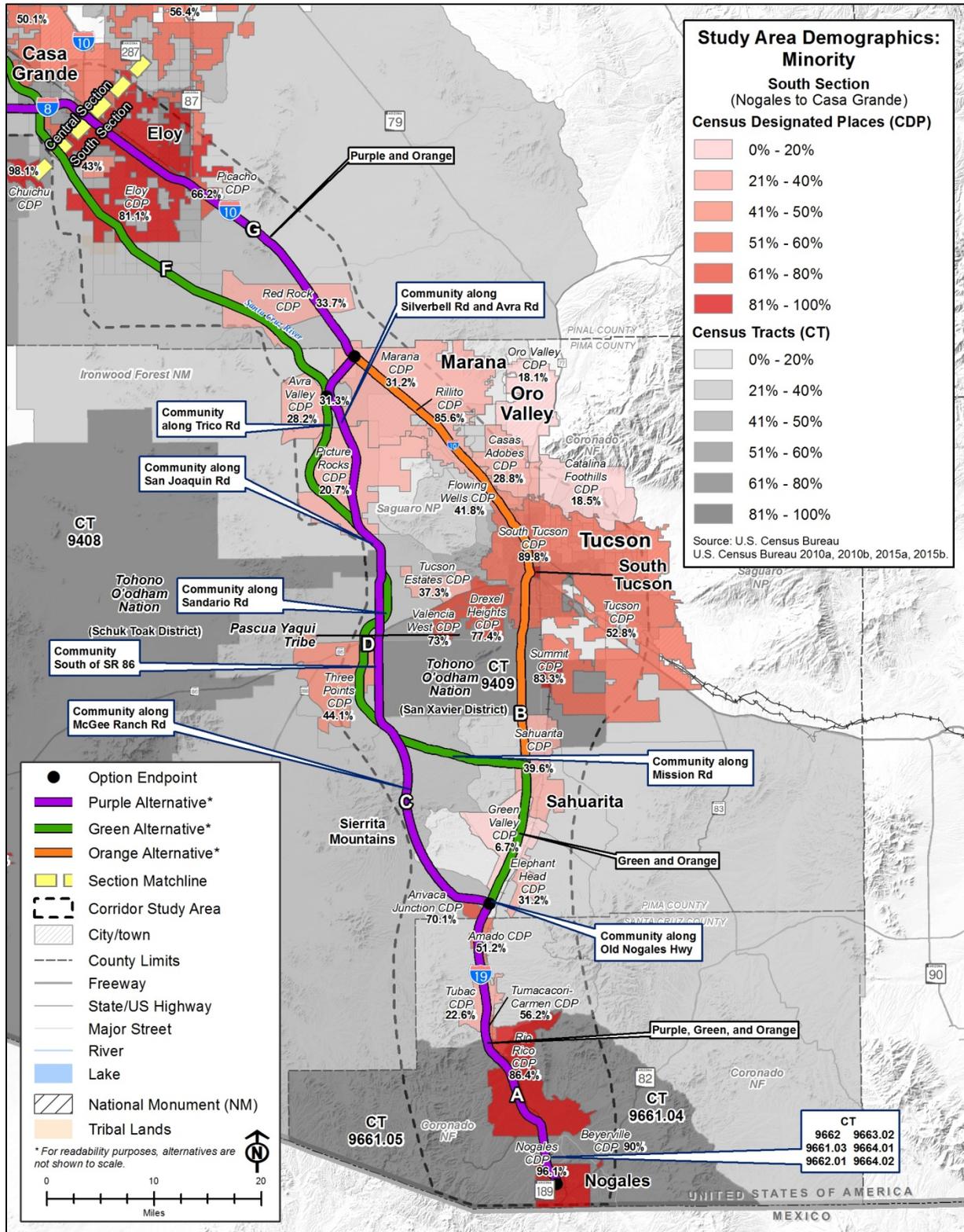


Figure 3.5-4 Minority Populations – South Section

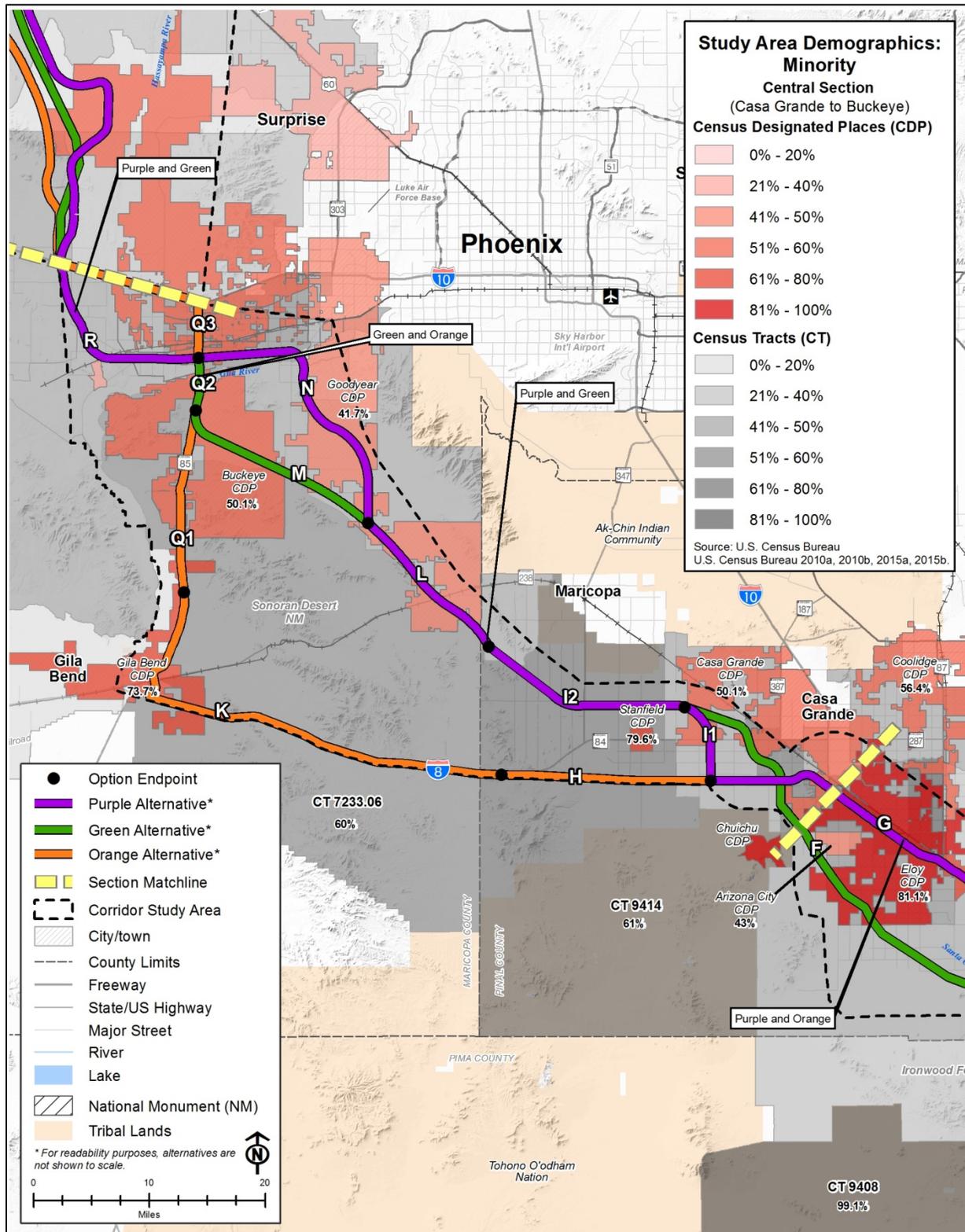


Figure 3.5-5 Minority Populations – Central Section

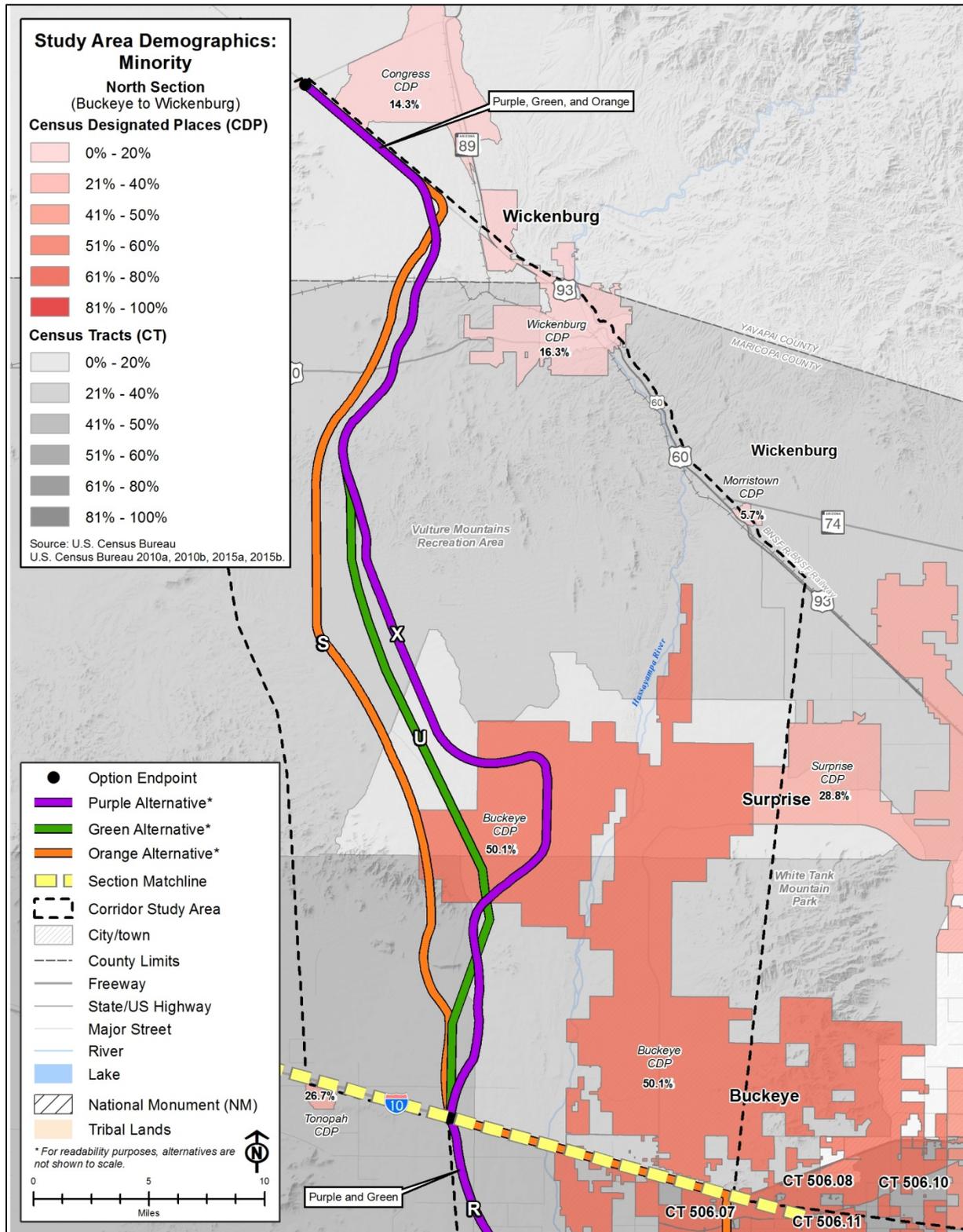


Figure 3.5-6 Minority Populations – North Section

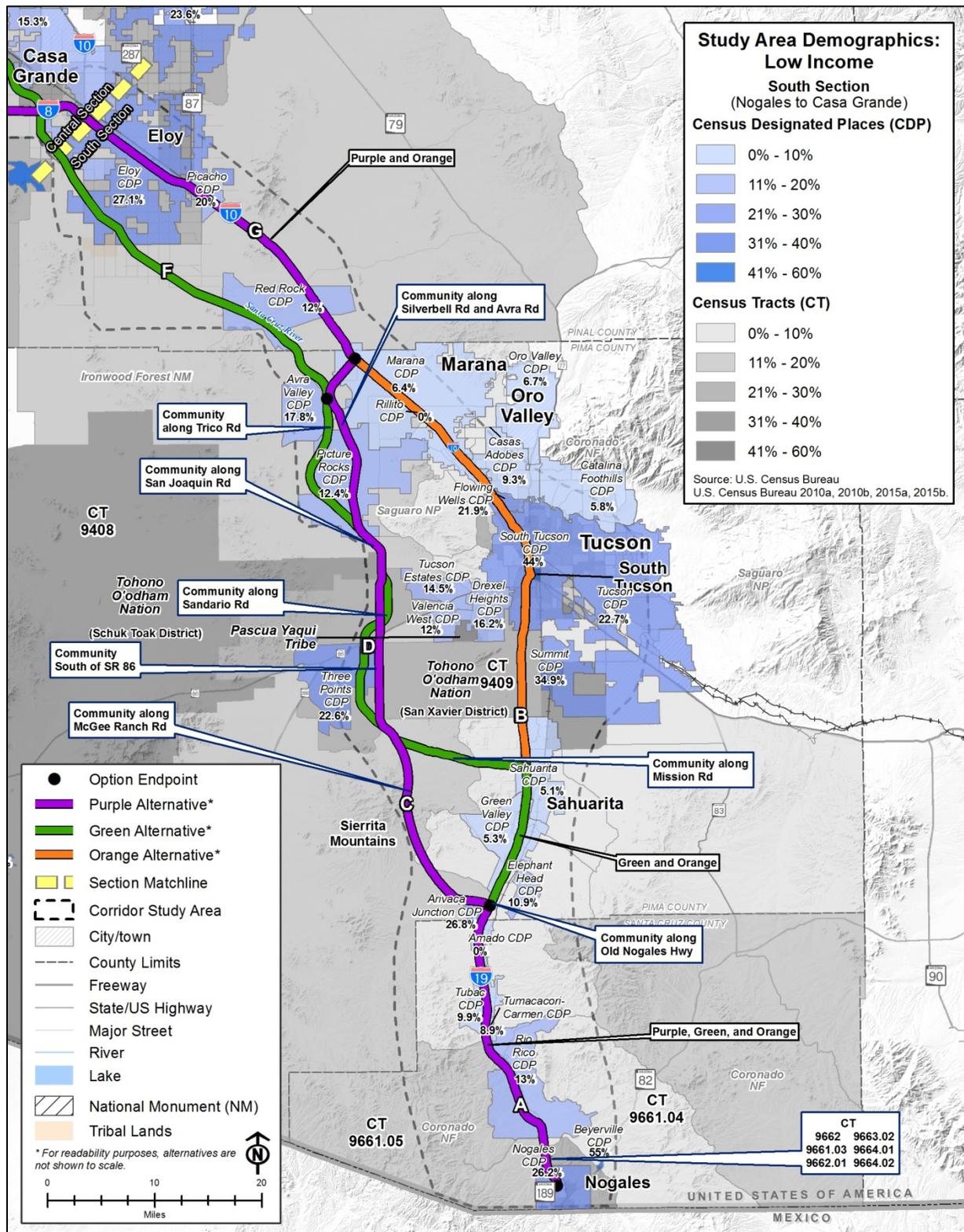


Figure 3.5-7 Low-Income Populations – South Section

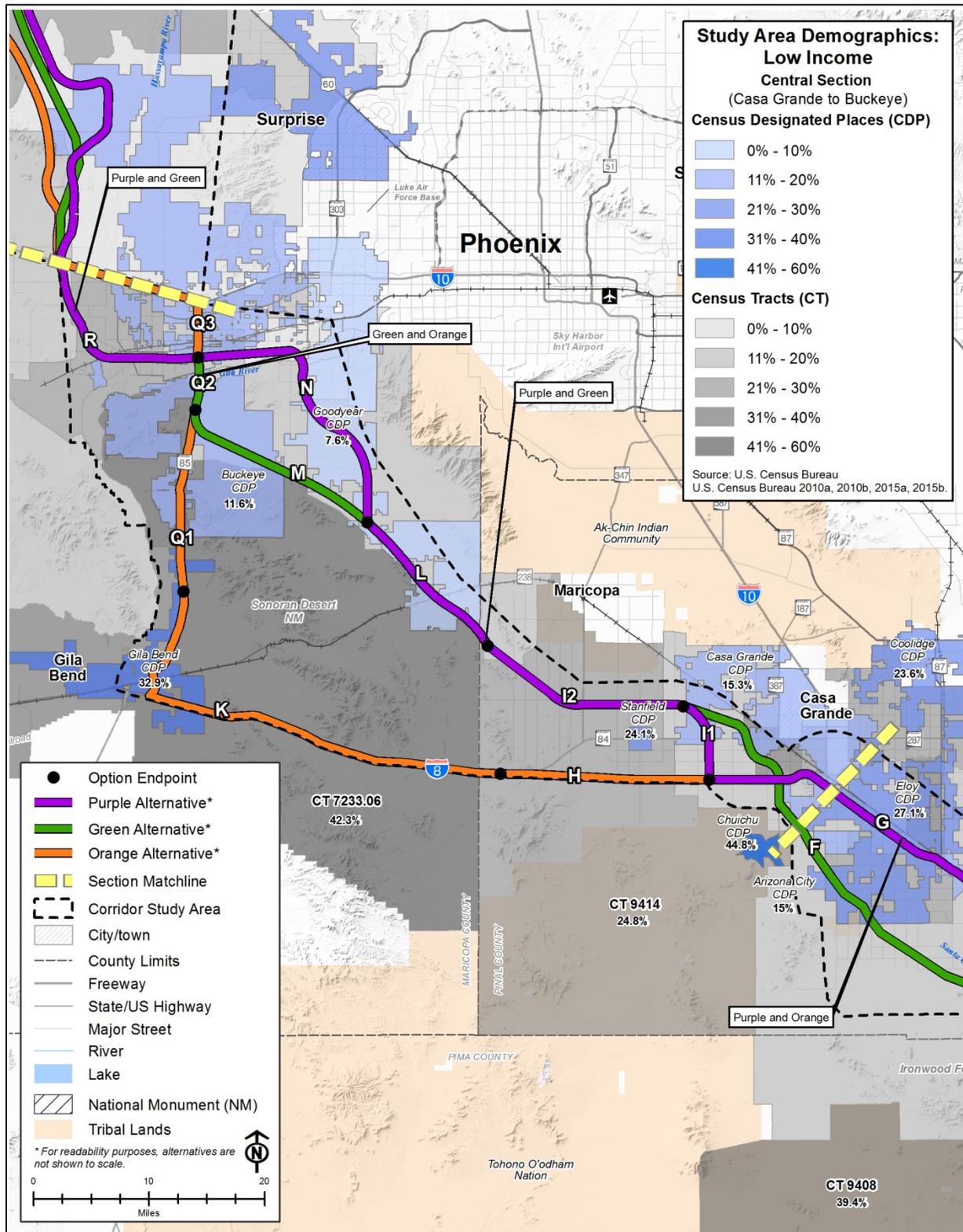


Figure 3.5-8 Low-Income Populations – Central Section

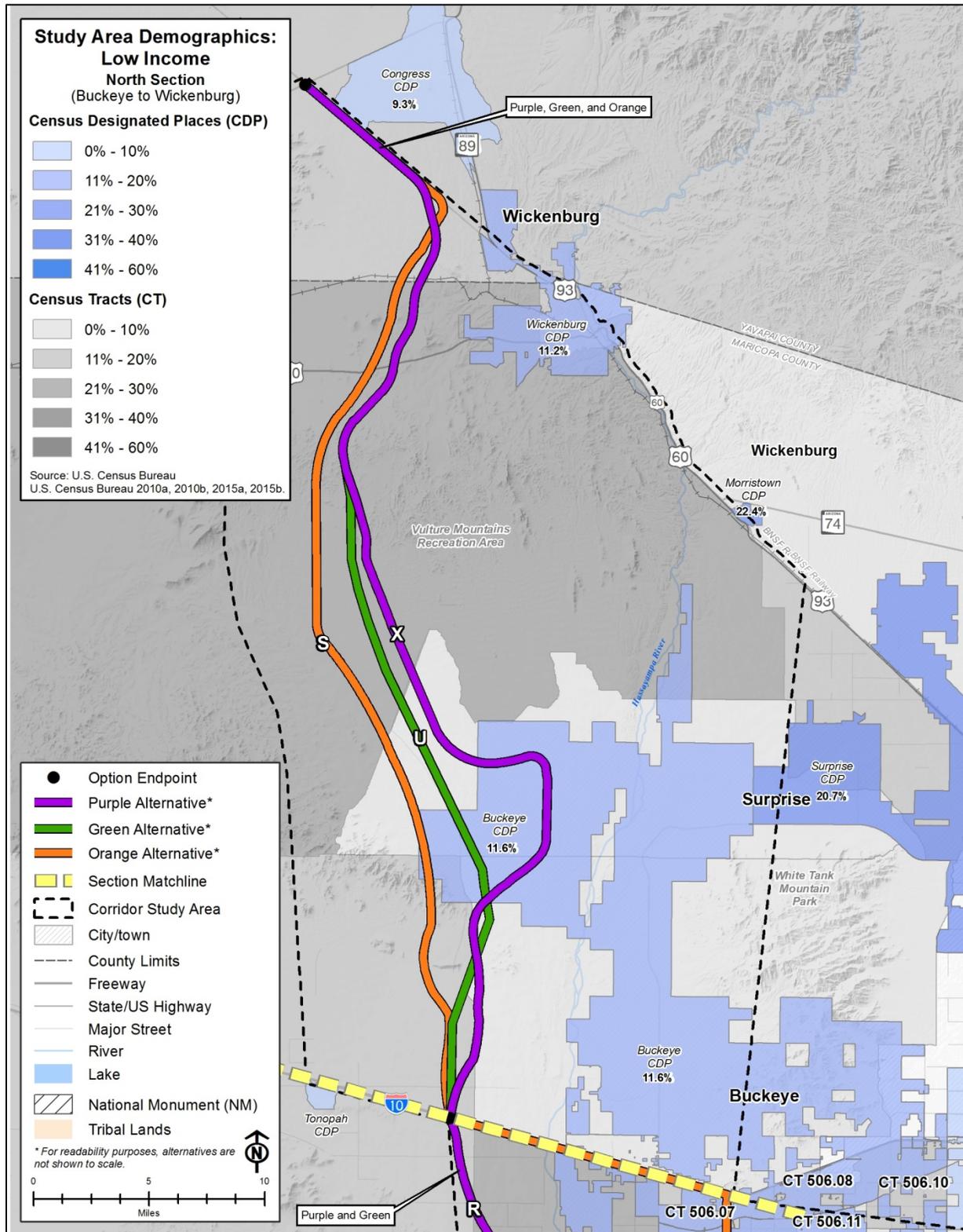


Figure 3.5-9 Low-Income Populations – North Section

1 There are high concentrations of minority and low-income individuals within the Nogales area,
2 within and extending west from the Tucson area, near Eloy, and within the Tohono O’odham
3 Nation. High percentages of minorities within the Nogales area CTs (9662, 9664.02, 9661.04,
4 9663.02, 9663.01, and 9661.05) can be seen. These CTs cover a large area and extend both
5 east and west beyond the Study Area. The population in the area surrounding the intersection of
6 SR 189 and I-19 in Nogales has a high concentration of both minority and low-income
7 individuals.

8 Census data for the Tucson City CDP shows that a high percentage of minority individuals are
9 present within Tucson and in the areas surrounding Option B. Further detail in the 100+ CTs in
10 the Tucson area also demonstrate there are high concentrations of low-income individuals in the
11 areas surrounding Option B, north of Tucson. Options F and G intersect the communities of
12 Picacho and Eloy, both of which have a high percentage of minority and low-income individuals.

13 South and west of Tucson, there also are high percentages of minority and low-income
14 individuals within Tribal lands in the South Section – Tohono O’odham Nation lands including
15 both the Shuck Toak District and San Xavier District, and the Pascua Yaqui Tribe. The San
16 Xavier District of the Tohono O’odham Nation is located along Options B, C, and D.

17 There are two large CTs within the Central Section which contain a high percentage of minority
18 and/or low-income individuals – CT 7233.06 and 7233.05. These CTs cover a large geographic
19 extent. Demographic data for the Gila Bend and Buckeye CDPs emphasize the presence of
20 minority and low-income individuals concentrated in areas surrounding Options K, N, and Q. A
21 third large CT containing high percentages of minority individuals is present along I-8, between
22 Casa Grande and Gila Bend. There are five CDPs located within this CT but outside of the
23 Study Area, including the Tribal communities of Ak-Chin Village, Kohatk, Tat Momoli, and Vaiva
24 Vo. This, combined with the fact that much of the land use within the Project Area is either
25 agricultural or undeveloped, indicates that much of the population within CT 9414 resides
26 outside of the Project Area for the Build Corridor Alternatives. Demographic data for the CDPs
27 outside of the Study Area was not collected.

28 The percentage of minority individuals in the Buckeye community population also is high relative
29 to the surrounding Maricopa County. While CDP data shows high percentages of minority
30 individuals in areas intersected by Options S, U, and X, these areas are generally undeveloped.
31 In comparison, Options Q and N extend through the more populated areas of Buckeye.

32 **Limited English Proficiency**

33 **Figures 3.5-10** (Limited English Proficiency Populations – South Section), **3.5-11** (Limited
34 English Proficiency Populations – Central Section), and **3.5-12** (Limited English Proficiency
35 Populations – North Section) illustrate the percentage of the population within the Study Area
36 that have LEP. Within the larger Study Area, of those that speak English ‘less than very well’,
37 Spanish is the most commonly spoken language other than English. There is a Chinese
38 language group (1,963 individuals) and a small pocket of Arabic-speaking individuals
39 (989 individuals) in the Tucson City CDP.

40 The highest percentage of people that speak English ‘less than very well’ are within the South
41 Section, within the CTs and CDPs surrounding the Nogales area and intersected by Option A.

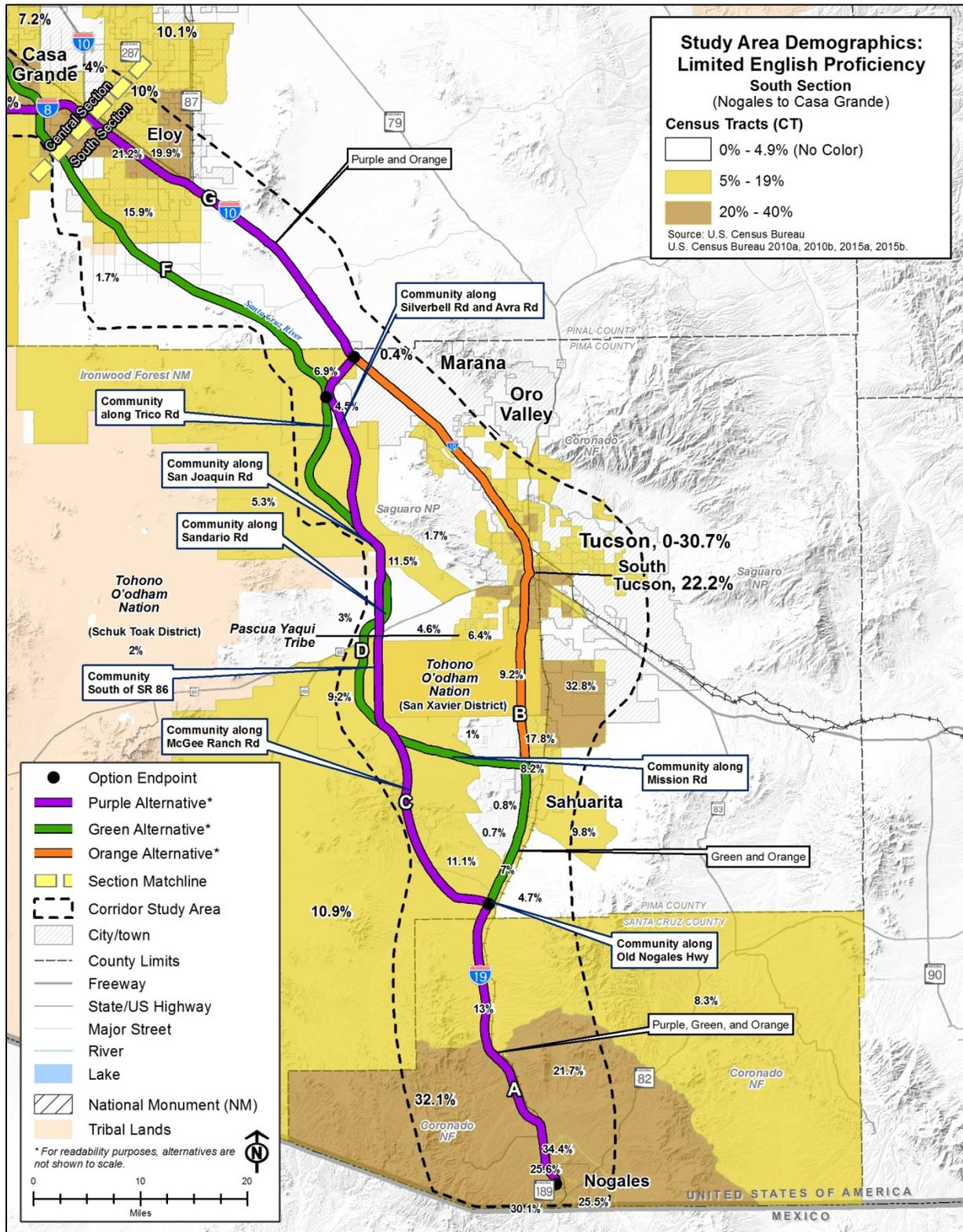


Figure 3.5-10 Limited English Proficiency Populations – South Section

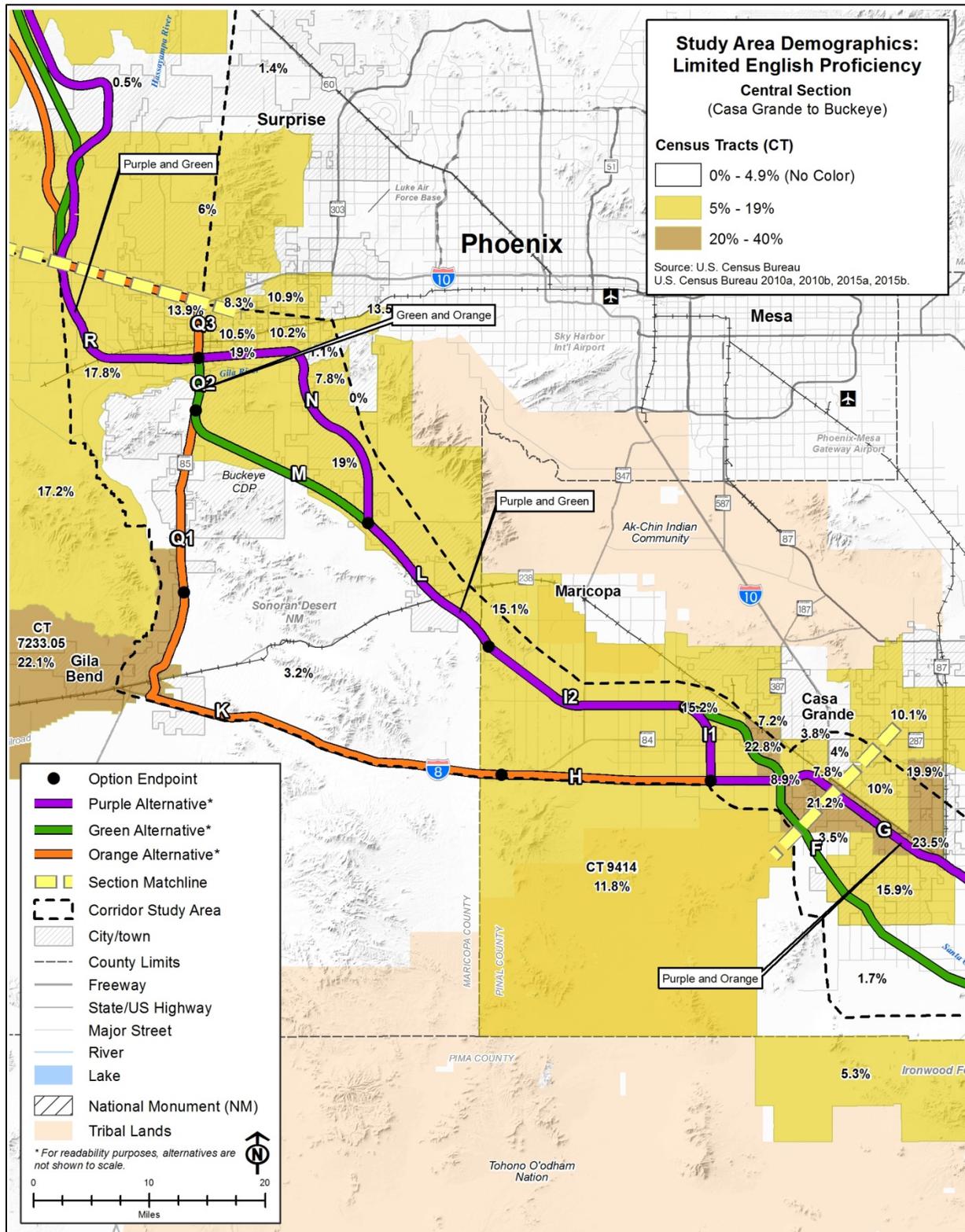


Figure 3.5-11 Limited English Proficiency Population – Central Section

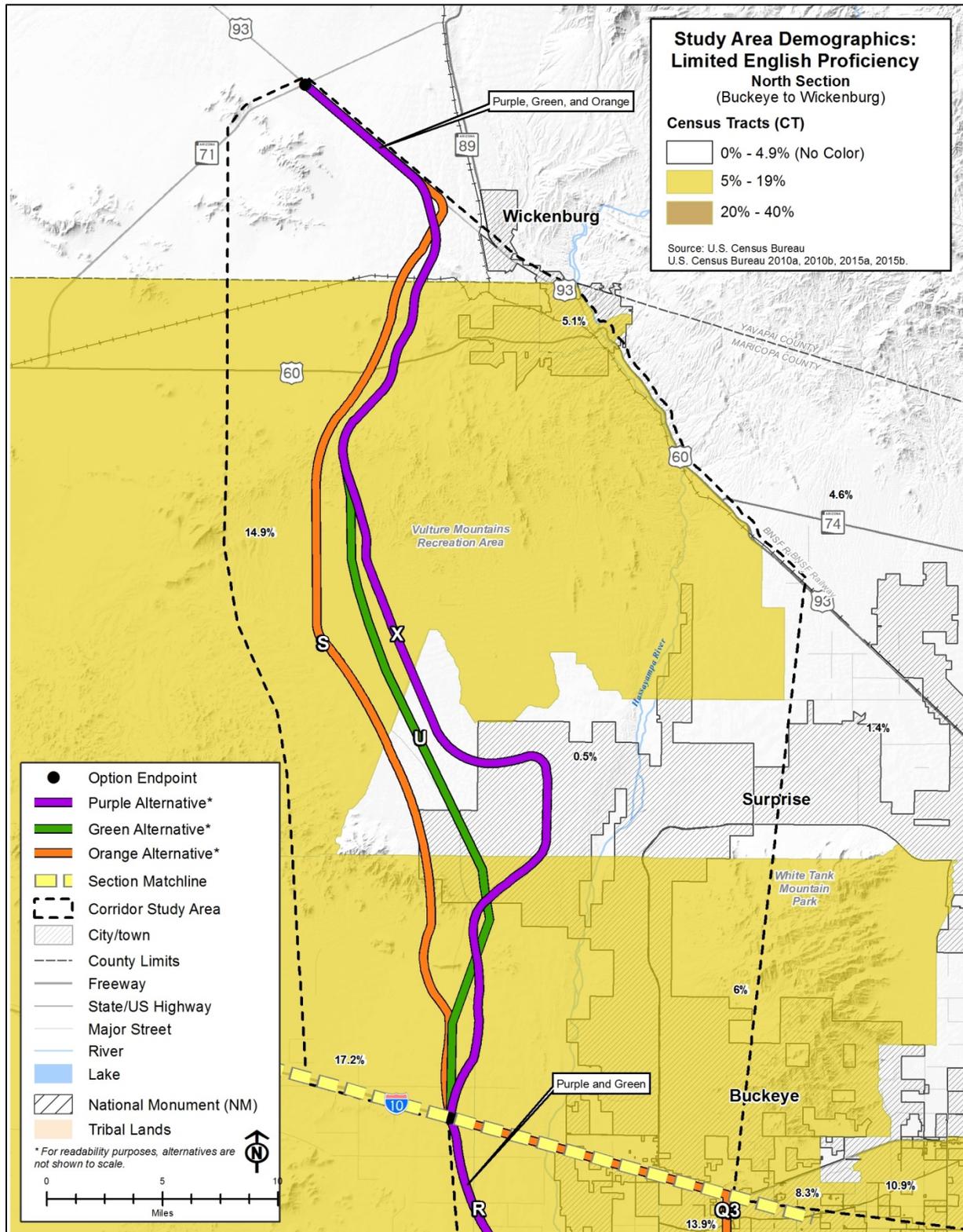


Figure 3.5-12 Limited English Proficiency Population – North Section



1 Throughout the CTs intersecting the Build Corridor Alternatives in the Central Section, the
2 highest percentages of people that speak English 'less than very well' are located along
3 Options F, G, K, and Q.

4 The percentage of the population that speak English 'less than very well' is lower within the CTs
5 intersected by the Build Corridor Alternatives in the North Section.

6 **Public Engagement during the Draft Tier 1 EIS Study**

7 FHWA and ADOT worked to engage diverse populations in public participation efforts. A key
8 focus of the public outreach and agency coordination is to facilitate an understanding with the
9 public regarding the study process, key milestones, and decision points.

10 FHWA and ADOT conducted two rounds of public review at the major phases and key
11 milestones of the planning process to elicit information, issues, and concerns from the public.
12 The first round of public engagement, a 45-day scoping period, was conducted during May and
13 June of 2016. The public was notified about the scoping process, public meeting locations, and
14 schedule by way of newspaper advertisements, the I-11 website, e-mail blasts, social media,
15 news releases, media interviews, and blog posts. Six public scoping meetings were held in the
16 Study Area at Casa Grande, Buckeye, Nogales, Tucson, Marana, and Wickenburg. During
17 these meetings, ADOT described the study objectives, as well as sought input on the I-11
18 Purpose and Need; potential alternatives to be studied; impacts to be evaluated; and evaluation
19 methods to be used. A report was prepared documenting agency and public scoping and is
20 attached in **Appendix G** (*Scoping Summary Report* dated January 2017). Additional information
21 also is provided in **Chapter 5**.

22 A second round of public engagement was conducted during the alternatives analysis phase of
23 the project and occurred between April and June 2017. During this outreach period, FHWA and
24 ADOT conducted six public meetings, held throughout the Study Area, including Buckeye, Casa
25 Grande, Marana, Nogales, Tucson, and Wickenburg. The public was notified about the outreach
26 process, public meeting locations, and schedule by way of newspaper advertisements, the I-11
27 website, e-mail blasts, social media, news releases, and media interviews. Meeting attendees
28 were encouraged to share verbal and written comments, as well as mark suggestions and
29 concerns on maps of the Study Area, with the goal of reviewing and commenting on the
30 proposed range of alternatives to be carried into the Tier 1 EIS for additional analysis. A report
31 was prepared documenting this round of public and agency engagement and is attached in
32 **Appendix G** (Agency and Public Information Meeting Summary Report dated November 2017).
33 Additional information also is provided in **Chapter 5**.

34 A third round of public engagement will occur with issuance of this Draft Tier 1 EIS, and a public
35 review period also will follow the issuance of the Final Tier 1 EIS document.

36 In addition to public engagement efforts, the project team has continuously accepted input from
37 the public by mail, e-mail, and a bilingual telephone hotline. Contact information for these input
38 channels was provided to attendees at the public meetings and also is available on the project
39 website. Input gathered through these channels is distributed to the appropriate Project Team
40 members for consideration upon receipt, regardless of whether the comment was received
41 during one of the defined public comment periods.

42 Early in the study process, it was determined that the diverse population of the Study Area
43 merited a communication strategy that addresses multicultural and bilingual issues and
44 challenges. A review of US Census data for counties and local municipalities within the Study



1 Area identified groups that speak English “less than very well,” which are defined as more than
2 1,000 people or five or more percent of the eligible protected population. The US Department of
3 Justice “safe harbor” provisions are being used to ensure all groups that speak English “less
4 than very well” are considered for language assistance services.

5 In order to appropriately provide reasonable accommodation to all persons within the
6 communities involved and potentially impacted by the study, ADOT and FHWA developed a
7 methodology for outreach to determine how to best reach out to minority and low-income
8 populations, those with LEP, and other protected populations. This methodology included
9 conducting interviews with federal, state, regional, county, and local agencies and stakeholders
10 and asking specific questions about how to best communicate with the communities and
11 protected populations within the Study Area. Previous experience with communities in the Study
12 Area contributed to the overall approach.

13 After evaluating the Study Area’s demographic data and implementing the methodology
14 described above, ADOT and FHWA developed 11 techniques to reduce linguistic, cultural,
15 institutional, geographic, and other barriers to meaningful participation.

- 16 • Translating all public involvement materials (included newspaper advertisements) into
17 Spanish and other languages upon request;
- 18 • Providing Spanish interpretation at all public meetings and hearings, as well as other
19 languages upon request;
- 20 • Adding “Google Translate” to the I-11 website, allowing translation of website text into
21 approximately 100 languages, including Chinese and Vietnamese;
- 22 • Including Spanish language graphics for download on the study website, as well as other
23 languages upon request;
- 24 • Establishing a bilingual I-11 hotline both in English and Spanish (1-844-544-8049);
- 25 • Integrating elected officials, intergovernmental liaisons, and special interest groups into the
26 process;
- 27 • Coordinating, implementing, and documenting communications protocols with the 4 adjacent
28 and 22 statewide tribal governments;
- 29 • Using advertising and graphics to more effectively reach illiterate individuals;
- 30 • Holding public meetings in locations that are easily accessible and American with
31 Disabilities Act compliant;
- 32 • Holding public hearings along transit lines for those who are transit dependent; and
- 33 • Providing reasonable accommodations such as for sign-language interpreters upon request.

34 Many of these techniques overlap with tools that also reach the public at large, with a goal of
35 providing access so everyone can participate.

36 Throughout the scoping and outreach process, the Project Team received input from the
37 members of the public in Pima County expressing opposition to the I-11 Corridor. FHWA and
38 ADOT invited the US Institute for Environmental Conflict Resolution as an independent third
39 party to facilitate a discussion in Pima County regarding the Draft Tier 1 EIS to allow the study
40 partners the opportunity to better understand the values, interests, and characteristics most
41 important to these community stakeholders. Two stakeholder groups participated in a series of



1 six stakeholder engagement meetings (three meetings per group) between March and April
2 2018 with the objective of facilitating discussions with the Pima County community to identify
3 issues and concerns in order to inform the decision-making process. More detail regarding the
4 meetings in Pima County facilitated by the US Institute for Environmental Conflict Resolution is
5 contained in **Chapter 5** of this Draft Tier 1 EIS. No citizen planning or advisory bodies have
6 been convened during the development of the Draft Tier 1 EIS.

7 ADOT and FHWA are committed to maintaining government-to-government relations with
8 Native American Tribes for projects that may affect Tribal rights and resources. Tribal
9 coordination continues to be an integral part of this study. More detail on tribal engagement is
10 contained in **Chapter 5** of this Draft Tier 1 EIS.

11 Public outreach and engagement for the I-11 corridor would continue into the Tier 2 studies
12 once a more specific alignment and facility footprint are determined.

13 **3.5.4 Environmental Consequences**

14 All three Build Corridor Alternatives are expected to have an impact on existing communities,
15 community facilities, and communities which have a high concentration of minority and low-
16 income individuals. The degree or severity of these impacts varies among the Build Corridor
17 Alternatives and would be location-specific. For the purposes of determining the potential for
18 disproportionate impacts in this planning-level study, this inventory identifies areas that are
19 known to have a high percentage of low-income and minority individuals based upon readily
20 available current US Census Bureau data. CDPs with minority and low-income populations
21 approaching or exceeding approximately 10 percentage points higher than the surrounding
22 county are called out as containing a high percentage of low-income and minority individuals for
23 the purposes of this inventory. There may be smaller pockets of minority or low-income
24 individuals and/or communities not apparent in the census data used for this analysis. Refer to
25 Section 3.5.5 for a description of supplemental data gathering techniques recommended for
26 future Tier 2 analyses.

27 **Purple Alternative**

28 As shown in **Table 3.5-5** (Inventory of Build Corridor Alternatives which Extend through
29 Communities with High Concentrations of Minority and Low-Income Population), approximately
30 25 percent of the total area within the Purple Alternative passes through areas with high
31 concentrations of low-income and minority individuals. Option A and Option I2 have the highest
32 intersection with minority and low-income populations. Option A is co-located with I-19 through
33 Santa Cruz County, and is included in all of the Build Corridor Alternatives under consideration
34 in this Draft Tier 1 EIS. Option I2 extends through an unincorporated area west of Casa Grande.
35 Option N of the Purple Alternative is a new facility extending through mixed
36 agricultural/residential areas in the minority population within Buckeye, while Options M and Q2
37 extend through predominantly undeveloped areas.

38 The Purple Alternative has the potential to affect several communities that contain low-income
39 and minority populations. In addition to determining whether there are disproportionately high
40 and adverse effects during Tier 2 analyses, the following areas have the potential to need a
41 greater public involvement and focus:



- 1 • Option A: Nogales, Rio Rico, Tumacacori-Carmen, Amado, Arivaca Junction
- 2 • Option C: Unincorporated communities along McGee Ranch Road, Three Points, North of
- 3 SR 86 along Sandario Road, Picture Rocks area
- 4 • Option G: Eloy and Casa Grande
- 5 • Option I2: West of Casa Grande
- 6 • Option N and R: Buckeye

Table 3.5-5 Inventory of Build Corridor Alternatives which Extend through Communities with High Concentrations of Minority and Low-Income Populations

Option	Total Project Area Acres ⁽¹⁾	Project Area Acres through High Concentrations of Minority or Low-Income Individuals ⁽¹⁾	Percentage of Project Area Acres Through High Concentrations of Minority or Low-Income Individuals
Purple Alternative			
A	6,960	3,906	56%
C	14,145	140	1%
G	10,936	4,372	40%
I1	1,769	854	48%
I2	4,517	3,412	76%
L	3,648	386	11%
N	6,207	758	12%
R	4,236	327	8%
X	13,228	2,499	19%
Total (end-to-end)	65,646	16,654	25%
Green Alternative			
A	6,960	3,906	56%
D	12,281	0	0%
F	12,338	4,602	37%
I2	4,517	3,412	76%
L	3,648	386	11%
M	4,479	2,345	52%
Q2	1,101	688	62%
R	4,236	327	8%
U	12,071	1,008	8%
Total (end-to-end)	61,631	16,674	27%
Orange Alternative			
A	6,960	3,906	56%
B	14,194	3,347	24%
G	10,936	4,372	40%
H	4,384	4,112	94%
K	10,038	1,568	16%
Q1	3,860	1,864	48%
Q2	1,101	688	62%
Q3	4,198	1,798	43%
S	12,227	546	4%
Total (end-to-end)	67,898	22,201	33%

(1) Acreages provided represent area within the 2,000-foot wide Project Area; actual acreages within the ultimate footprint of I-11 would be much lower, based upon an approximately 400-foot wide cross section to be determined during Tier 2 analyses. Source: US Census Bureau 2017, US Census Bureau 2015, US Census Bureau 2015a, US Census Bureau 2010.

1 Early in the planning process for the Tier 2 analysis, it is recommended that a public
2 involvement plan be developed with the focus of ensuring full and fair participation by all
3 affected communities and populations. Coordination with local stakeholders and community
4 representatives may be needed to understand the needs and priorities of the communities
5 which contain a high percentage of low-income and minority individuals, as well as determine
6 the most effective means of engaging them in the outreach process.

7 Several of the communities listed above are small, unincorporated, rural communities in Pima
8 County and are called out in **Figure 3.5-4** (Minority Populations – South Section) and
9 **Figure 3.5-7** (Low-Income Populations – South Section). While census data does not show high
10 percentages of low-income or minority individuals in this area, it is possible the large geography
11 covered by the CT within which they are located masks the demographics of these
12 communities. Supplemental data gathering techniques are recommended during Tier 2
13 analyses to better characterize the community profile in these locations and are discussed in
14 more detail in Section 3.5.5 Tier 2 Analysis.

15 The Project Area for the Purple Alternative is not located on any Tribal communities. Option C is
16 located between two discontinuous land holdings of the Tohono O’odham Nation – the San
17 Xavier District and the Schuk Toak District.

18 **Green Alternative**

19 As summarized in **Table 3.5-6** (Summary of Potential Impacts and Beneficial Effects to
20 Communities), the Green Alternative would cause impacts similar to those created by the Purple
21 Alternative. Option D passes through areas with a high level of sensitivity based on agency,
22 Tribal, and public input.

23 As shown in **Table 3.5-5** (Inventory of Build Corridor Alternatives which Extend through
24 Communities with High Concentrations of Minority and Low-Income Populations), approximately
25 27 percent of the total area within the Green Alternative passes through known minority and
26 low-income populations. Like the Purple Alternative, Option A and Option I2 intersect with
27 communities known to include minority and low-income populations. The primary differentiation
28 in impacts between the Purple Alternative and the Green Alternative is that Option F presents a
29 new interstate facility that is not co-located with an existing highway through the minority
30 population in Casa Grande.

31 Like the Purple Alternative, the Green Alternative also extends through a low-density,
32 unincorporated residential community north of I-10 near Buckeye and the differences between
33 Option X (Purple Alternative) and Option U (Green Alternative) are limited. The difference
34 between the Project Areas of the Options S, U, and X is limited and have a similar potential to
35 affect this community.

36 The Green Alternative is not located on any Tribal communities. Option D is located between
37 two discontinuous land holdings of the Tohono O’odham Nation – the San Xavier District and
38 the Schuk Toak District.

39 The Green Alternative has the potential to affect several communities that contain low-income
40 and minority populations. In addition to determining whether there are disproportionately high
41 and adverse effects during Tier 2 analyses, the following areas have the potential to need a
42 greater involvement and focus:



- 1 • Option A: Nogales, Rio Rico, Tumacacori-Carmen, Amado, Arivaca Junction
 - 2 • Options F and I1: Eloy and Casa Grande
 - 3 • Option I2: West of Casa Grande
 - 4 • Option R: Buckeye
- 5 Similar to the Purple Alternative, early in the planning process for the Tier 2 analysis, a public
6 involvement plan should be developed with the focus of ensuring full and fair participation by all
7 of the affected communities and populations.

8 **Orange Alternative**

9 The Orange Alternative follows more existing highway facilities than the Purple and Green
10 Alternatives. Because there is a greater concentration of communities, community resources,
11 and minority and low-income individuals following existing highway facilities, the Orange
12 Alternative includes more communities with a high percentage of minority and low-income
13 individuals in their populations than the Purple and Green Alternatives (see **Table 3.5-5**
14 [Inventory of Build Corridor Alternatives which Extend through Communities with High
15 Concentrations of Minority and Low-Income Populations]).

16 Option B is co-located with I-10 through downtown Tucson and extends through minority and
17 low-income populations in the historic barrios and neighborhoods abutting the interstate. When
18 I-10 was originally constructed in the 1960s, it introduced a barrier that divided many of the
19 neighborhoods in downtown Tucson. Should Tier 2 evaluations determine property acquisitions
20 are required, resulting residential displacement and/or relocations in combination with the
21 expanded infrastructure could potentially affect the character of these low-income and minority
22 populations and further reduce community cohesion. This is particularly true within the Yaqui
23 communities in downtown Tucson and the historic neighborhoods of Barrio Anita, Barrio El
24 Membrillo, and the El Paso & Southwestern Railroad Historic District, which has been
25 determined eligible for listing in the National Register of Historic Places. (See Section 3.7,
26 Archaeological, Historical, and Cultural Resources for more detail regarding potential impacts to
27 the historic districts through downtown Tucson.) Because the residences and buildings are
28 located very close to the existing interstate right-of-way (ROW) boundaries, there is a high
29 potential for Option B to impact these communities, which have a high percentage of minority
30 and low-income individuals and a unique character and community profile. During Tier 2
31 analyses, planning and design of the specific alignment and design elements of I-11 would
32 explore opportunities to avoid and minimize impacts to these communities and further efforts
33 would be needed during Tier 2 analyses to better understand the community, their needs, and
34 how best to engage them in the transportation-planning process.

35 Option B along I-19 crosses the San Xavier District of the Tohono O’odham Nation. ADOT has a
36 perpetual right-of-way easement from the Tohono O’odham Nation for approximately 8 miles of
37 interstate highway in this area. Direct impacts to this area could be minimized by limiting the
38 transportation improvements to the existing ADOT right-of-way in this area.

39 Like the Purple and Green Alternatives, the Orange Alternative also extends through a low-
40 density, unincorporated residential community north of I-10 near Buckeye and the differences
41 between Option X (Purple Alternative), Option U (Green Alternative) and Option S (Orange
42 Alternative) are limited. The Purple and Green Alternatives have a similar potential to affect this
43 community, but the Orange Alternative offers better avoidance opportunities to minimize
44 potential impacts.

1 The Orange Alternative has the potential to affect several communities that contain a high
2 percentage of low-income and minority individuals. In addition to determining whether there are
3 disproportionately high and adverse effects during Tier 2 analyses, the following areas have the
4 potential to need a greater involvement and focus:

- 5 • Option A: Nogales, Rio Rico, Tumacacori-Carmen, Amado, Arivaca Junction
- 6 • Options B: Tohono O’odham Nation, South Tucson, Tucson, Rillito
- 7 • Option G: Eloy and Casa Grande
- 8 • Option H: West of Casa Grande
- 9 • Option K: Gila Bend
- 10 • Options Q1, Q2, and Q3: Buckeye

11 Similar to the Purple and Green Alternatives, early in the planning process for the Tier 2
12 analysis, a public involvement plan should be developed with the focus of ensuring full and fair
13 participation by all of the affected communities and populations.

14 **No Build Alternative**

15 Under the No Build Alternative, impacts to community facilities and communities with a high
16 percentage of minority or low-income populations would include only those related to projects
17 already planned and programmed. Improvement projects along SR 189 and I-10 in Nogales and
18 Casa Grande, respectively, have the potential to affect both communities which a high
19 percentage of minority individuals. Under the No Build Alternative, future projects would need to
20 comply with EO 12989 and related statutes. Beneficial impacts of the Build Corridor Alternatives
21 such as improved travel times, reduced congestion, economic development and improvements
22 to regional mobility would not occur under the No Build Alternative.

23 **Summary**

24 ADOT and FHWA engaged all population segments to ensure access to the EIS study process.
25 While the No Build Alternative would result in a few impacts, the benefits related to the need for
26 greater connectivity and travel time reliability also would not be realized. The Build Corridor
27 Alternatives would provide the following primary benefits:

- 28 • Improvement to connectivity and mobility, providing access to jobs, services, education, and
29 entertainment.
- 30 • Result in travel time savings and improvements to travel time reliability.
- 31 • Offer the potential for economic opportunities through improved access and mobility.
- 32 • Improved safety when traveling on existing roads due to lower crash rates.
- 33 • Competitive advantages for existing and future businesses located in the Study Area due to
34 the additional transportation capacity and accessibility.
- 35 • Improved regional air quality due to shifting traffic away from existing roadways and
36 reducing congestion.

37 Potential impacts associated with the three Build Corridor Alternatives and the No Build
38 Alternative are summarized in **Table 3.5-6** (Summary of Potential Impacts and Beneficial Effects
39 to Communities) located at the end of this section. All three Build Corridor Alternatives are co-

1 located with I-19 along Option A, so they result in the same potential impacts on the
2 communities of Nogales, Rio Rico, Tumacacori-Carmen, Amado, and Arivaca Junction (all of
3 which contain a high percentage of minority and/or low-income individuals).

4 The Purple Alternative (Corridor Options I2, N, and R) has unavoidable impacts on the
5 community west of Casa Grande and the community of Buckeye. The Green Alternative
6 (Corridor Options F, I1, I2, and R) has the potential to adversely affect the communities of Eloy,
7 Casa Grande, the unincorporated area west of Casa Grande, and Buckeye. The Orange
8 Alternative (Corridor Options B and G) has the potential to adversely affect communities of
9 South Tucson, Rillito, Eloy, and Casa Grande and impact Tribal land of the Tohono O'odham
10 Nation.

11 Overall, the Purple Alternative presents the lowest overall potential to disproportionately and
12 adversely affect minority and low-income populations. While all three Build Corridor Alternatives
13 go through the community of Eloy, Option F in the Green Alternative represents a new facility
14 through those communities.

15 **3.5.5 Potential Mitigation Strategies**

16 FHWA and ADOT identified communities with a high percentage of minority and low-income
17 individuals along each of the Build Corridor Alternatives under consideration. Under all Build
18 Corridor Alternatives, proactive efforts would need to continue to ensure meaningful
19 opportunities for public participation by all affected communities, including minority and low-
20 income populations. This is essential to address the requirements outlined in EO 12898,
21 *Federal Actions to Address Environmental Justice in Minority Populations* and FHWA
22 regulations outlined in CFR Title 23, Part 450. These requirements are intended to ensure that a
23 project does not cause a disproportionately high and adverse effect on minority and low-income
24 populations, as well as other protected categories such as sex, age, and disability. Efforts to
25 engage all populations throughout the Study Area that have been undertaken during the Tier 1
26 process are described in **Chapter 5**.

27 Further refinement of the Build Corridor Alternatives would be necessary in order to determine
28 the full potential for impacts on low-income and minority populations. Impacts could be avoided
29 or mitigated through the design of the specific alignment during the Tier 2 process by avoiding
30 community features or resources; planning and locating new facilities outside of a selected Build
31 Corridor Alternatives; building structures such as pedestrian overpasses to maintain existing
32 neighborhood connections; or modifying existing facilities to maintain access and function.
33 Actual mitigations would be identified and implemented as part of subsequent Tier 2 analysis.

34 If disproportionate adverse impacts to minority and low-income populations are found,
35 collaboration to avoid and minimize the potential impacts would occur. If avoidance and
36 minimization are not practicable or feasible, a mitigation strategy designed to satisfy the needs
37 of the community would be needed. The anticipated impacts would determine which mitigation
38 strategies, if any, are the most appropriate to implement in order to avoid disproportionate
39 adverse effects on those populations.

40 **3.5.6 Future Tier 2 Analysis**

41 Future Tier 2 National Environmental Policy Act analysis would include identifying and
42 quantifying impacts and mitigation measures. Characterization of the demographics for affected

1 communities would be conducted using the most recent census data and supplemental
2 characterization techniques. Supplemental techniques could include, but are not limited to,
3 reaching out to local planning staff and community leaders, examining residential property
4 assessments/valuations, direct surveys of local residents, and outreach to local employment
5 centers, schools, and social service programs. Using these techniques, a more complete profile
6 of the affected communities should be developed. These efforts are particularly important in
7 areas where the CTs cover large geographies, resulting in census data that potentially masks
8 the demographics of smaller unincorporated rural communities. Some of these communities are
9 called out in the maps of low-income and minority demographics in the South Section
10 (**Figure 3.5-4** (Minority Populations – South Section) and **Figure 3.5-7** (Low-Income
11 Populations – South Section)).

12 The Tier 2 analysis would be based on more specific corridor alignment information and design
13 features, providing for a more precise evaluation of the impacts related to proposed
14 displacements, relocations, changes to employment and businesses, community characteristics,
15 and housing availability. Additional air quality, noise, and other applicable environmental studies
16 also would be conducted in order to assess the impacts that these environmental concerns
17 would have on human health. A full determination of these effects, both adverse and beneficial,
18 to minority, low-income, and other protected populations would occur.

19 The Tier 2 Environmental Justice analysis would address the following items, as established by
20 the *Federal Highway Administration Environmental Reference Guide* (FHWA 2012):

- 21 • Conduct major, proactive efforts to ensure meaningful opportunities for public participation,
22 including activities to increase low-income and minority participation.
- 23 • Compare the project effects (including indirect and cumulative effects) on the minority and
24 low-income populations with respect to those on the overall population. Fair distribution of
25 the beneficial and adverse effects of the proposed action is the desired outcome.
- 26 • Determine if the adverse effects are predominantly borne by the minority and low-income
27 populations or are appreciably more severe or greater in magnitude on these populations
28 than the adverse effects suffered by the non-minority and non-low-income populations (i.e.,
29 disproportionately high and adverse effects).
- 30 • Determine if the project might prevent the denial of, reduction in, or significant delay in the
31 receipt of benefits by minority and low-income populations.
- 32 • Determine whether there are practicable mitigation measures or alignment alternatives that
33 would avoid or minimize the disproportionately high and adverse effect(s).
- 34 • Determine whether any of the affected communities include minorities, ethnic groups, senior
35 populations, persons with disabilities, individuals with a Low-Income, or those who are LEP.

36 The Tier 2 analysis will involve further coordination with minority and low-income populations,
37 including Tribal communities, and with agencies in order to determine the most effective means
38 of minimizing and mitigating adverse impacts on these populations.

39 The Tier 2 analysis also will include a Public Involvement Plan consistent with ADOT's agency-
40 wide Public Involvement Plan, which meets federal requirements for Title VI, Environmental
41 Justice, and LEP in the transportation decision-making process. The Public Involvement Plan
42 will continue efforts to remove barriers to participation in the public engagement and
43 transportation decision-making process by addressing the unique needs of those affected by the
44 project to include minorities, ethnic groups, and individuals with low incomes or who are LEP.

Table 3.5-6 Summary of Potential Impacts and Beneficial Effects to Communities

Topics	No Build Alternative	Purple Alternative	Green Alternative	Orange Alternative
Communities	<p>No I-11 impacts identified.</p> <p>Existing conditions and baseline trends would continue.</p> <p>Potential for long-term socioeconomic change and impacts on communities due to growing populations and increasing traffic volumes.</p>	<p>Communities where Alternative follows an existing highway:</p> <ul style="list-style-type: none"> • Marana • Red Rock • Picacho • Eloy • Casa Grande • Arivaca Junction <p>Communities where Alternative would be a new corridor:</p> <ul style="list-style-type: none"> • Goodyear • Buckeye • Arlington • Arivaca Junction 	<p>Communities where Alternative follows an existing highway:</p> <ul style="list-style-type: none"> • Arivaca Junction • Buckeye <p>Communities where Alternative does not follow an existing highway:</p> <ul style="list-style-type: none"> • Sahuarita • Three Points • Picture Rocks • Avra Valley • Red Rock • Eloy • Casa Grande • Goodyear • Arlington • Buckeye 	<p>Communities where Alternative follows an existing highway:</p> <ul style="list-style-type: none"> • Arivaca Junction • Green Valley • Sahuarita • Tucson • Flowing Wells • Casas Adobes • Rillito • Marana • Buckeye <p>Communities where Alternative does not follow an existing highway:</p> <ul style="list-style-type: none"> • Buckeye

Table 3.5-6 Summary of Potential Impacts and Beneficial Effects to Communities (Continued)

Topics	No Build Alternative	Purple Alternative	Green Alternative	Orange Alternative
Communities with High Concentration of Minority and Low-Income Individuals *	Other projects within the Study Area would be subject to individual Environmental Justice evaluations.	Affected communities with a high percentage of minority and low-income individuals: <ul style="list-style-type: none"> • Arivaca Junction • Valencia West • Eloy • Casa Grande • Unincorporated area between Casa Grande and Gila Bend • Buckeye 	Affected communities with a high percentage of minority and low-income individuals: <ul style="list-style-type: none"> • Arivaca Junction • Valencia West • Eloy • Casa Grande • Unincorporated area between Casa Grande and Gila Bend • Gila Bend • Buckeye 	Affected communities with a high percentage of minority and low-income individuals: <ul style="list-style-type: none"> • Arivaca Junction • Tohono O’odham Nation, San Xavier District • Tucson • Rillito • Picacho • Eloy • Casa Grande • Unincorporated area between Casa Grande and Gila Bend • Gila Bend • Buckeye <p>Highest proportion of Project Area extending through communities with minority and/or low-income populations (33%).</p>
Tribal Communities (also contain high concentration of minority and/or low-income individuals*)	Through San Xavier District along existing I-10.	Closer to San Xavier District than Green, but not on tribal land. Close to Garcia Strip, but not on tribal land.	Similar to Purple Alternative.	Through San Xavier District along existing I-10.

Table 3.5-6 Summary of Potential Impacts and Beneficial Effects to Communities (Continued)

Topics	No Build Alternative	Purple Alternative	Green Alternative	Orange Alternative
Potential Beneficial Effects	Existing conditions and baseline trends would continue.	Transportation benefits would affect communities throughout Study Area. Implementation of the Purple Alternative also would have a beneficial effect in terms of the region's economic conditions, leading to an increase in personal income and employment –which would benefit all communities.	Transportation benefits would affect communities throughout Study Area. Implementation of the Green Alternative also would have a beneficial effect in terms of the region's economic conditions on a similar scale to the Purple Alternative, leading to an increase in personal income and employment –which would benefit communities.	Transportation benefits would affect communities throughout Study Area. Benefits to the region's economic conditions.
Indirect Effects	Programmed transportation improvements plus projected population and employment growth could: <ul style="list-style-type: none"> • Decrease mobility and access to job opportunities and housing options due to increased travel times and congestion. 	Land development induced by the project could increase or change the nature and location of residential, business, and other uses could: <ul style="list-style-type: none"> • Increase traffic on local roads. • Displace existing residents and businesses. • Increase job opportunities and housing options. • Enhance mobility where future growth and development is planned. • Change property values. • Change air quality, noise and visual characteristics. • Create demand for public facilities and services. 	Similar to the Purple Alternative.	Similar to the Purple Alternative; except: <ul style="list-style-type: none"> • The benefits and changes from improved mobility would be reduced in the South and Central Sections.

Table 3.5-6 Summary of Potential Impacts and Beneficial Effects to Communities (Continued)

Topics	No Build Alternative	Purple Alternative	Green Alternative	Orange Alternative
Cumulative Effects	Past, present, and reasonably foreseeable projects could: <ul style="list-style-type: none"> • Increase displacements, increase noise levels, and impact air quality as part of the ongoing trend to develop land in the region. 	Past, present, and reasonably foreseeable projects could: <ul style="list-style-type: none"> • Potentially have an incremental role improving access to housing and jobs for minority and Low-Income Environmental Justice communities. • Increase the number of displacements. • Increase noise levels and new visual highway features. • Potentially reduce noise levels along existing infrastructure in the South and Central Sections. • Impact air quality. • Potential changes in access to community facilities. • Impact quality of life; however, changes will be subjective depending on individual perspective and personal value of their current rural or urban lifestyle. 	Similar to the Purple Alternative.	Similar to the Purple Alternative.

* Based upon demographic data provided by the US Census Bureau. Detailed demographic tables can be found in **Table 3.5-4** (Race and Ethnicity in the Study Area, County and Statewide Averages) of this section and in **Appendix E5**.



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