Town of

Florence Transportation Planning Study

Final Report

February 2020

TOWN OF FLORENCE ARIZONA

ADOT

Michael Baker INTERNATIONAL

The Town of Florence
2040
Transportation Planning Study

Final Report

February 2020

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Adopted by Town of Florence Council on _____

All photos and figures were created by Michael Baker International unless otherwise noted

Executive Summary

At the time that the current transportation plan was adopted, the 2008 Regional Coolidge-Florence Transportation Plan, Florence was poised for rapid population growth much like many cities throughout Arizona. Roadways were planned to carry traffic volumes that reflected aggressive growth rates that no longer reflect more moderate population growth today. As the Great Recession came to an end, it became evident that the planned roadways within the Town were either oversized or not properly aligned with existing growth patterns that Florence now holds. As the Town's first municipal transportation plan, the Town of Florence Transportation Planning Study 2040 will shape future roadway infrastructure and the development of the Town over the next 20 years.

Objectives were created by the Technical Advisory Committee (TAC) during the initial project stages to guide this study and identify desired outcomes. This TAC consisted of Town of Florence and Pinal County staff, ADOT representatives, and various Town stakeholders. The project objectives agreed upon are as follows:

1. To update local transportation planning within the Town of Florence and interface with Arizona Department of Transportation (ADOT) and Pinal County transportation systems to meet the needs of the Town.
2. Identify and recommend short-, medium-, and long-term plan of improvements.
3. Develop roadway cross sections that are consistent with the Pinal County Roads of Regional Significance plan.
4. Develop planning-level cost estimates (per lane mile) for each recommended roadway classification type.
5. Recommend access management policies for the Town of Florence.
6. Establish the ability for Florence to obtain a stand-alone travel demand model in order to perform future modeling to accommodate incoming development proposals.
7. The results/deliverables of this study will be utilized as the Circulation Element of Florence's General Plan update anticipated in 2018.
8. Incorporate multimodal policies and facility locations into the transportation framework.
9. Obtain stakeholder and advisory committee input early and throughout the entire planning process.

Another anticipated outcome of this process is to inform the development of the Town's Infrastructure Improvement Plan establishing transportation policies and strategies related to the ongoing and changing development patterns.

In addition to these objectives, project staff and the TAC identified various existing transportation issues and needs such as:

1. The proposed North-South corridor
2. East-West connectivity
3. Updating Roadway Functional Classifications
4. Transit Facilities (Park & Rides)
5. Roadways with surplus Right-of-Way
6. Pedestrian & Bicycle Mobility
7. Safety, and
8. Town Regulations & Policies

Currently seventy-eight percent (78%) of land, 31,385.58 acres, within the Town of Florence is private land, much of which is presently vacant but contains plans for thirty-six (36) Master Planned Communities (MPC's). Another sixteen percent (16%), 6,476.07 acres, is State Trust Land. These two landowner groups combined total ninety-four percent (94%) of all land within Town limits. The current General Plan's most prominent Land Use type is MPC, and the largest acreage zoning category is for Planned Unit Developments at 55.42% (22,232 acres) highlighting that population and employment growth in Florence is a likely reality, though at a more moderate pace.

Utilizing a Traffic Demand Model (TDM) created in conjunction with Maricopa Association of Governments (MAG) staff, the projections for the future 2040 no-build traffic conditions, all previously planned roadways are expected to operate at LOS "D" or better, except for Judd Road, Quail Road, Hunt Highway, Attaway Road, and SR 79 which will operate at a LOS E or F in their various segments. The primary outcome from this analysis reflects that the existing Florence Functional Classification system is largely oversized (surplus capacity) for many roadways which would result in wider than necessary rights-of-way and unnecessary construction costs for the Town and developers. As such, this study has essentially "right-sized" a number of Florence's roadways under a new and enhanced Functional Classification plan and map.

The primary traffic challenges within the Town of Florence are impacts of the daily employees commute patterns into and out of town, with Florence receiving nearly twice as many employees daily as leave the community to work elsewhere. With the development of the Town's largest MPC, Anthem at Merrill Ranch (with a population of nearly 7,000), the traffic congestion along this stretch of Hunt Highway into San Tan Valley has been heavily exacerbated. Knowing that these challenges will only increase as development occurs, yet that the prescribed roadway classifications were oversized. As a result, eighteen (18) roadways in Florence were recommended for adjustment and/or downsizing of their respective roadway functional classifications. Please see Chapter 9 for additional detail.

In addition to recommended changes to many roadway functional classifications, several Florence roadways were identified for capacity-related roadway improvements and prioritized for near term, mid-term and long-term implementation horizons. See Table A-1 below

Table A-1: Roadway Improvement Recommendations

Roadway Segment	2040 No-Build		2040 Built		Implementation Phase[1]
	# of Lanes	LOS	# of Lanes	LOS	
Judd Road: Quail Run Road to Attaway Road	2	E	4	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Quail Run Road: Judd Road to 0.5 miles North	2	E	3	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Hunt Highway: Stone Creek Drive to Paseo Fino Way	4	F	6	C	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Hunt Highway: Paseo Fino Way to Bella Vista Road	3	E	6	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Hunt Highway: Bella Vista to Arizona Farms Road	2	F	6	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Hunt Highway: S. of AZ Farms Road to Mirage Avenue	2	E	4	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation
Hunt Highway: Mirage Avenue to Franklin Road	2	F	4	C	Near-Term Construction
Hunt Highway: Fire Station #2 to Attaway Road	2	F	4	C	Near-Term Construction
SR 79: Gila Drive to Hunt Highway	2	F	4	C	Mid-Term Construction
SR 79: Hunt Highway to Ranch View Road	2	F	4	D	Long-Term Construction

SR 79: Ranch View Road to 1st Street	2	F	4	C	Long-Term Construction
Attaway Road: South of Hunt Highway[3]	2	F	4	C	Mid-Tern Construction

This Plan also identified a series of safety-related intersection improvements that were derived and prioritized through extensive field investigations, crash history analysis and anecdotal feedback for stakeholders and the public. Please refer to Chapter 12 for additional detail. A summary of the intersection improvements with assigned implementation priorities is found in Table A-2 below.

Table A-2: Summary of Recommendation Intersection Improvements

Intersection Location	Concern	Recommendation	Implementation Phase[1]
Hunt Highway/ Felix Road	Incomplete Intersection, poor lighting, sight visibility.	Install lighting at the intersection, refresh painting, install edge lines, intersection improvements to increase visibility.	Short-Term (design currently underway)
Hunt Highway/ Arizona Farms Road	Elevated intersection, no lighting, tight radius.	Reevaluate radii, install lighting, refresh pavement marking.	Short-Term (Pinal County design currently underway)
Felix Road/ Judd Road	Lighting, sight visibility.	Intersection improvement to improve sight visibility, lighting on the west side of Felix Road and on Judd Road	Long-Term
Hunt Highway/ Attaway Road	Sight visibility, high northbound right-turn volumes.	Install a northbound right-turn lane, install stop bars/crosswalks, refresh striping.	Short-Term
Hunt Highway/ SR 79	Heavy eastbound right-turn traffic volumes, safety.	Install an eastbound right-turn lane, install a traffic signal, restripe the intersection, install rumble strips.	Short-Term (In conjunction with ADOT bridge project to signalize the intersection in 2021)
SR 287/ Attaway Road	High number of crashes, education and enforcement issues.	Coordinate with Coolidge to complete an RSA.	Short-Term
SR 79/ SR 287	Capacity issues.	Roundabout is currently in the design phases.	Short-Term
Hunt Highway/ Bella Vista Road	Safety - high number of crashes, lot of rear-ends and left-turns.	Coordinate with Pinal County to complete an RSA, evaluate left-turn phases, review signal timing and clearance intervals.	Short-Term
Bella Vista Road/ Gantzel Road	Safety – high number of crashes, lot of rear-ends.	Complete an RSA, review signal timing and clearance intervals.	Short-Term: Conduct RSA Mid-Term: Construction

[1] The Implementation Phase is a recommendation and is subject to change. Near-Term refers to 0-5 years, Mid-Term is 5-10 years, and Long-Term is 10+ years after publication

[2] Cost estimates are to be considered preliminary planning-level cost estimates

Additional recommendations brought forth in this study include:

1. A set of Recommended Roadway Cross Sections including a Parkway, Principal Arterial (both single and dual lanes), Minor Arterial, Enhanced Collector, Major and Minor Collectors, and two versions of Local Roadways, fifty (50) foot and sixty (60) foot right-of-way (ROW),
2. A Truck Route Plan for heavy loads and hazardous materials that will better serve the Florence Military Reservation missions, and employment generating land uses a first for the Town of Florence,
3. Considerations for the North-South Corridor, including a preferred alignment and access locations,
4. Considerations for the extension of River Road and Butte Avenue,
5. Recommendations for unpaved roadway improvements and gap closures,
6. Modifications to the Town's CIP Roadway Improvements (2018-2019),
7. Intersection & Safety Improvements,
8. Pedestrian & Bicycle Facility Improvements that support the recently adopted Active Transportation Plan, and
9. Recommended Town Policies and Regulations including a new sight visibility triangle design, public transportation bus turnout, best practices for bus stop location and design, complete streets and adaptive street projects, and Enhanced Mobility and Connection of the Town's existing and planned residential communities.

Numerous funding sources were also identified for the recommendations identified herein.

1 Plan Purpose

The Town of Florence's current transportation plan, the 2008 Coolidge-Florence Regional Transportation Plan, is over ten (10) years old. At that time the housing boom in Arizona was beginning to slow down. Since the end of the Great Recession and the adoption of the Coolidge-Florence Regional Transportation Plan, development patterns and select landowners have changed. The majority of the roads assigned to short and mid-term projects as part of the previous transportation plan are no longer fitting with current development patterns.

The Coolidge-Florence Regional Transportation Plan did not evaluate and determine the impacts that existing development agreements would have had on the Town's Capital Improvement Plan (CIP). The Town currently has over fifteen (15) existing development agreements with varying obligations required of the Town as part of the agreements. Many of the agreements also detail the ability to form Community Facility Districts (CFD) that prescribe infrastructure (roadway, water and sewer) improvements that serve incoming development.

Roadways classified as four-lane facilities in the previous transportation plan (prepared pre-recession), in some cases no longer meet the four-lane demand due to post-recession shifts in the town's development patterns and growth rates. Roadways that meet the minor arterial traffic volume demands are classified as principal arterials. There are previously planned roadway connections that will not be connected based on current land developments or platted entitlements. These changes largely necessitate a new Transportation Planning Study.

The Town's Infrastructure Improvement Plan also needs to be brought up-to-date, and this Transportation Planning Study is a key contributor to informing this plan. Ultimately, this study will help the Town of Florence determine and create transportation policies and strategies including access management, especially in relation to the ongoing and changing development patterns.

The Town of Florence participates in the Central Arizona Regional Transit (CART) bus system in partnership with Coolidge, Central Arizona College, Pinal County and ADOT. The program is an integral component of transit in Florence and the region. Florence's participation in the CART system is briefly referenced in the transportation plan with a focus on CART's existing or proposed connectivity to paths, trails, and bike ways. No transit system analysis is identified as a component of this study.

Source: Wade Jurney Homes

1.1 Plan Objectives

Preliminarily identified study objectives for the Florence Transportation Planning Study (TPS) are identified below. These objectives were discussed, refined, and agreed upon by the Technical Advisory Committee (TAC) are as follows:

10. To update local transportation planning within the Town of Florence and interface with Arizona Department of Transportation (ADOT) and Pinal County transportation systems to meet the needs of the Town.
11. Identify and recommend short-, medium-, and long-term plan of improvements.
12. Develop roadway cross sections that are consistent with the Pinal County Roads of Regional Significance plan.
13. Develop planning-level cost estimates (per lane mile) for each recommended roadway classification type.
14. Recommend access management policies for the Town of Florence.
15. Establish the ability for Florence to obtain a stand-alone travel demand model in order to perform future modeling to accommodate incoming development proposals.
16. The results/deliverables of this study will be utilized as the Circulation Element of Florence's General Plan update anticipated in 2018.
17. Incorporate multimodal policies and facility locations into the transportation framework.
18. Obtain stakeholder and advisory committee input early and throughout the entire planning process.

Pinal County Administrative Complex

Source: Greater Florence Chamber of Commerce

1.2 Study Area Context

The Town of Florence is located in central Arizona along the Gila River, at the junction of State Route (SR) 287 and SR 79. Florence is the county seat of Pinal County and is generally considered a focal point in Pinal County for government services, employment, and cultural activities. A large percentage of the jobs in Florence are government and prison-related positions. It is located midway between the two (2) largest urbanized areas in Arizona. The urbanized boundary of metro-Phoenix is roughly twenty (20) miles to the northwest, while the City of Tucson is approximately fifty-one (51) miles to the southeast. Florence is within the Phoenix-Mesa-Scottsdale Metropolitan Statistical Area (MSA) which includes all of Maricopa County and Pinal County. The Town is also within the Sun Corridor Megapolitan Area which includes Maricopa County, Pinal County, and Pima County. The Sun Corridor Municipal Planning Organization, Maricopa Association of Governments (MAG), and Central Arizona Association of Governments (CAAG) all include the Town within their boundaries. See Figure 1-1 for additional context.

The Town of Florence is generally surrounded by the Town of Queen Creek to the northwest, the Gila River Indian Community to the west and the City of Coolidge to the southwest. The northern, eastern and southern boundaries of Florence are bordered by a combination of State Trust land, County land, Bureau of Land Management (BLM) land, and privately-owned

unincorporated land. The Arizona National Guard/Military Reserve owns land north and east of Florence. See Figure 1-2 for additional reference.

Major natural landmarks in the area are the Gila River, which flows in a westerly direction north of Downtown, and Poston Butte, which is located northwest of Downtown and is commonly known as "F Mountain" (pictured below).

The Town of Florence Planning Area encompasses 196 square miles, of which only ten (10) percent is currently developed. Most of the Planning Area is undeveloped or in agricultural production, creating a rural character. The Town of Florence's incorporated limits (study area) are 62.7 square miles, and its 2017 population per the American Community Survey (ACS) is 26,074.

The Town has three (3) distinct residential developments that are geographically separated; Anthem at Merrill Ranch, Florence Gardens and the "Old Florence" downtown/ Historic District area.

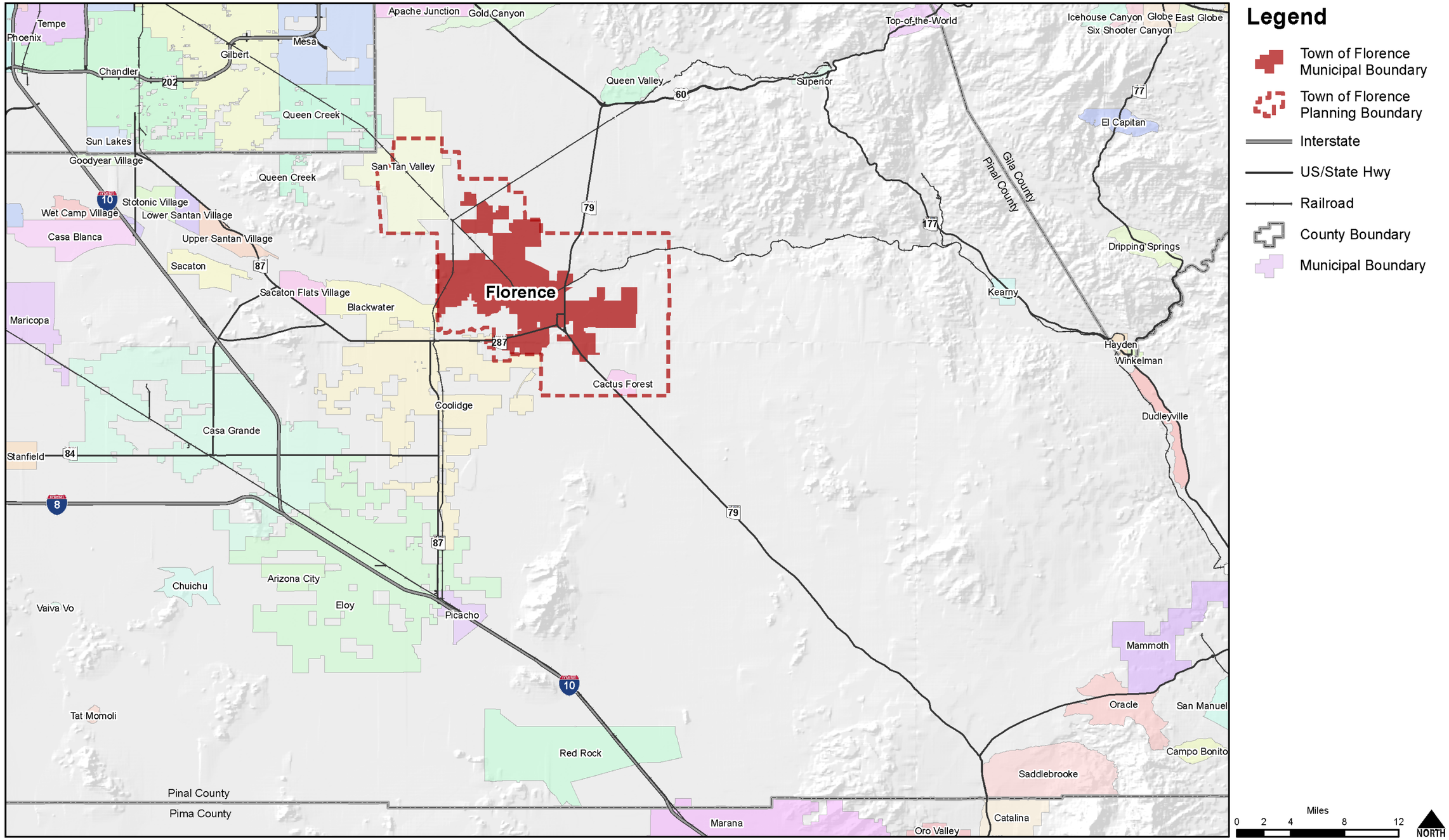


Figure 1-1: Town of Florence Regional Context

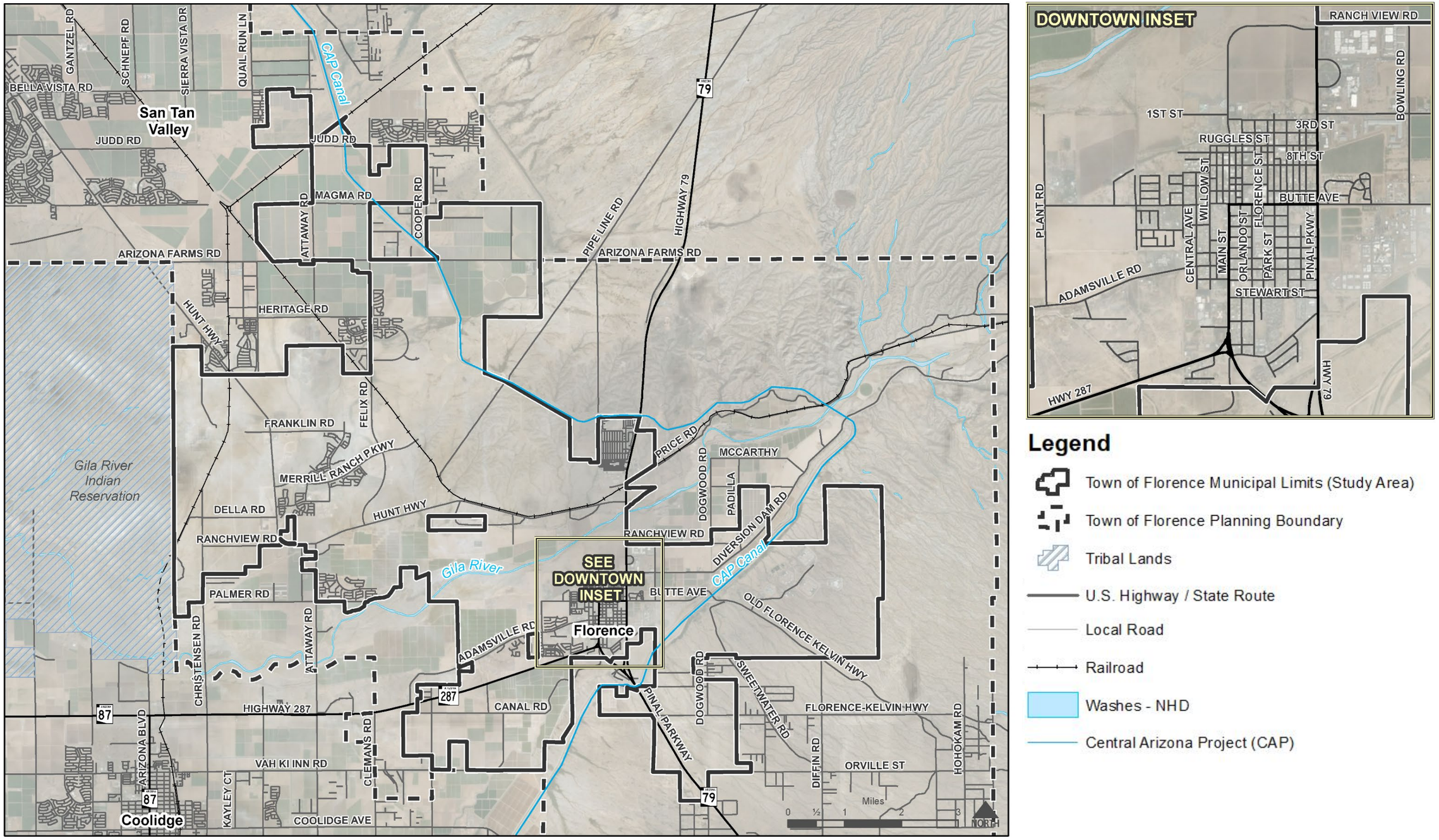


Figure 1-2: Town of Florence Transportation Planning Study- Study Area

1.3 Study Process

The preparation of a comprehensive transportation study, such as the Florence Transportation Study, requires a balance between technical analysis and critical input and guidance from a collaboration of representatives from the Town of Florence, ADOT, regional agencies, Technical Advisory Committee (TAC) members, stakeholders and the general public. As Figure 1-3 illustrates, there are five (5) key phases to the planning process of a comprehensive transportation plan. The result of this holistic approach will reflect a thoroughly vetted series of identified needs and a prioritized listing of short-, medium-, and long-term plan of improvements that are fiscally responsible and consistent with the Town's and other agency's budget realities.

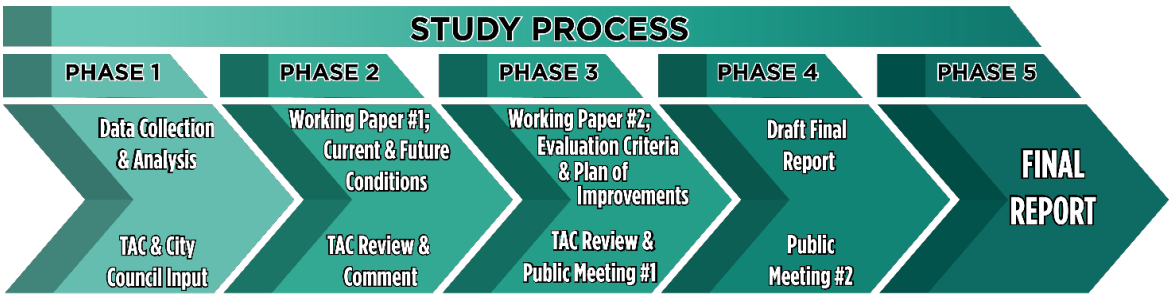


Figure 1-3: Florence TPS Study Process

1.4 Technical Advisory Committee

A Technical Advisory Committee (TAC) has been established for the Florence Transportation Planning Study. The TAC provides an essential role in the study process – by providing guidance, feedback, oversight and recommendations on all aspects of the study plan and process. The TAC will prepare for and attend TAC meetings to review and comments on project working papers and other deliverables, assist with messaging to stakeholders and assist in notifying stakeholders and others of public meetings.

1.5 Plan Update Process

As previously noted, the purpose of this plan is to guide the growth of the town by providing sound and data-driven recommendations to foster a complete and successful future transportation network. The 2040 Florence TPS has twenty (20)-year planning horizon; however, transportation plans are typically updated on a ten (10)-year cycle meaning, the next master transportation planning process could potentially not take place until ten (10) years beyond adoption of this plan.

Florence has experienced rapid growth in the past and can possibly experience similar rapid growth in the next ten (10) years. The results of the technical analysis and recommended

improvements of this plan were based on the best data available at the time and are subject to modification based on any significant changes that take place within or adjacent to the Town of Florence. A formal process will need to take place where council can add an addendum to the adopted 2040 Florence TPS.

2 Relevant Plans, Studies, & Reports

This section summarizes the relevant plans, studies and reports that have influenced the Town of Florence. Prior to this planning effort, many different studies, plans and policies have been developed in response to Florence's and other regional needs. Many plans and studies have been completed that will impact transportation in the Town of Florence. It describes each plan, law, ordinance, or regulation as it relates to the Town. These documents reviewed in relation to this study are listed in below and have been reviewed to identify the relevant projects, policies, and themes to be considered when developing strategic solutions. For a more detailed review, please refer to Appendix A for a complete summary of all pertinent documents.

- Coolidge- Florence Regional Transportation Study (2008)
- Pinal Strategic Transportation Safety Plan
- Pinal County Small Area Transportation Study (2006)
- Town of Florence 2020 General Plan (2007), Updates (2011 & 2012), & Land Use Map Update (2014)
- Pinal County Regionally Significant Routes for Safety & Mobility (RSRSM) (2008, and map update 2017)
- Proposed New Transportation Route in Pinal County- ADOT (2014, ongoing EIS, and concurrent study)
- MAG Commuter Rail Study (concurrent study)
- Town of Florence Parks, Trails and Open Space Master Plan (2008)
- Pinal County Open Space & Trails Master Plan (2008, updated 2017)
- Florence Unified School District Safe Routes to School Study (2018)
- Town of Florence Redevelopment Plan Update (2009)
- Town Core Infill Incentive District Plan and Map (2011)
- North End Framework Plan (2011)
- Pinal County Transit Feasibility Study (2011)
- Pinal Access Management Manual (2017)
- Coolidge Comprehensive Transportation Feasibility Study (2012)
- Coolidge 2025 General Plan (2014)
- CAG Regional Transit Plan (2015)
- Pinal County Regional Transportation Plan (2017)
- Pinal County Regional Transit Authority Report (2016)
- Town of Florence Territory Square Zoning District (2016)
- MAG 2040 Regional Transportation Plan (2016)
- Town of Florence Capital Improvement Plan
- Pinal County Five-Year Transportation Improvement & Maintenance Program (2017)
- Pinal Subdivision & Infrastructure Design Manual (2006)

- Pinal Subdivision Regulations (2009)
- Southern Pinal County Regional Corridors Study (2015)
- Pinal County Floodplain Management Plan (2017)
- Pinal County Regional Transportation Plan Brochure 2017
- Superstition Vistas Study (2012)
- I-8 & I-10/ Hidden Valley Framework Study (concurrent study)

3 Existing Transportation Issues & Needs

This section outlines the transportation issues and needs the Town of Florence faces which were identified through the existing conditions analysis and through several strategic engagement opportunities with Town staff, the TAC, and members of the community. Ultimately, these the issues and needs described in this section formed the foundation for further analysis and the development of recommendations. See Figure 3-1 for a graphic illustration summarizing the transportation needs and issues.

3.1 Roadway & Multimodal Facilities

Below are some of the most significant local and regional roadway issues the Town of Florence is currently facing.

North-South Corridor

ADOT has been studying the potential alignment of a proposed north-south high capacity corridor to improve regional connectivity in Florence and the surrounding areas in the fast-growing Sun Corridor. Pinal County voters have approved the formulation and taxing authority of the newly created Regional Transportation Authority (RTA). Though the NEPA Tier 1 environmental impact statement (EIS) continues, the Town of Florence had identified a preferred alignment which is different from the preferred corridor identified in the release of the Draft Tier 1 EIS. Though the Draft Tier 1 EIS preferred corridor does not entirely represent the alignment that Florence was initially promoting, the Town of Florence supports the new preferred alignment. A Record of Decision (ROD) on the Final Tier 1 EIS is anticipated in the Winter of 2020. Please refer to Section 11.1 for more information on the North-South Corridor.

Improve East-West Connectivity Through the Study Area

There are currently very few existing roadways in the Town that offer east-west connectivity. While some of these future connections will partially depend upon leveraging incoming private development to construct segments of future roadways, Florence's current east-west roadways are limited to Hunt Highway and SR 287. Proposed roadway extensions such as Butte Avenue, "River Road" along the south side of the Gila River, and Judd Road are preliminarily identified.

Roadway Functional Classifications

The existing roadway functional classifications that are codified through the Florence General Plan represent the recommended functional classifications from the Coolidge-Florence Transportation Planning Study of 2008. The Town has requested that the Florence Transportation Planning Study evaluate and recommend an updated roadway functional classification system, partially based on a shift in overall growth rates and anticipated PUD development patterns. Some roadways may be oversized, and this Plan will evaluate and recommend updated roadway functional classifications. Florence would also like to explore the possibility of making a distinction in classifications and standard cross-sections for "urban" roadways and "rural" roadways.

Transit Facilities

The evaluation of existing transit routes, operations and potential expansion opportunities are not a priority focus of this Plan (a separate transit study for Pinal County is currently being undertaken), however, the Town has identified a need to establish two (2) proposed park and ride facilities – one at the intersection of SR 79 and Arizona Farms Road and the second along Hunt Highway in the San Tan Valley area. The RTA has identified two (2) additional park and ride facilities in the Florence Municipal Planning Area.

Surplus Right-of-Way of Select Downtown Florence Roadways

Some roadways in the downtown Florence area that were established early in the Town's settlement - Butte Avenue, Willow Street, Orlando Street and Park Street to name a few, have surplus rights-of-way. Butte Avenue from Main Street to Pinal Parkway/ SR 79B for example is a 100-foot right-of-way (ADOT ROW). Some of these wide rights-of-way also have wider than necessary pavement sections, especially for the roadways that are posted at thirty-five (35) miles per hour (mph) or lower. Speeding however has not typically been an issue on these roadways. The Town of Florence would like the Transportation Planning Study to evaluate the potential to utilize these surplus rights-of-way for the inclusion of shared use paths (or other bike-ped improvements), possible shade trees and other landscaping elements, and/or recommending a policy that contemplates the Town's sale of surplus rights-of-way to adjacent property owners for their use and enjoyment.

3.2 Pedestrian & Bicycle Mobility

Perhaps the most significant issues posed to pedestrians and cyclists are the lack of facilities and connectivity. Bicycling and walking along the regional routes in Florence present many safety challenges. There are few sidewalks in the Town of Florence aside from the newly built master planned communities and parts of historic downtown, and even fewer bicycle facilities. Equally challenging perhaps are the lack of ADA facilities available. Florence has a topographical slope of less than three (3) percent across the community and a large percentage of the

population over the age of sixty-five (65), therefore ADA access is achievable and should be a priority.

3.3 Safety

The following observations were related to safety concerns in the Town of Florence:

- Based on observations from the Town of Florence staff as well as the consultant review of the crash data, it appears that speeding is generally not a problem in Florence, even with wide streets. Analysis of the crash data did not show any significant number of injury or fatalities due to speeding.
- There is not a significant number of crashes at any particular intersection.
- According to the Town of Florence staff, the intersection of SR 79 and SR 79B had one of the worst safety conditions, however this intersection has been recently improved by ADOT.
- A roundabout is in the design phases for the intersection of SR 79B and SR 287. Construction of this facility is planned for the year 2021.
- A traffic signal warrant analysis was completed, and the intersection met signal warrants in two (2) categories for the intersection of Hunt Highway and SR 79. This intersection experiences high right-turn volumes in the eastbound direction. A bridge design project by ADOT at this intersection could impact intersection design, including a dedicated right turn lane, restriping since installation and possibly installing rumble strips.
- A traffic signal has been installed at the intersection of Attaway Road and Hunt Highway. Operational issues could result in safety issues.
- The intersection of SR 287 and Attaway Road is a Town of Coolidge owned and maintained intersection; however, the Town of Florence Emergency Services responds to crashes at this location due to Florence's closer proximity to the intersection. Based on the observations by Town of Florence personnel, it appears that the intersection of SR 287 and Attaway Road has the highest crash rate within Pinal County. Based on the discussions with Pinal County and Town of Florence personnel, this intersection has an education and enforcement issue, not necessarily a design issue.
- The intersection of Felix Road and Hunt Highway is an incomplete road section with poor lighting. The stop bar on Felix Road is too far back from the intersection.
- The Town of Florence receives many complaints regarding the intersection of Arizona Farms Road and Hunt Highway; however, it is not within Town Limits. The intersection is very elevated and has a tight radius.
- The intersection of Judd Road and Felix Road should deal with the Pinal County-Town of Florence jurisdictional division as Judd Road is in Pinal County and Felix Road is in Florence. There is a history of crashes at this intersection and lighting is an issue in the vicinity of the canal on Judd Road. Improvements at the intersection are only complete on the northeast corner.

- ADOT crash data indicates that there are high number of crashes in the vicinity of San Tan Valley development.
- One third of the total crashes were rear end collisions. Lighting conditions do not appear to be a factor with respect to crashes as most of the crashes occurred in daylight conditions.

3.4 Town Regulations & Policies

Based on preliminary conversations with staff and stakeholders the town is requesting assistance in developing Town policy and regulations on the following topics:

1. The Town would like to see the Florence Transportation Planning Study provide a recommended policy on sight visibility triangles.
2. The Town has completed a development impact fee study based on guidance from the Florence Transportation Study that helped inform future Town roadway and other mobility-related infrastructure projects and investment choices.
3. The Town would like to see this study provide a recommended policy and standard cross section for a bus turnout. It is suggested that this study look to the RPTA and other agencies for examples.
4. The Town of Florence requests that the Transportation Planning Study identify and recommend designated truck routes to assist and facilitate the hauling of hazardous materials and roadways to support the mission of the Florence Military Reservation and Army National Guard.
5. The Town of Florence is requesting that this Plan support bicycle and pedestrian policies within the recently completed Active Transportation Plan that address facility requirements within new subdivisions as well as connections between subdivisions (or residential communities) in the subdivision platting submittal and review process.

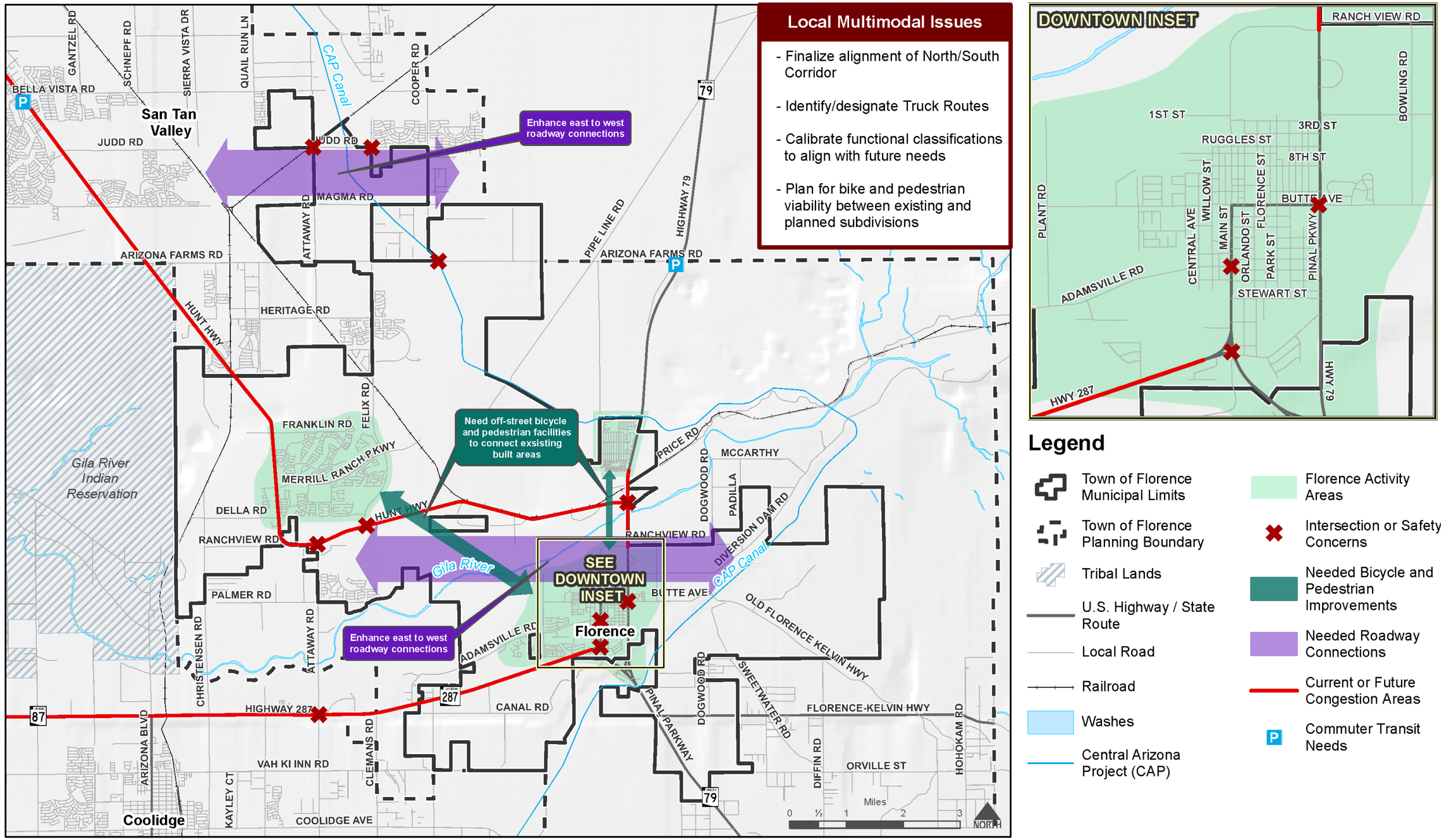


Figure 3-1: Transportation Needs & Issues

4 Existing Community Profile

Assessing the current status of the community initiates the important exchange of ideas about the Town's future.

4.1 Land Ownership

The Town of Florence municipal limits covers approximately 62.7 square miles of land owned and maintained by numerous sources, though privately-owned property is the overwhelming majority covering over three quarters of all properties in the Town limits.

Table 4-1: Land Ownership

Landowners	Acreage	Percent
Private Land	31,385.58	78
State Trust Land	6,476.07	16
Bureau of Land Management	1,795.19	5
Military Reservation	344.03	< 1%
Bureau of Reclamation	125.20	< 1%
McFarland SHP	1.78	< 1%
Total	**40,127.85**	**100**

Source: Bureau of Land Management

4.2 Existing Land Uses & Activity Centers

What presently appears as agricultural land and undeveloped desert is primarily privately-owned land containing plans for future Master Planned Communities (or PUD's). The existing residential areas in the Town of Florence are all low, or low to medium density and employment is predominantly saturated in the historic core, with some additional employment located in the Anthem at Merrill Ranch community.

Anthem at Merrill Ranch is a modern master planned community that currently consists of 2,244 residential dwelling units, and 212,290 square feet of commercial space. Florence Gardens is a

manufactured home community platted in the 1960's that currently contains 800 dwelling units and continues to grow. Florence Gardens (including their adjoining communities) is an age restricted community (fifty-five (55) years and older) and reports a winter population of approximately 1,500 with a year-round population of only 350. Please refer to Table 4-2 for existing land use areas and percentages.

4.3 General Plan Future Land Uses

The Town of Florence's Future Land Use Plan, a product of the Town's 2020 General Plan, was developed to strike a balance between housing and employment to achieve a level of environmental, economic, and social sustainability. The plan allows for the Town to achieve their goal of becoming a "Town of Neighborhoods" allowing them to keep the small-town rural feel, while providing opportunities for education and economic advancement. The Town's Future Land Use Plan establishes the following uses within their Municipal Planning Area:

- The most prominent General Plan land use categories in the Town of Florence include Master Planned Community (MPC), Medium Density Residential (MDR), Low Density Residential (LDR), and Employment/Light Industrial (E/LI). Existing Community Commercial (CC) land use is predominantly located along Hunt Highway, SR 287, SR 79, and in the Historic downtown core.
- Downtown Florence consists primarily of Master Planned Community (MPC), Medium Density Residential (MDR), and Prison (P) land uses primarily east of SR 79, however it also provides for mixed uses within the Downtown Mixed-Use (DMU), Highway Mixed-Use (HMU), and Prison/ Employment/ Light Industrial (P/E/LI) Mixed-Use areas.
- Mixed uses are somewhat new in the Town's planning efforts. The Downtown Mixed-Use (DMU) designation allows for taller buildings and higher densities than what is presently found along Main Street (SR 79B). Highway Mixed-Use (HMU), intended to create revitalization along SR 79 geared towards commuters, along with multistory structures that include residential use. HMU development will be automobile and non-resident focused, while DMU is more pedestrian in scale and resident focused. While no description is provided for the Prison/ Employment/ Light Industrial (P/E/LI) Mixed-Use areas, it can be inferred that the Town now allows for the combination of employment uses.

- A breakdown of the various land use designations and their respective acreages are shown in Table 4-2 and referrer to Figure 4-2 for a map illustrating the Town's 2020 General Plan Future Land Uses.

Source: Town of Florence

Land Use	Existing Area	Existing Percent	Future Area
Single Family	9,846.79	8.10%	59,500.35
Multi Family	73.76	0.10%	2,076.65
Commercial	239.74	0.20%	4,961.54
Industrial	119.70	0.10%	121.54
Office	38.94	0%	779.45
Other Employment	8,755.12	7.20%	21,563.08
Mixed Use	0.00	0%	14,846.88
Transportation	1,273.73	1.00%	1,273.85
Open Space	9,886.25	8.10%	16,373.15
Agriculture	31,694.37	26.10%	0.00
Vacant	59,567.93	49.00%	-
Total Acres	121,496.34	-	121,496.34
Total Square Miles	**189.84**	**-**	**189.84**

Source: Maricopa Association of Governments 2016, by Municipal Planning Area (MPA)

Table 4-2: Existing and Future Land Use Comparison

Source: Next Home Alliance

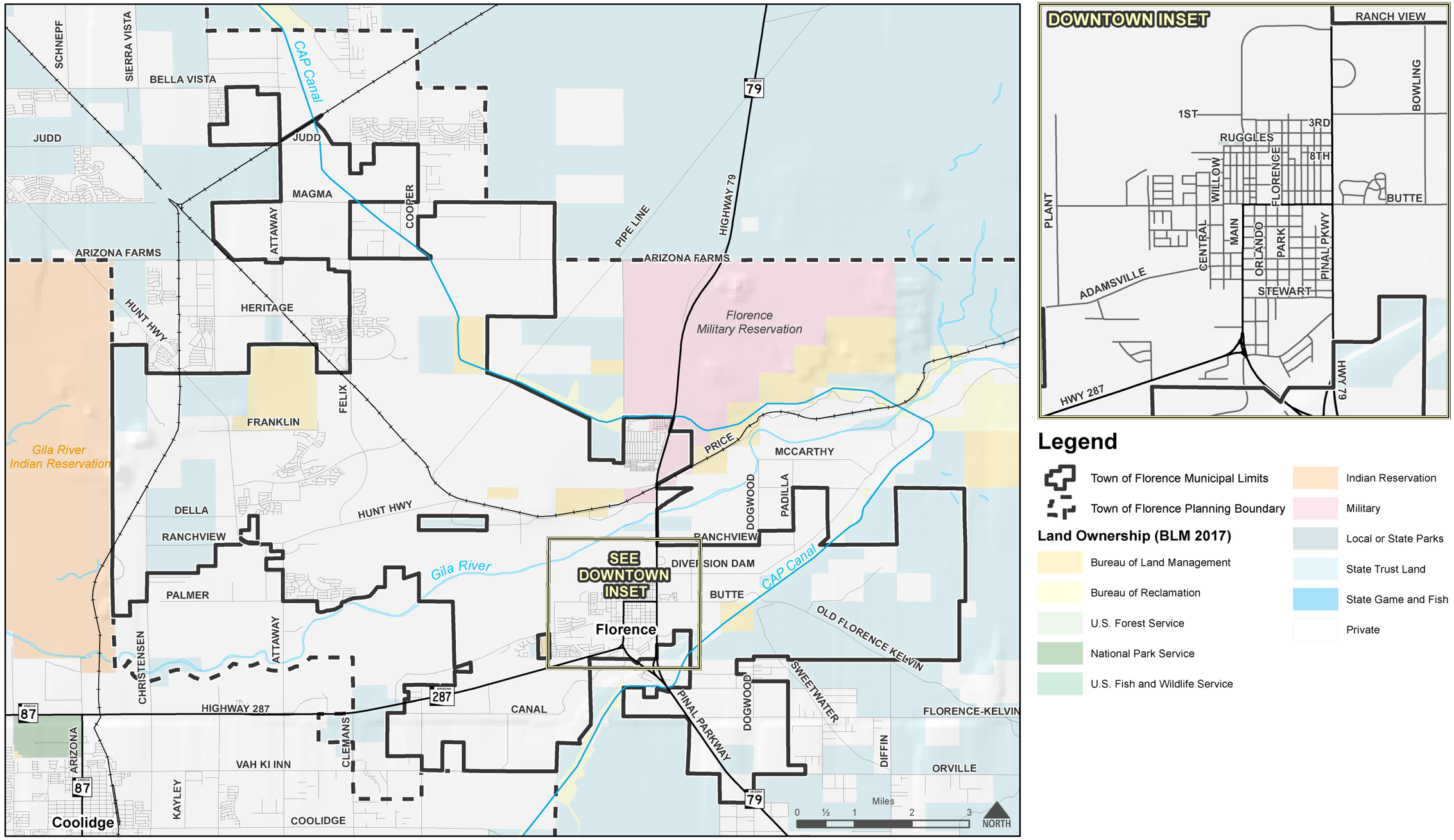


Figure 4-1: Land Ownership

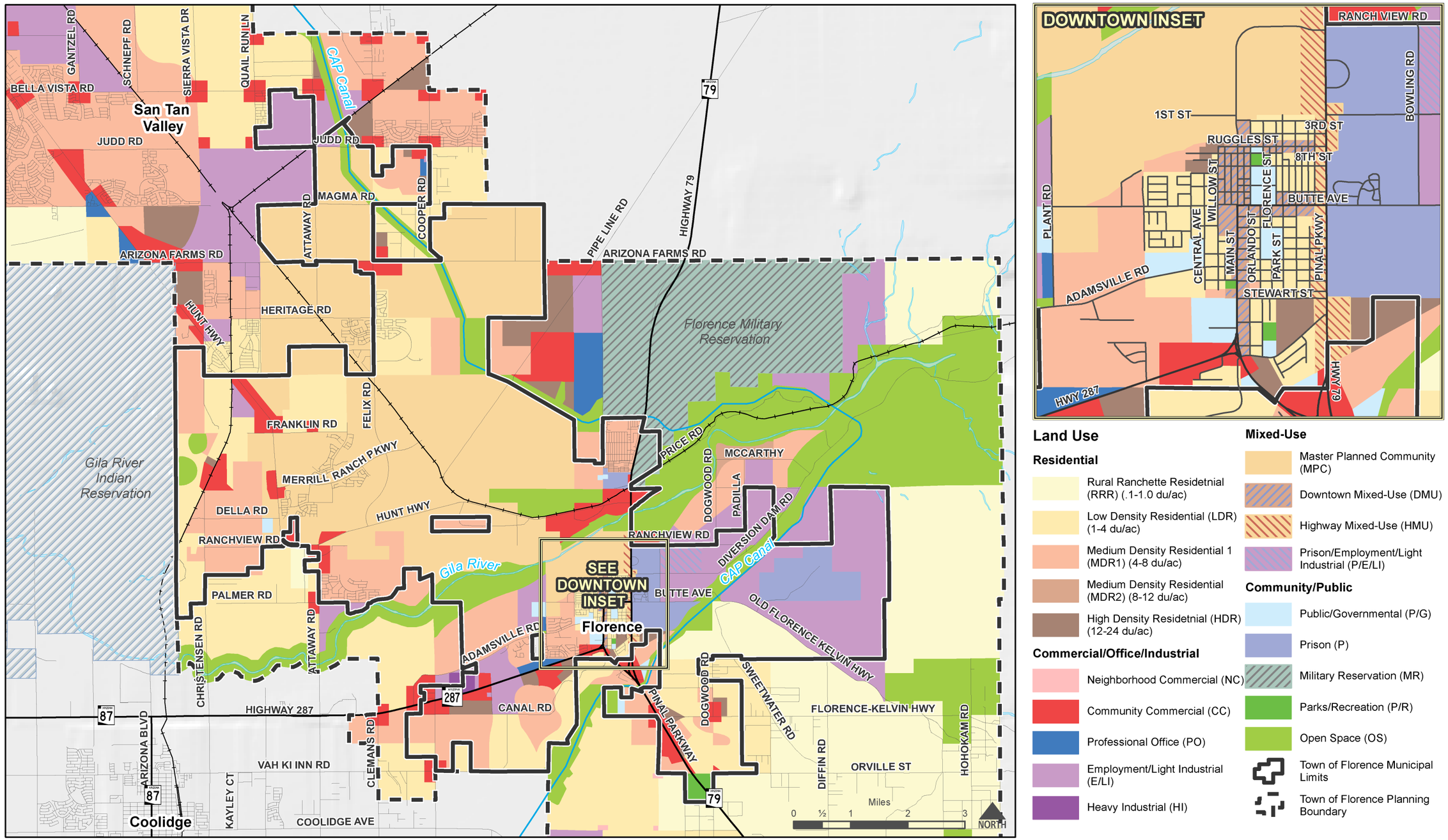


Figure 4-2: Florence General Plan Future Land Use

4.4 Existing Town of Florence Zoning Districts

The Town of Florence currently contains eighteen (18) different zoning districts within their Town limits with the most two (2) predominant districts being Planned Unit Development (PUD) and Residential Rural Agricultural (RA-4), while the Single family residential (R1-18), neighborhood business, and downtown commercial being the least prominent zoning districts. A detailed breakdown of the various districts and their respective acreages are shown in Table

Zoning Category	Acreage	Percentage
Neighborhood Business	18	0.04%
Downtown and Highway Business	366	0.91%
Downtown Commercial	25	0.06%
Light Industrial	1,135	2.83%
Multiple Family Residential	39	0.10%
Manufactured Home Subdivision	340	0.85%
Neighborhood Office	33	0.08%
Multiple Zoning District	46	0.11%
Public/Institutional	69	0.17%
Planned Unit Development	22,232	55.42%
Neighborhood Multi-Family Residential	2,171	5.41%
Single Family Residential (R1-18)	4	0.01%
Single Family Residential (R1-6)	1,159	2.89%
Single Family Ranchette	1,370	3.42%
Rural Agricultural (RA-4)	8,331	20.77%
Rural Agricultural (RA-10)	1,923	4.79%
Recreational Vehicle Park/Subdivision	57	0.14%
Territory Square	799	1.99%
Total	**40,117**	**100%**

Source: Town of Florence

4-3 Please refer to Figure 4-3 for an illustration of the existing zoning districts.

Table 4-3: Zoning District Breakdown

As Figure 4-4 illustrates, over one-half of the Town consists of the PUD district. The PUD zoning district is primarily designed to accommodate master planned communities that typically consist of a mixture of land uses. Anthem at Merrill Ranch, Florence's largest and most active PUD is over 3,000 acres and is approved for approximately 9,000 dwelling units. Please see section 4.3 below for additional description of the various approved PUD's in the Town of Florence. The vast majority of the lands in the western and northern reaches of the Florence Town limits consist of the PUD zoning districts which include the Anthem at Merrill Ranch, Merrill Ranch, Skyview Farms, Aspen/ Palorossa Farms and Walker Butte PUDs. Rural Agriculture (RA-10)

zoning predominately covers the eastern reaches of Florence southeast of the CAP canal. Rural Agriculture (RA-4) and PUD (Johnson Ranch Estates) zoning districts include the southern areas of Florence south of the downtown.

Existing zoning in the downtown area includes a mixture of single family residential (R1-6) for the mature neighborhoods in proximity to Main Street. Existing zoning along the Main Street frontage includes Downtown and Highway Business (B-2)) south of Butte Ave., and Downtown Commercial (DC) north of Butte Ave. Supporting districts in the downtown also include Neighborhood Multi-Family Residential (R-2), Multiple Family Residential (MFR) and Public/Institutional (P/I) that include Pinal County and Town of Florence government buildings and properties. Territory Square (TS) zoning is located along the south bank of the Gila River to approximately Ruggles St. The Territory Square district includes Town Hall, Aquatic Center, Heritage Park and the Community Center and future plans along the river frontage.

4.5 Existing Planned Unit Developments (Approved)

There are presently thirty-seven (37) approved PUDs in the Town of Florence which represent over one-half of areas within the Town municipal limits. Table 4-4 provides a listing of each of the approved PUDs in Florence.

Table 4-4: Existing PUD Acreage

PUD Name	Acreage
Adamsville 650 LLC	655.86
Anthem at Merrill Ranch	3318.82
Aspen/ Palorossa Farms	1253.20
Bonnybrooke Solar	318.44
Burnett	0.78
Dobson Farms	1693.53
Dobson Ranch	139.21
Felix Farms	84.27
Florence 70	73.04
Florence Crossing	19.54
Florence Industrial Park	71.10
Freedom Farms	542.42
Heritage Creek Estates	143.75
Johnson Ranch Estates	1299.34
LB Inn	0.69
La Entrada	40.43
Magma Ranch (SRP)	72.19
Mahoney	9.99
Majestic Ranch	228.98

PUD Name	Acreage
Merrill Ranch	5933.85
Mesquite Trails	644.03
Monterra	916.33
Montessa	30.64
Nevitt Farms (SRP)	526.79
Rancho Sendero	41.45
Redstone Ranch	29.99
Rodeo State Land	320.56
Sendera Ranch	398.01
Silver State Land	58.48
Skyview Farms	1856.50
SunAire Ranch	107.43
Territory Square	812.43
Twin Peaks State Land	482.93
Urton Farms	428.68
Valley Farms Estate	79.50
Walker Butte	1700.21
Western Century	63.33
Total	**24,396.72**

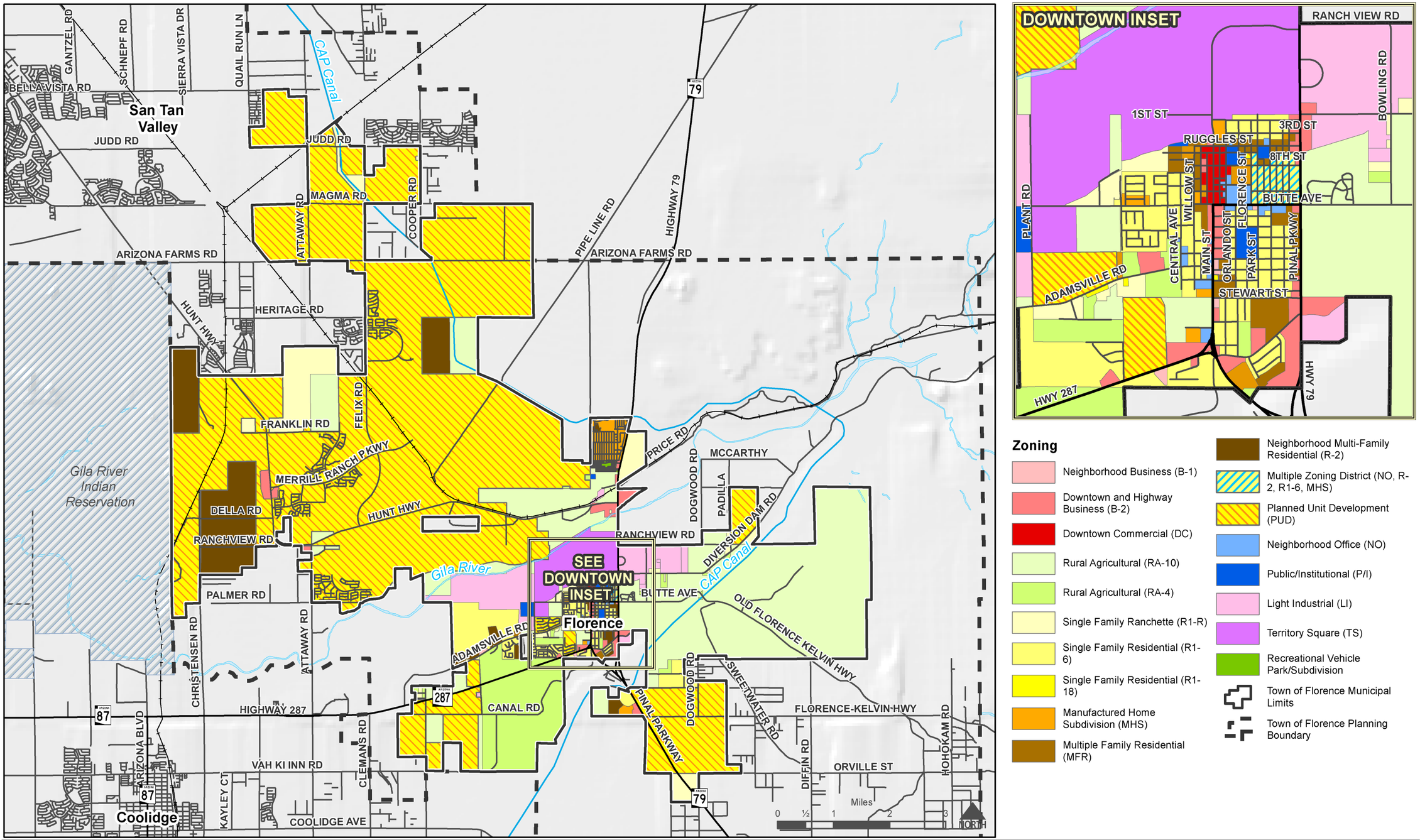


Figure 4-3: Current Zoning

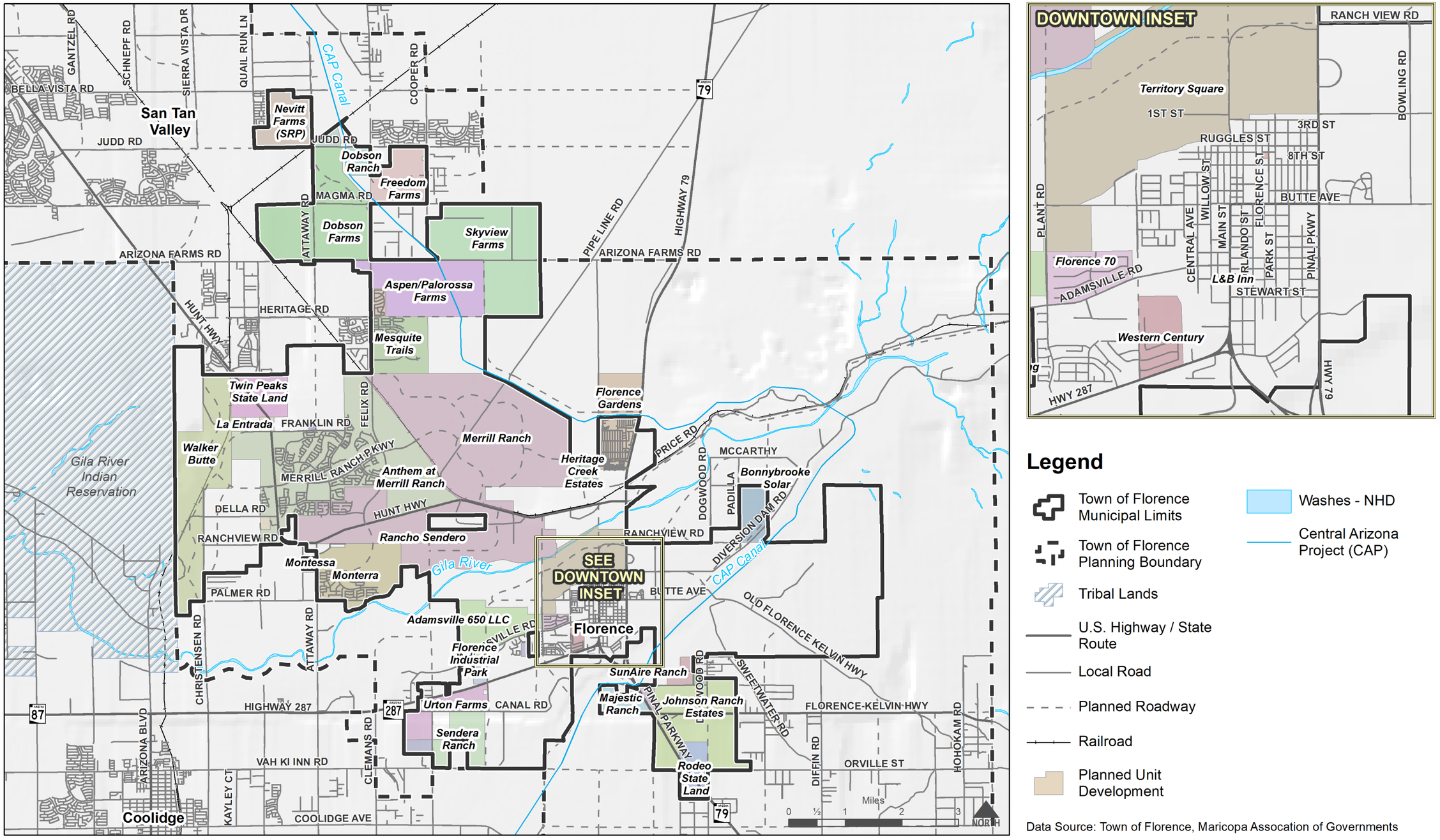


Figure 4-4: Current Planned Unit Developments (2018)

4.6 Historic Properties

There are presently 123 properties in the Town of Florence listed on the National Register of Historic Places; twenty-five (25) are listed individually, while ninety-eight (98) are listed as part of the Multiple Resource Area (MRA) which is the Florence Townsite Historic District. Additional properties throughout Florence qualify for the designation. See Figure 4-5 for the historic district boundary.

4.7 Florence Military Reservation

The Florence Military Reservation consists of 25,752 acres, 344 acres of which lie within the Town of Florence limits. The Reservation serves as an Army National Guard training site and is also home to a large population of Sonoran Desert Tortoise. The Military Reservation is also classified as a Superfund Site.

The Town of Florence is committed to supporting and upholding the mission of the Florence Military Reservation and the U.S. Department of Defense as follows:

Title 10 of the U.S. Code, Section 3062 (a) defines the military mission as:

- *Preserving the peace and security, and providing for the defense of the United States, the Territories, Commonwealths, and possessions, and any areas occupied by the United States;*
- *Supporting national policies;*
- *Implementing the national objectives; and*
- *Overcoming any nations responsible for aggressive acts that imperil the peace and security of the United States*

The TAC and Town staff shared a desire for this Transportation Planning Study to identify and preserve sufficient vehicle/truck routes, right-of-way, and pavement designs to support the current and future operations of the Florence Military Reservation.

The Pinal County Joint Land Use Study (JLUS) is concurrently taking place as a combined effort between Pinal County, the Town of Florence, the Town of Marana, the Town of Queen Creek, the City of Eloy, the Arizona National Guard (AZNG), and state and federal agencies. It is funded by the Department of Defense (DOD) and the Office of Economic Adjustment (OEA). The main objective of this study (which includes the Florence Military Reservation as one of four areas of study) is to reduce conflicts between the AZNG activities and the surrounding jurisdictions while providing for growth and advancement and maintaining health and safety. The outcome of the JLUS study will include:

- A land use assessment for surrounding potential growth areas
- A baseline of existing incompatible land uses around the AZNG installations
- A plan to assist surrounding communities to make informed decisions regarding compatibility
- Recommended strategies to promote compatible land use planning around the AZNG installations and within the surrounding communities

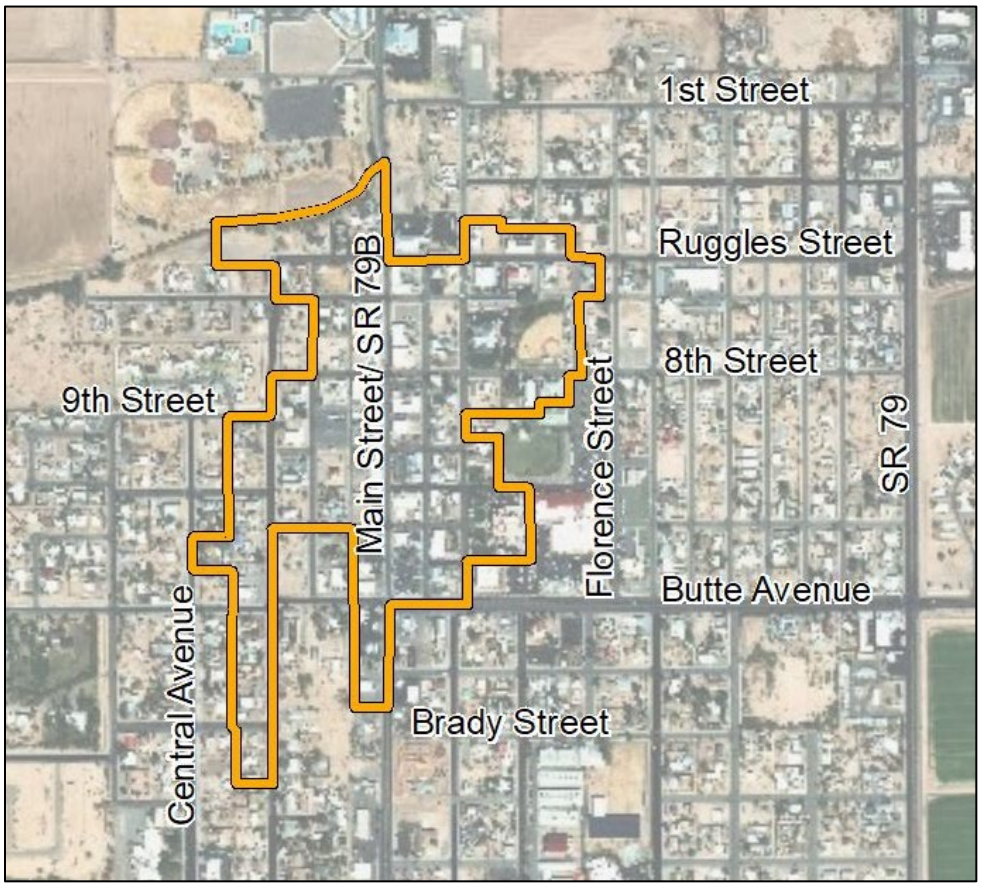


Figure 4-5: Florence Townsite Historic District Boundary

4.8 Existing Demographic & Socioeconomic Conditions

Demographics

As of July 2017, the Town of Florence had a population of 26,074; a two (2) percent increase since April 2010. This total population does include an incarcerated population of approximately 16,432 (AZ State Demographer, 2017). The incarcerated population skews other demographic data such as gender, age, and Title VI as seen below in Figure 4-6 and Table 4-5.

There are approximately 5,472 households within the Town limits with a median home value of $112,100. The median household income is $48,919, lower than Pinal County and the State of Arizona at $52,555 and $53,558 respectively.

The median age of the population is 40.8 years old which is higher than Pinal County's average of 39.2 years old and Arizona's average of thirty-six (36) years old.

The vast majority of the existing population base in Florence primarily reside in one of three communities – Anthem at Merrill Ranch, Florence Gardens, and the downtown area.

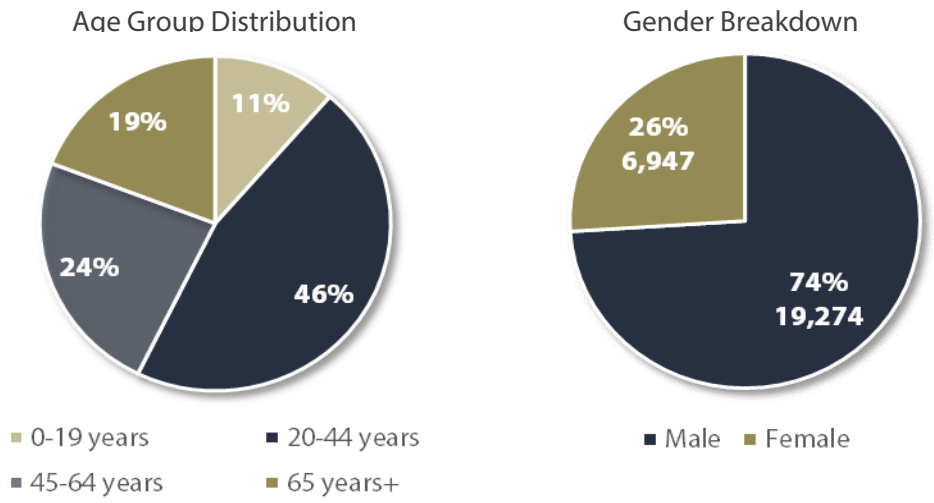


Figure 4-6: Age & Gender Breakdown

Title VI Populations

To ensure environmental justice throughout the study process, the following information regarding race, color or national origin, income level, age, disability, and gender is provided.

Table 4-5: Title VI Populations

Title VI Population	Number	Percent
Minority	13,233	50.75
Age 65+	5,021	19.26
Female Head of Household (children <18, no husband)	102	0.39
Low Income (persons living below the poverty level)	1,940	7.44
Population with a Disability	1,437	5.51
Limited English Proficient Persons (LEP)	3,474	13.32

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year Estimates

Socioeconomic Conditions

Socioeconomic information was obtained from the ACS Census 2012-2016, five (5)-Year Estimates. The socioeconomic review included: Ages sixty-five (65) and Older, Low-Income, Transit-Dependent Households, Population Density, Population Taking Public Transportation to Work, Population Bicycling to Work, and Population Walking to Work. Socioeconomic data were displayed using block group data and shows the block groups (Figure 4-7) within and

adjacent to the Florence TPS study area. These characteristics were reviewed to show the socioeconomic makeup of the study area. Refer to Figure 4-8 through Figure 4-18 for graphic illustrations of the socioeconomic conditions.

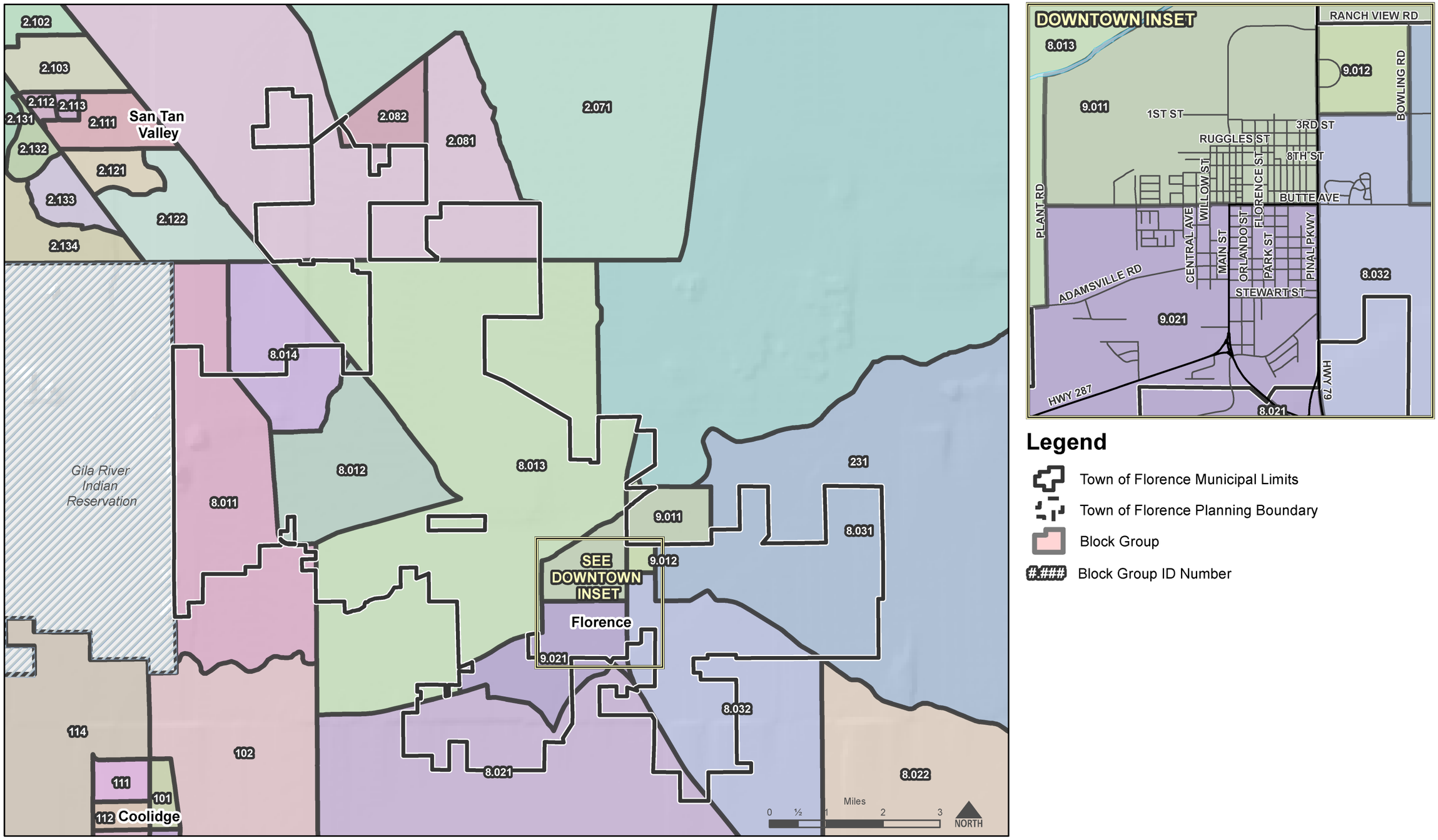


Figure 4-7: Relevant Block Groups

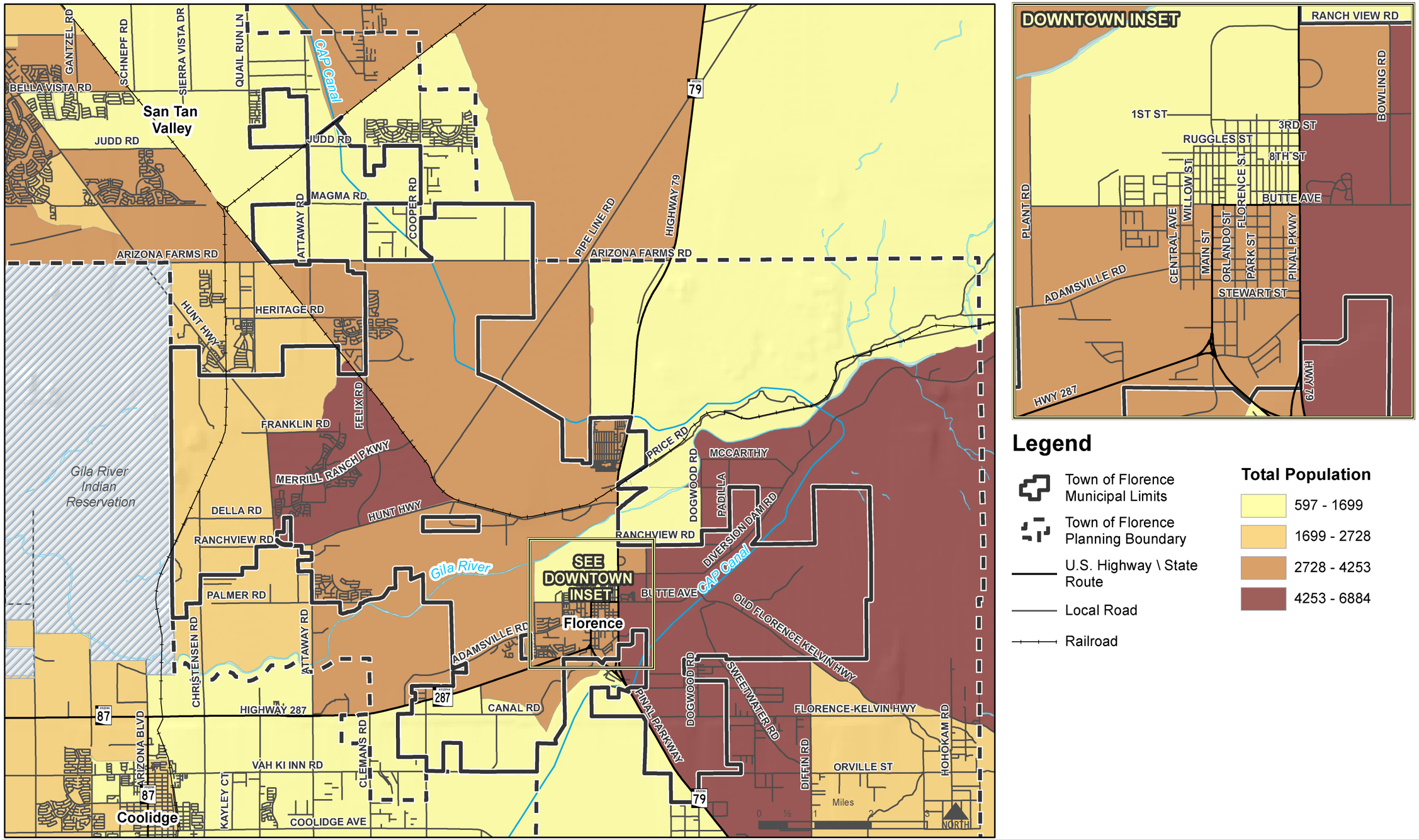


Figure 4-8: Total Population by Block Group

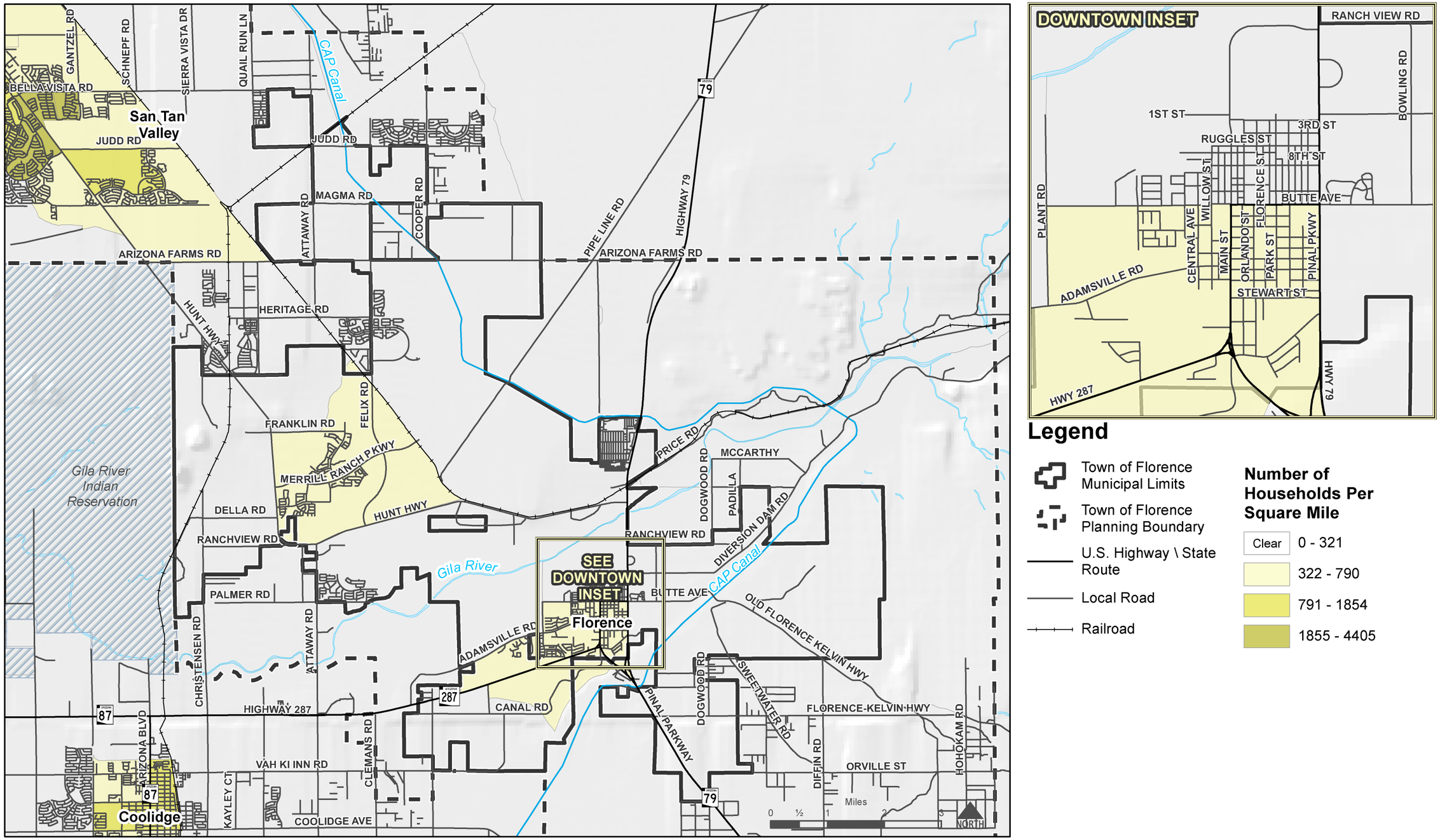


Figure 4-9: Household Density by Block Group

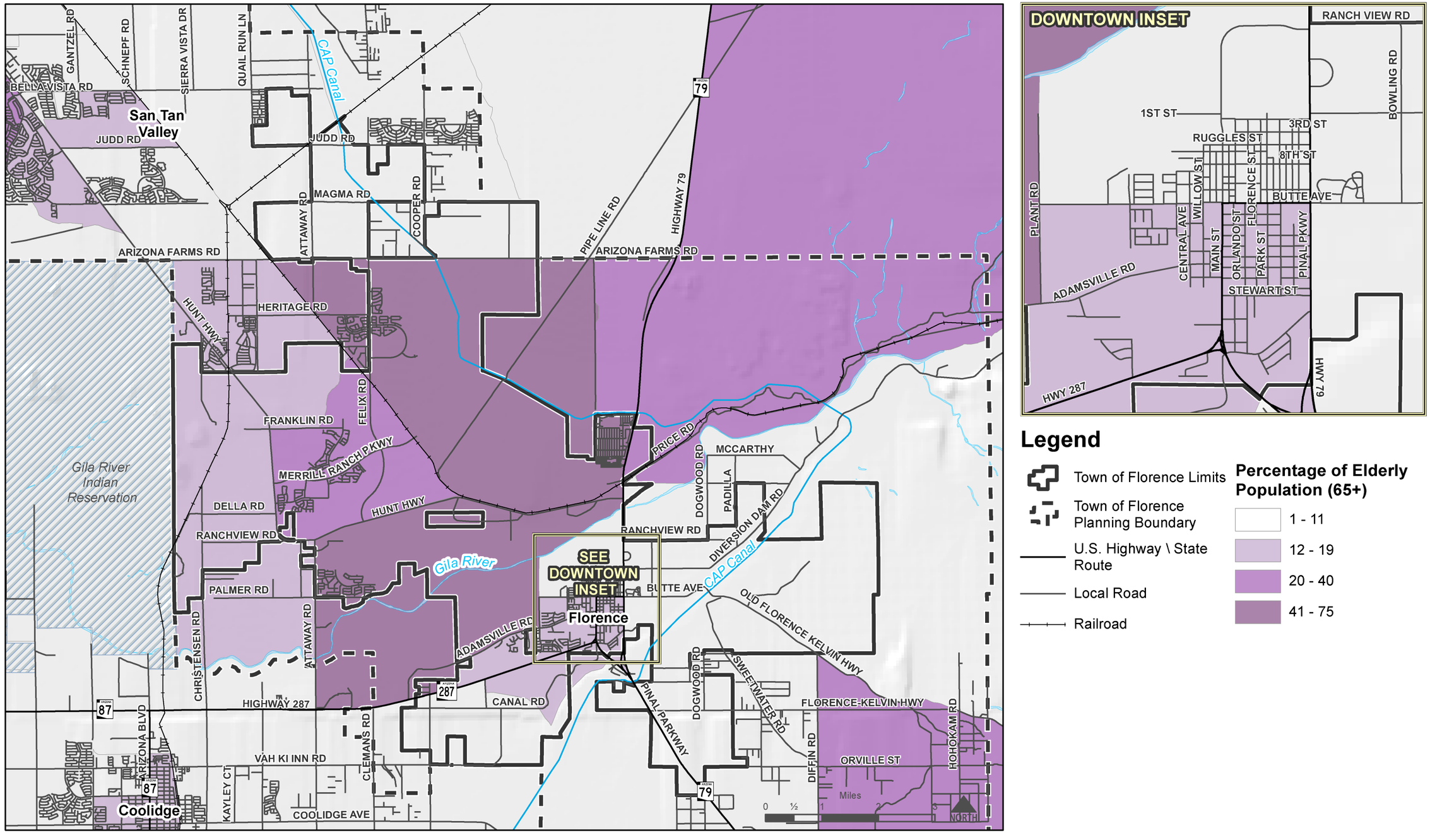


Figure 4-10: Percent of Elderly by Block Group

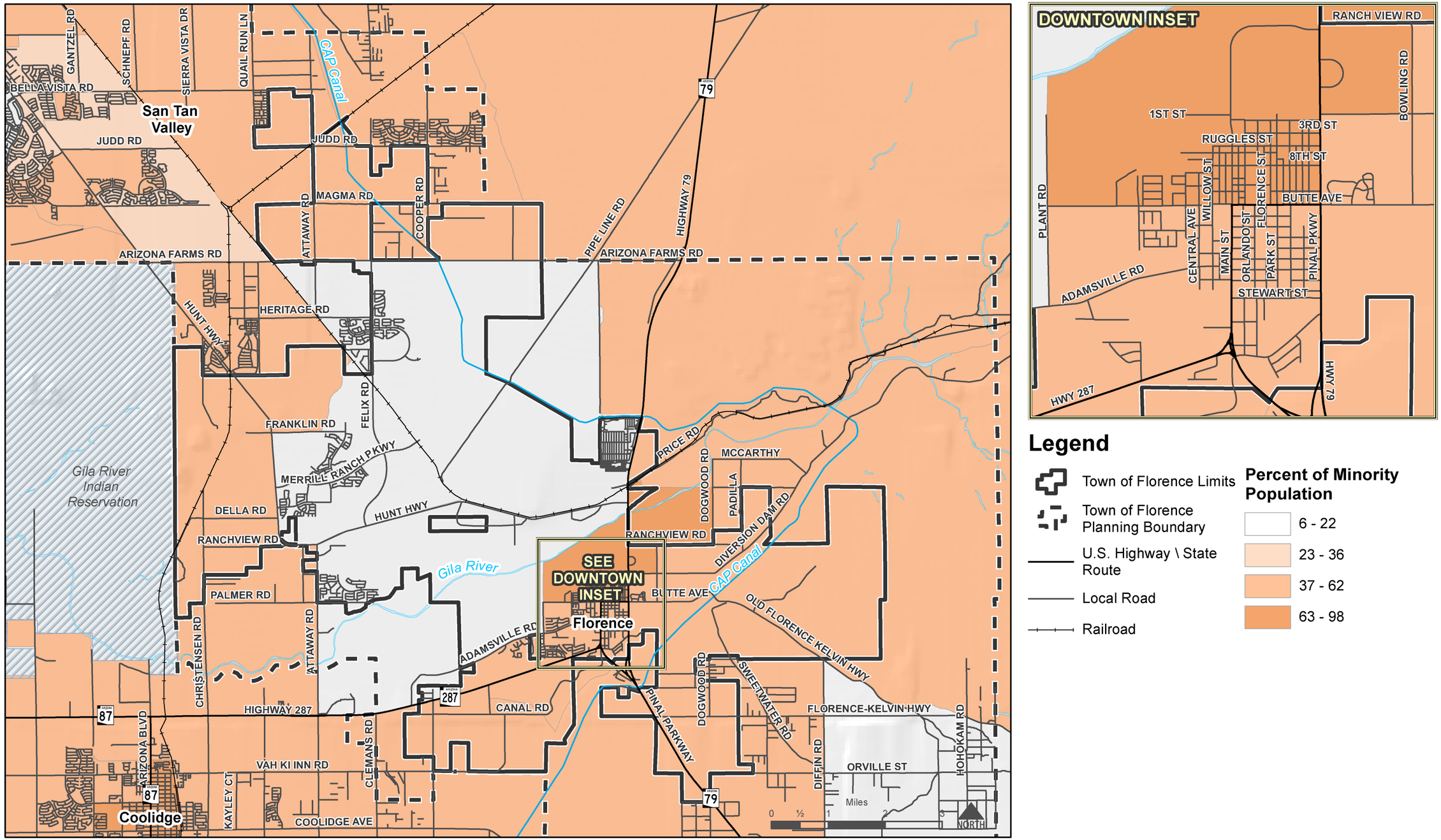
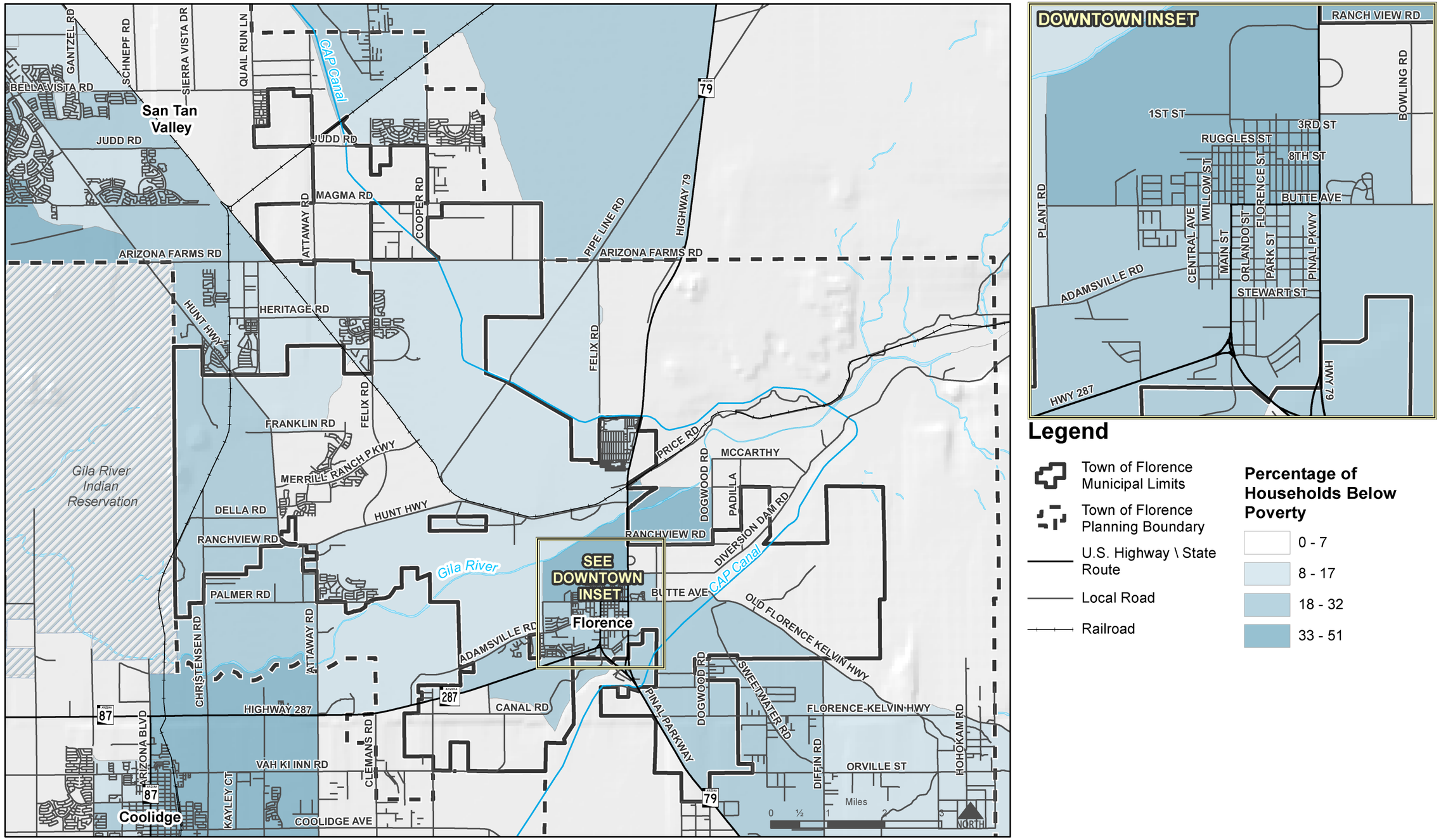


Figure 4-11: Percent Minority Population by Block Group



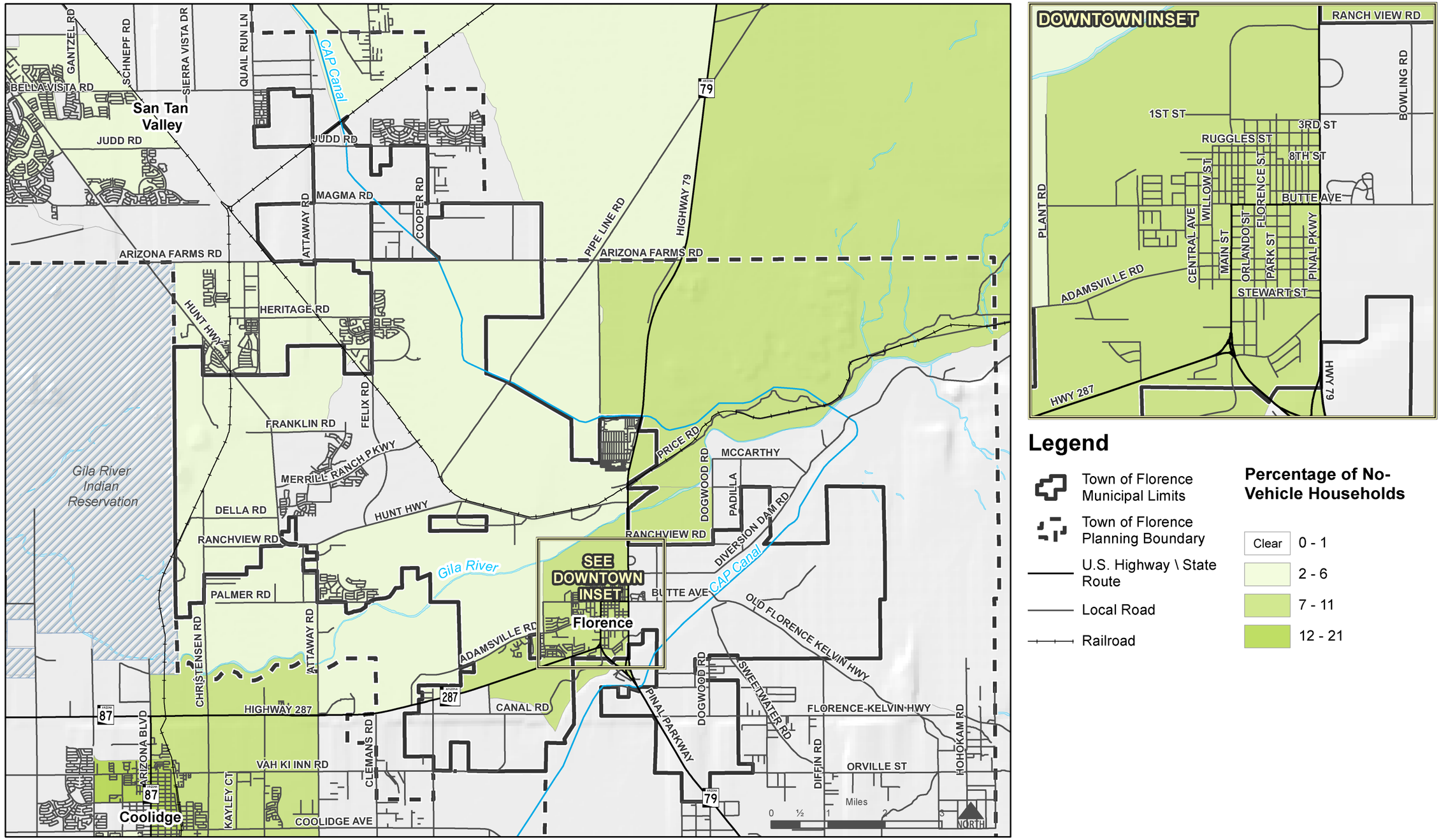
Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- U.S. Highway \ State Route
- Local Road
- Railroad

Percentage of Households Below Poverty

- 0 - 7
- 8 - 17
- 18 - 32
- 33 - 51

Figure 4-12: Percentage of Households Below Poverty by Block Group



Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- U.S. Highway \ State Route
- Local Road
- Railroad

Percentage of No-Vehicle Households

- Clear 0 - 1
- 2 - 6
- 7 - 11
- 12 - 21

Figure 4-13: Percent of No-Vehicle Households by Block Group

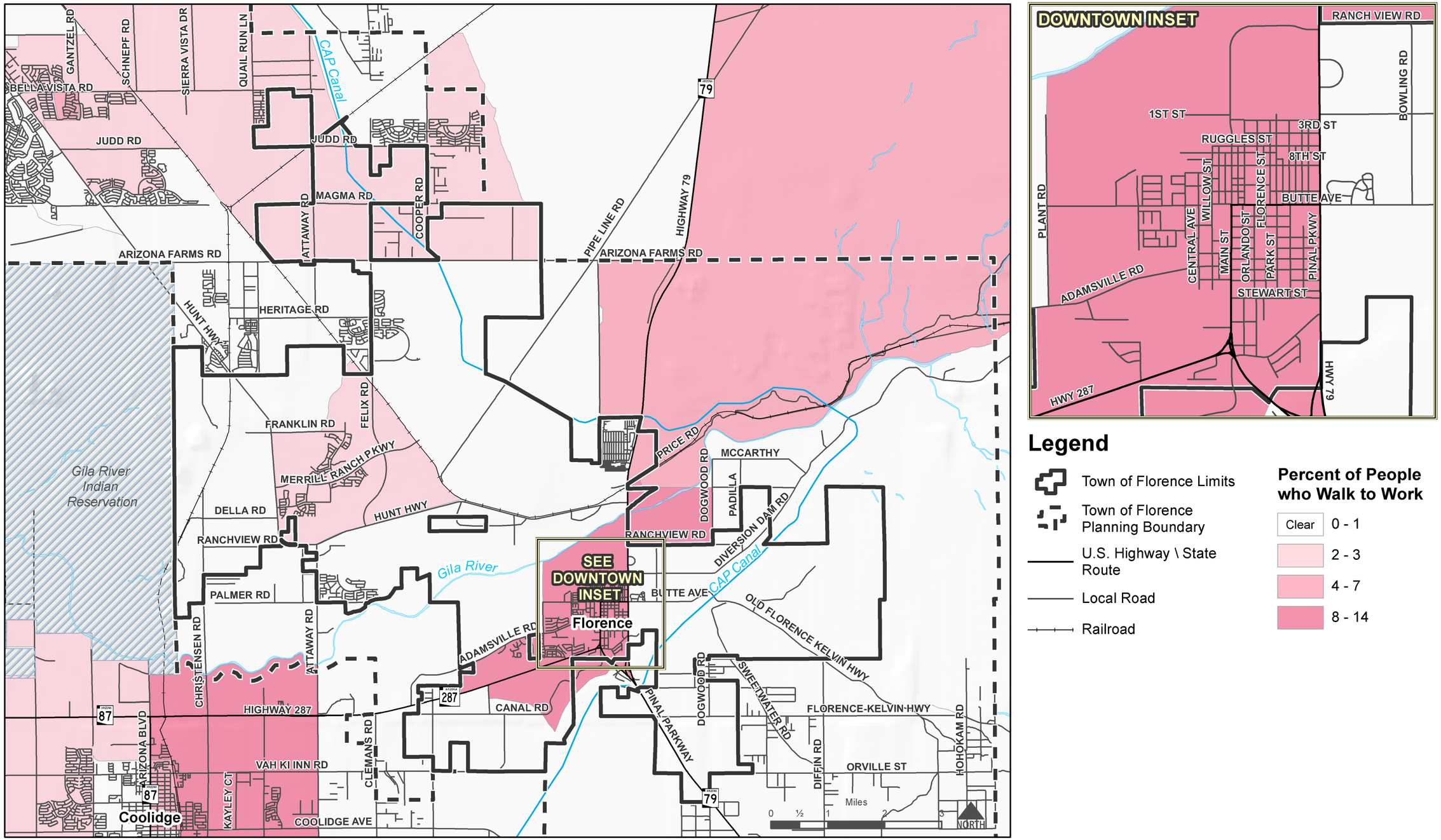


Figure 4-14: Percent of People Who Walk to Work by Block Group

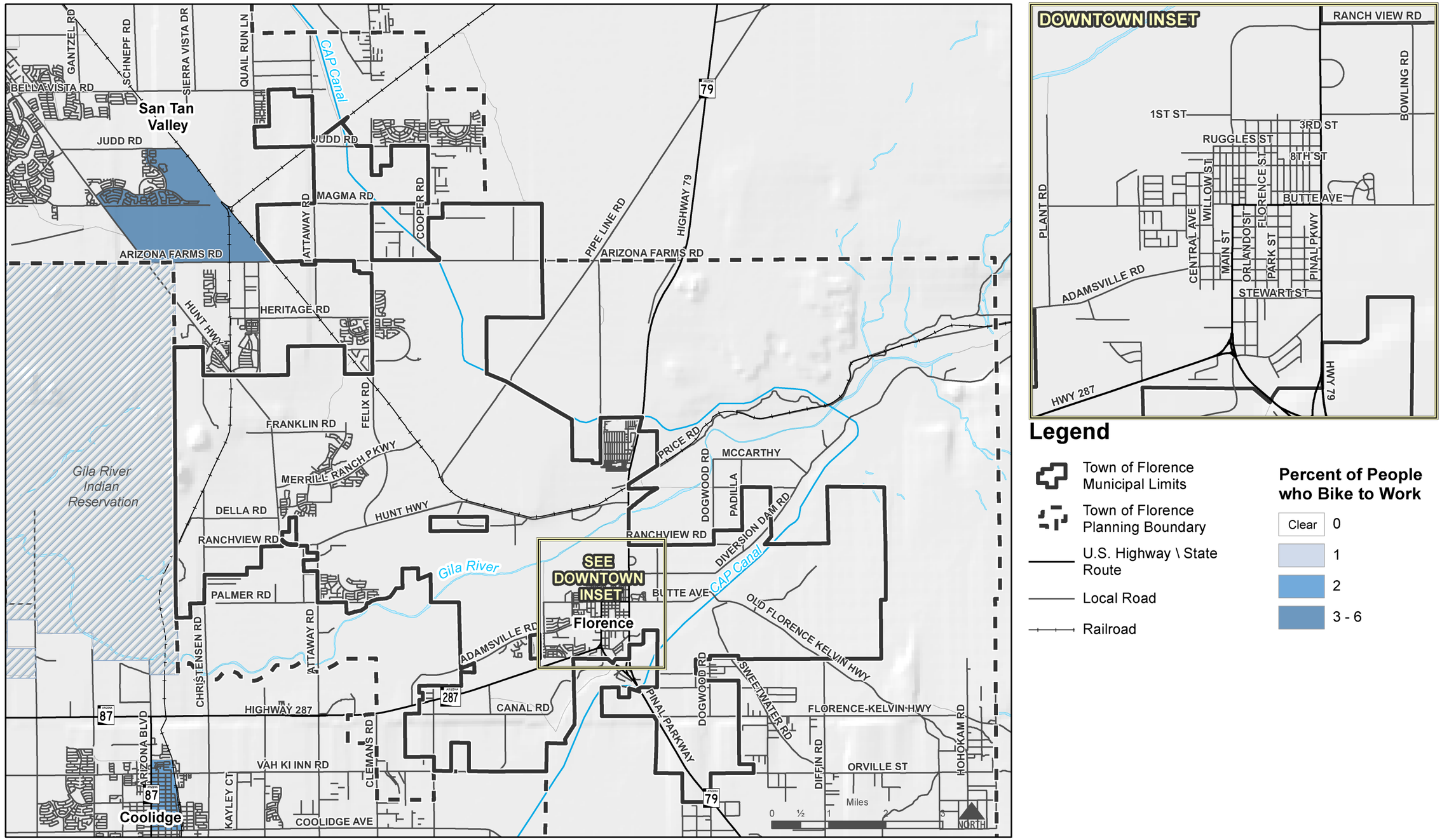


Figure 4-15: Percent of People Who Walk to Work by Block Group

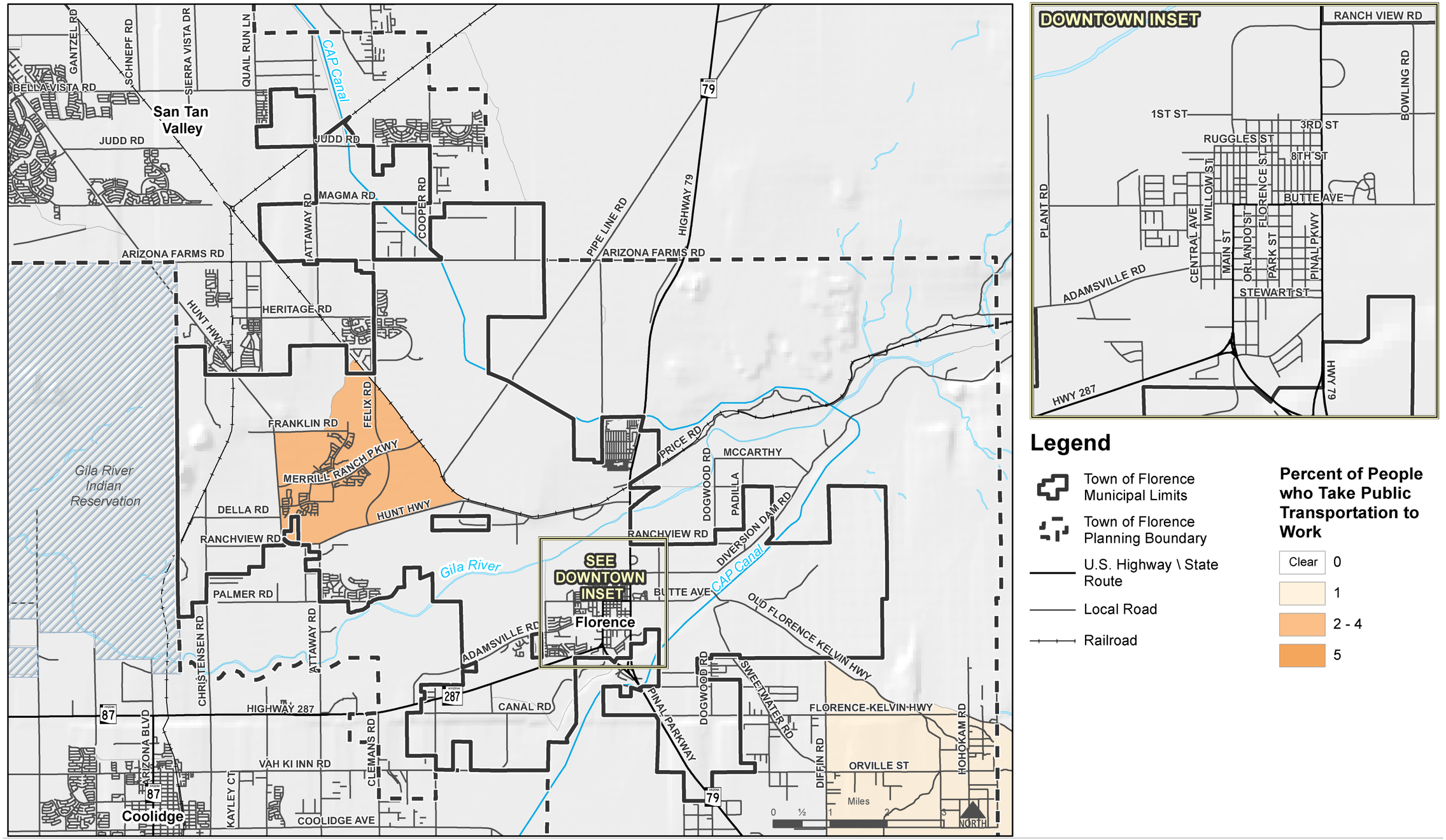


Figure 4-16: Percent of People Who Take Public Transit to Work by Block Group

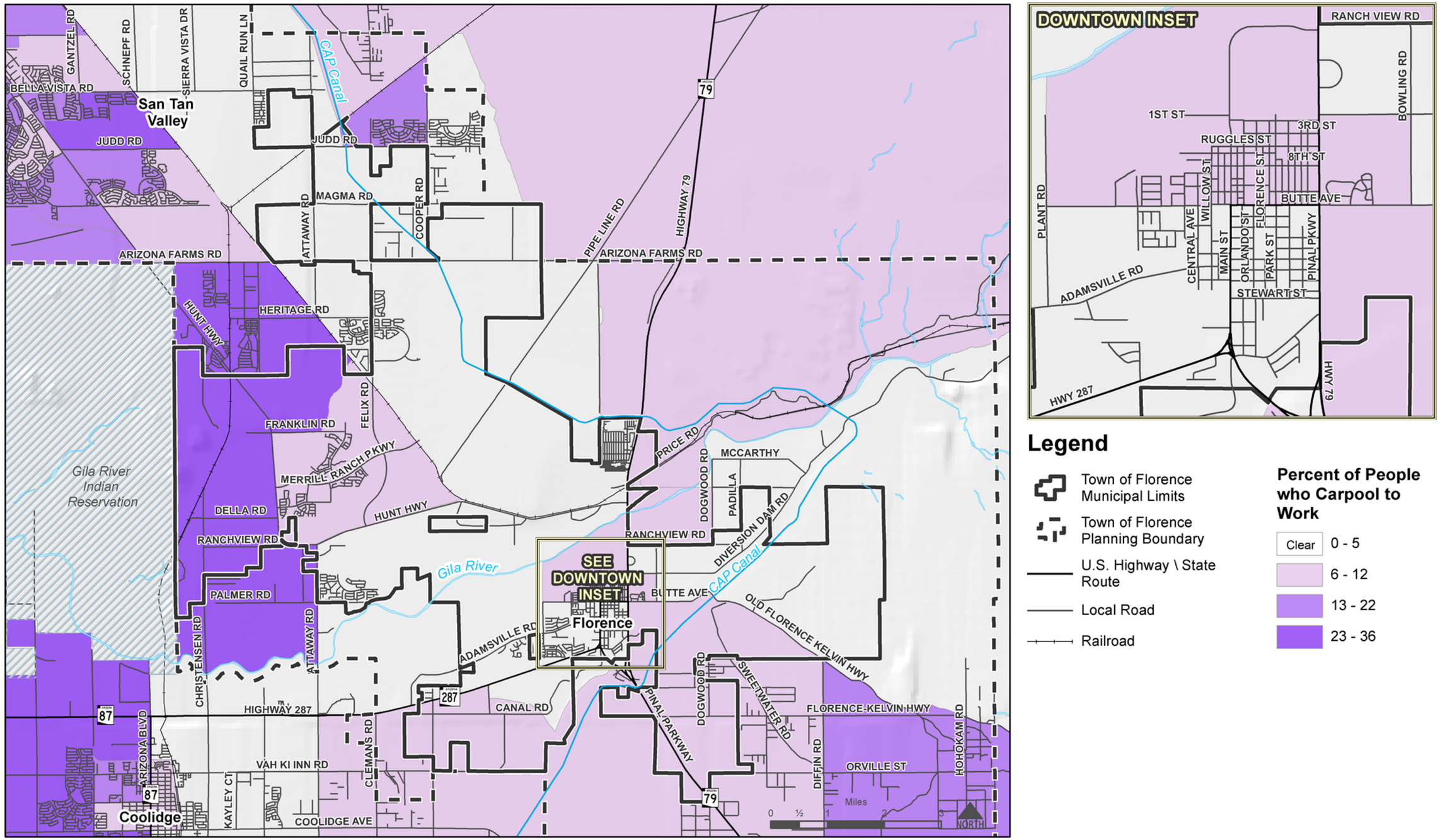


Figure 4-17: Percent of People Who Carpool to Work

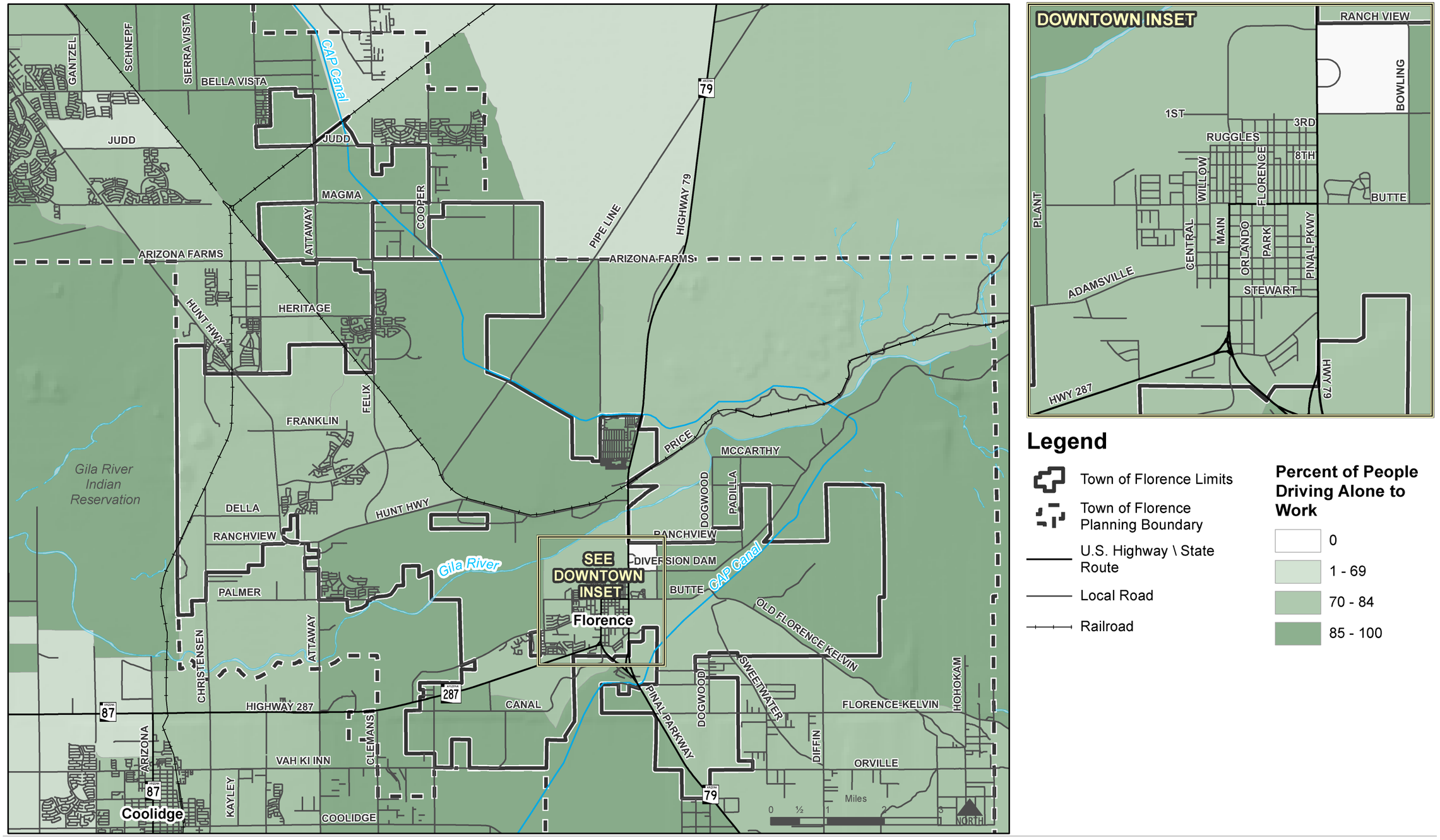


Figure 4-18: Percent of People Who Drive Alone to Work

Employment Overview

There are approximately 3,579 employees over the age of sixteen (16) within the Town, with an estimated 4,717 employees traveling to the Town for work (see Figure 4-20). The three primary employment industries are the service industry (31.3%) including law enforcement and protective services, jobs in the management, business, science, and arts occupations categories (29%), and finally sales and office occupations (18.8%).

The top nine (9) employers within the Town of Florence are displayed in descending order of their number of employees in Table 4-6 and Figure 4-19. in descending order of their number of employees; The State of Arizona, Pinal County, CoreCivic, Citizen Immigration Services, Florence Unified School District, Correctional Services Corp, Town of Florence, United States Department of Justice, and the Bureau of Customs and Border Protection.

Table 4-6: Top 9 Employers in Florence

Top 9 Employers in Florence	Number of Employees
The State of Arizona	1,890
Pinal County	1,340
CoreCivic	740
Citizen Immigration Services	300
Florence Unified School District	270
Correctional Services Corp	230
Town of Florence	160
United States Department of Justice	100
Bureau of Customs and Border Protection	90

Source: Maricopa Association of Governments

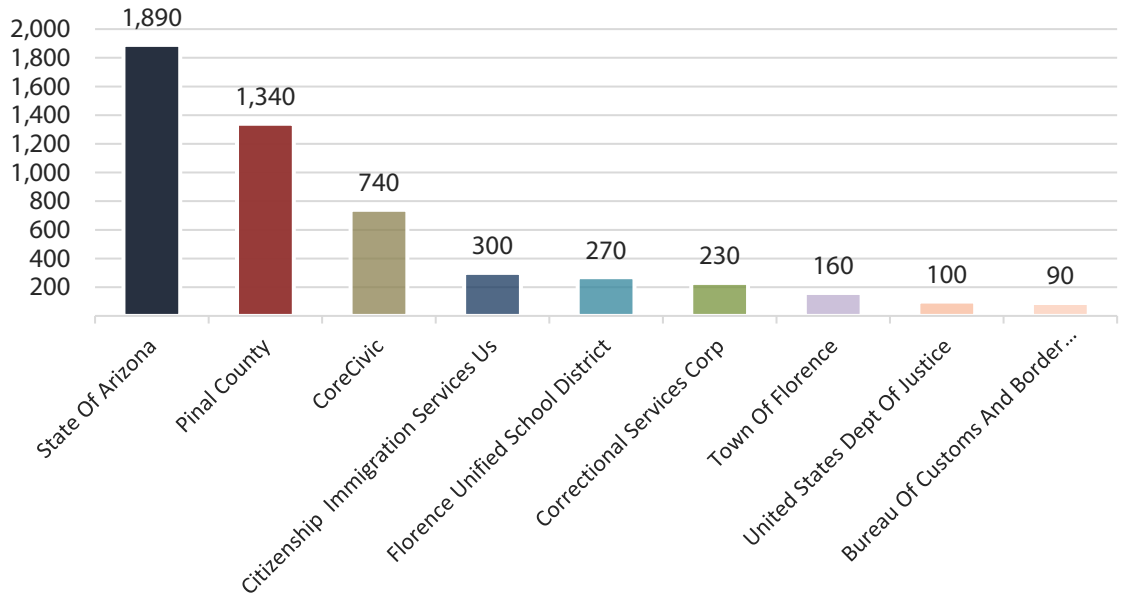


Figure 4-19: Top 9 Employers in Florence

Table 4-7: Employment Industries

Civilian Employed Population 16 Years and Over	Town of Florence Percent	Pinal County Percent	Maricopa County Percent
Agriculture, forestry, fishing and hunting, and mining	3.52	3.38	0.65
Construction	2.65	6.1	6.78
Manufacturing	4.58	9.37	7.64
Wholesale trade	1.09	1.78	2.6
Retail trade	8.8	11.75	12.32
Transportation and warehousing, and utilities	5.48	5.01	5.15
Information	2.24	1.67	1.96
Finance and insurance, and real estate and rental and leasing	3.86	6.34	9.79
Professional, scientific, and management, and administrative and waste management services	8.6	9.85	13.11
Educational services, and health care and social assistance	21.77	21.31	21.09
Arts, entertainment, and recreation, and accommodation and food services	8.77	11.06	10.01
Other services, except public administration	2.15	4.13	4.92
Public Administration	26.49	8.25	3.98
Total	100	100	100

Source: 2012- 2016 American Community Survey Data

Prison Industry

The prison industry consists of nine facilities with varying prisoner capacities and levels of security. All facilities are located within Downtown Florence, except for the Eyman facility located on the east side of Town. The number of incarcerated individuals, approximately 16,432 as of 2017, has dropped significantly since 2010 - decreasing nearly twenty-six (26) percent. Here are the following prison complexes in Florence:

- Pinal County Jail
- Arizona State Prison Complex- Eyman Facility
- Arizona State Prison Complex- Florence
- Central Arizona Detention Center
- Florence Correctional Center
- Pinal County Juvenile Detention Center
- Arizona State Prison- Florence South Unit
- Florence Prison Complex
- US Department of Homeland Security- Florence Detention Center

Commute Patterns

According to the 2015 ACS, an estimated 4,717 employees that work within the Town of Florence are non-residents commuting from outside of Florence. Conversely, 2,509 Florence residents commute to their employment outside of the Town of Florence. Approximately 443 Florence residents live and work within the Town.

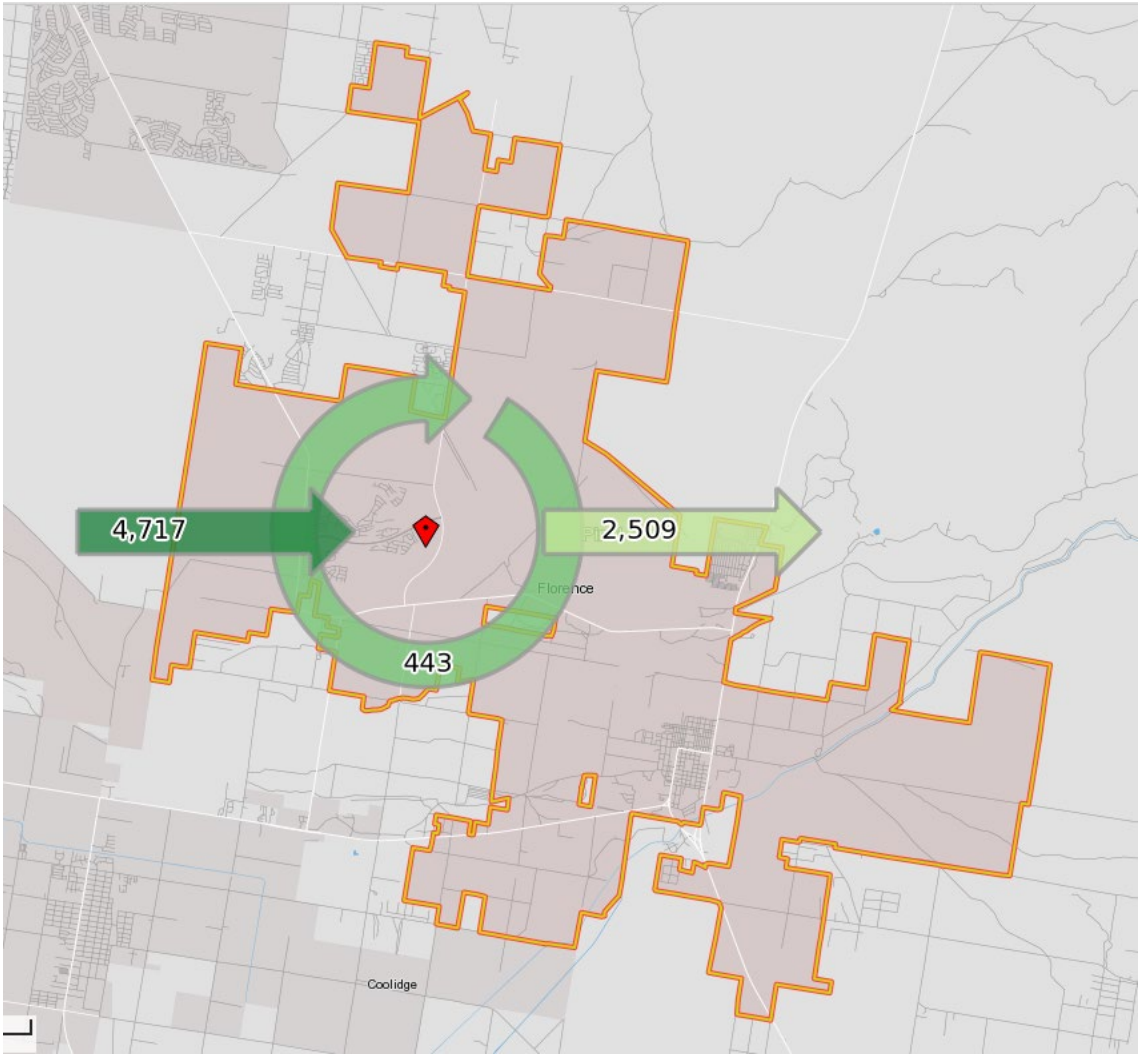


Figure 4-20: Inflow/Outflow Job Counts (2015)

5 Existing Transportation Network

The current status/condition of the major components of the existing transportation system are documented and summarized in this section. Major elements include bridges, pavement conditions, roadway operations and performance, and non-motorized modes of transportation.

5.1 Roadway Network

Town of Florence planning area is comprised of a network of approximately 534 miles of paved and unpaved roadways. Florence is currently being served by two State Routes, SR 287 and SR 79. Inter-regional access is provided by Interstate 10 (I-10), located twenty-seven (27) miles to the west. I-10 provides access to Florence through SR 287 and SR 387. Please refer to Figure 5-1 and Figure 5-2 for illustration of the number of existing lanes and functional classifications for each of the roadways described below. Significant roadways serving Florence include:

- SR 287, the "Florence-Coolidge Highway", is the State Highway that provides local and regional access between Florence and Coolidge, Casa Grande and the I-10.
- SR 79 is the State Highway that provides a connection from the Town of Florence north to US 60 at Florence Junction, connecting residents to the Town of Superior, Apache Junction, and the greater Metro-Phoenix. SR 79 also provides southern access to the Towns of Oracle, Oracle Junction and Catalina, the Catalina State Park, and ultimately the City of Tucson.
- SR 79B is the only active State Business Route within Arizona, SR 79B provides access to the Historic Downtown and business district, as well as the Pinal County Government Complex, Courthouse, Historical Museum, Library and various local businesses.
- Hunt Highway is a Town of Florence maintained roadway (within the Town limits) and serves as a major route between Town of Florence (especially Merrill Ranch) and the east valley communities of Queen Creek, Apache Junction, and San Tan Valley.
- Arizona Farms Road is a Town of Florence maintained roadway that runs east to west and serves as a major connector between SR 79 and Hunt Highway.
- Felix Road is a Town of Florence maintained roadway that runs north to south and currently exists between Hunt Highway and Magma Road.
- Adamsville Road runs parallel to SR 79 and serves as an alternate to SR 79 from Downtown Florence during special events or traffic control. It also serves as a connection to the historic Adamsville area.
- Butte Avenue/ The Old Florence-Kelvin Highway generally runs east-west through Downtown Florence. East of the Central Arizona Project (CAP) canal, Butte Avenue turns into the Old Florence- Kelvin Highway. Old Florence- Kelvin Highway is a highly traveled roadway as it is the entry point into the Arizona Department of Corrections Eyman Prison Facility.

- The Florence-Kelvin Highway is a Town of Florence roadway that runs east-west between SR 79 and Old Florence-Kelvin Highway. Florence-Kelvin Highway serves as an alternate route to the Eyman Prison Facility. Florence-Kelvin Highway also serves as a connection between Town of Florence and SR 177 in eastern Pinal County.
- Valley Farms Road is a Town of Florence maintained roadway that runs north-south between SR 287 and Cactus Forest Road.

In addition, the following roadway sections remain unpaved:

- Heritage Road from Hunt Highway to Mitchell Trail (Apollo Drive), Gecko Ranch Road to Cobblestone Drive, and Felix Road to SR 79,
- Judd Road from Hunt Highway to Quail Run Lane,
- East Butte from Diffin Road to Florence Kevin Highway,
- Christensen Road from Reynolds Road to 3500' south of Palmer Road,
- Canal Road from Valley Farms Road to 1 mile east of Hiscox Road,
- Hiscox Road from Canal Road to SR 287,
- Peacock Road from Butte Avenue to 600' to the north, and
- Felix Road north of Arizona Farms.

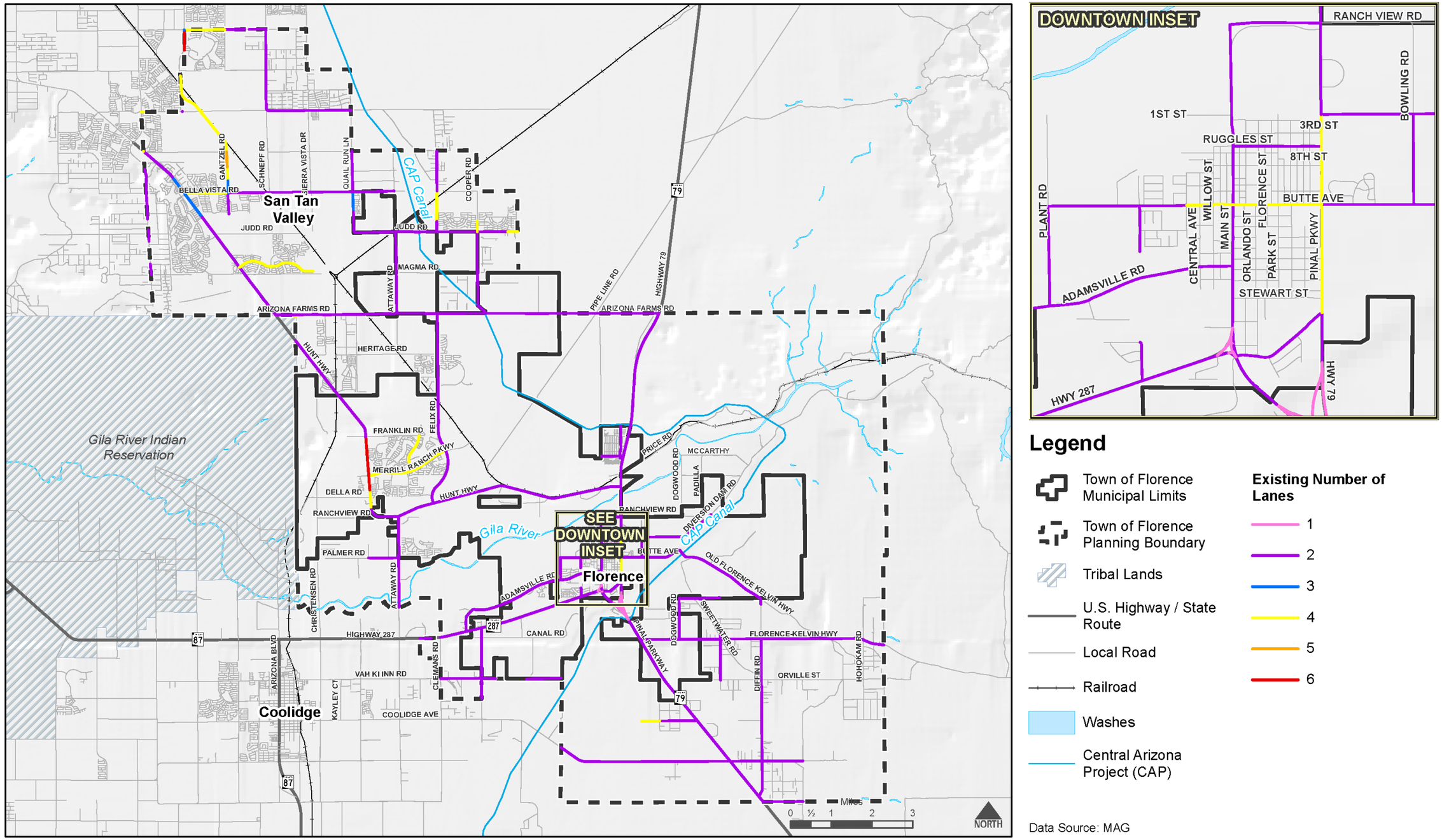


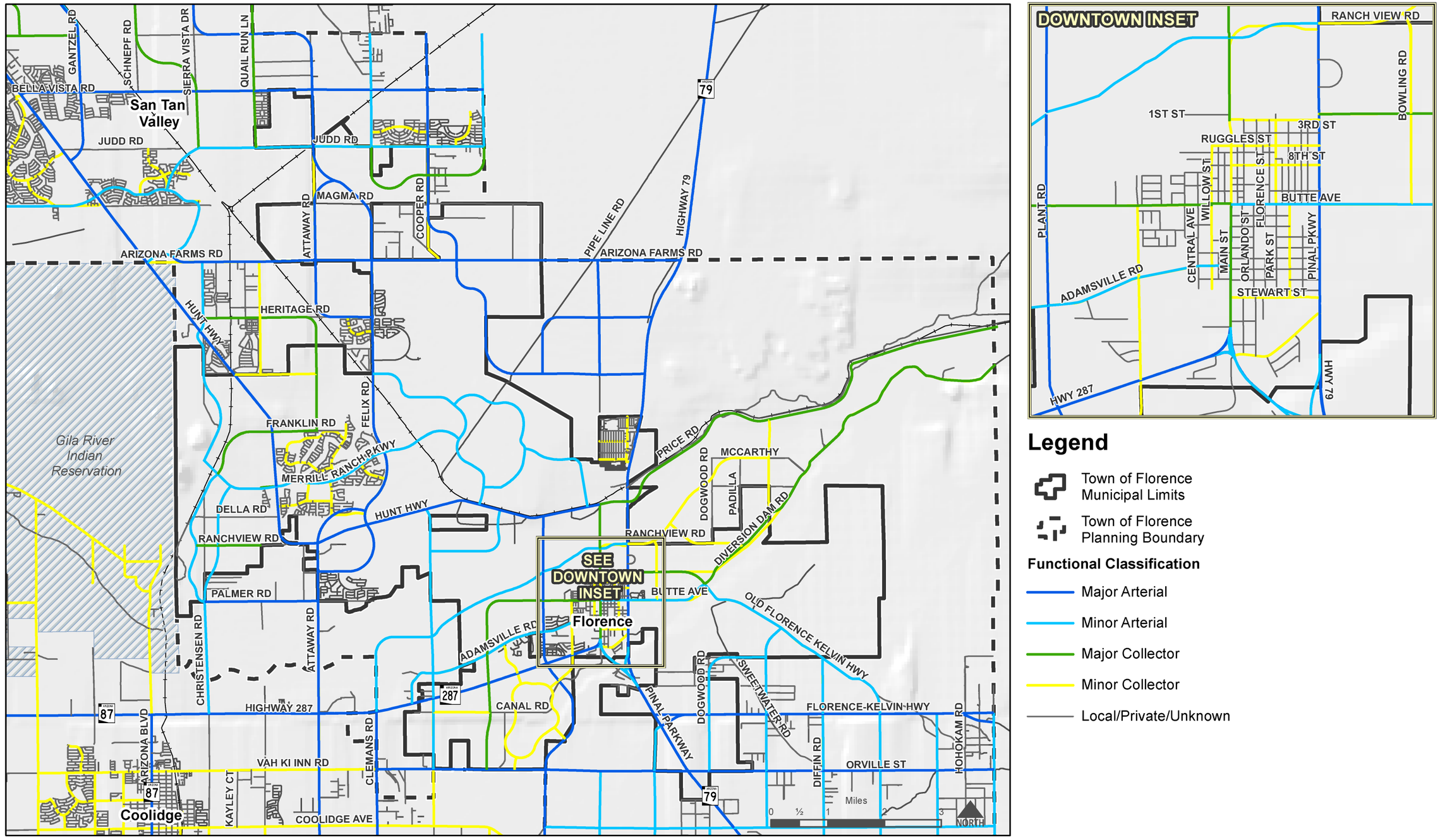
Figure 5-1: Existing Number of Lanes

5.2 Functional Classifications

Functional classification is the grouping of streets and highways into classes according to the character of service in which they are intended to provide as it relates to mobility, access and trip length. Functional classification is used by the planners and engineers to establish a roadway's design standards, speed, capacity, access management features, and land use development. Functional classification also impacts a roadway's eligibility for federal transportation funds for roadway improvements and maintenance.

The existing Florence General Plan represents the recommended functional classifications that were derived from the Coolidge-Florence Transportation Planning Study of 2008. The General Plan designated functional classifications for roadways in Florence currently include:

- Interstate - reference to I-10 outside the Town limits
- Freeway - reference to the future North-South Corridor
- Principal Major Arterial - proposed six-lane facilities along the one-mile grid system serving major local and regional traffic. Examples include SR 79, SR 287, Hunt Highway, Felix Road, Attaway Rd. and others.
- Minor Arterial - designed to serve similar mobility needs as Major Arterials but are four (4)-lane facilities. Examples include Butte Road, Adamsville Road, Merrill Ranch Parkway and the Old Florence-Kelvin Highway.
- Major Collector - these roadways can be configured as a four (4)-lane road or a two (2)-lane road with center turn lane. Examples include Diversion Dam Road, Main Street, and Price Road.
- Minor Collector - represents two (2)-lane roads with no center turn lane that typically facilitate connection between internal neighborhoods and adjacent arterial roadways. Examples include Ranch view Road, and Bowling Road.
- Local Streets - local streets provide access directly to residential properties and are not designed to accommodate through traffic. Examples include Orlando Street, Brady Street, and others.



Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary

Functional Classification

- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local/Private/Unknown

Figure 5-2: Roadway Functional Classification (Per 2020 General Plan)

The Regionally Significant Routes for Safety and Mobility (RSRSM) Study (2008) serves as a guide for the County and other stakeholders to implement, fund, and preserve the right-of-way of regionally significant routes (RSRs). Based on the RSRSM study, two classifications for regionally significant routes were identified: RSR Parkway and RSR Principal Arterial. RSR Parkway is a six (6)-lane roadway with a planned capacity of 88,000 vehicles per day. RSR Principal Arterial is a six (6)-lane roadway with a planned capacity of 50,000 vehicles per day. Regionally significant routes within the Town of Florence are shown in Figure 5-3.

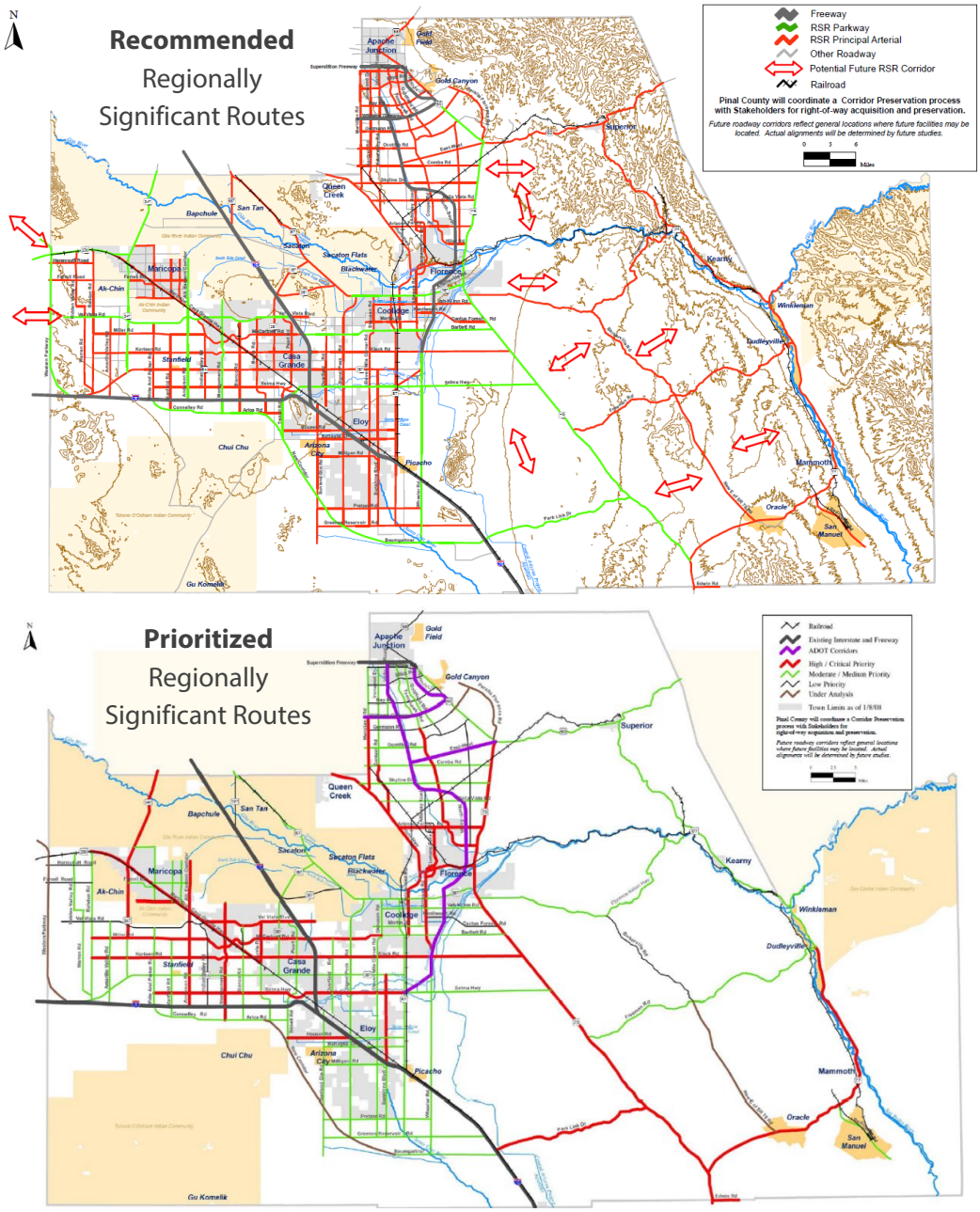


Figure 5-3: Regionally Significant Routes

The Federal Highway Administration (FHWA) also has guidelines for federal functional classification of roadways. The FHWA functional classification groups within the study area are minor arterial, major collector, minor collector and local road. In general, arterials provide a high level of mobility for the travelling public with minimal allowance for access, while collectors and local roads provide for residential and non-residential access. FHWA guidelines also distinguish between rural and urban roadways. Based on FHWA, "rural" is termed as an area with population of less than 5,000, whereas "urban" is termed as an area with population 5,000 or more. The roadways must have a federal functional classification for it to be eligible and/or utilize federal funds. The roadways within Town of Florence planning area that currently have federal classification are shown in Figure 5-2. Based on the 2017 demographics, the population of Florence is greater than 25,000. Therefore, Town of Florence roadways shall be classified as "urban" roadways according to FHWA functional classification.

5.3 Traffic Signals

The usage of traffic control devices is the primary method of ensuring orderly traffic flow at intersections and along roadways. Many of intersections within the study area are either free flow or stop controlled. Traffic signals exist at the following intersections within the study area:

1. Hunt Highway and Bella Vista Road
2. Bella Vista Road and Star Dust Road
3. Bella Vista Road and Gantzel Road
4. Hunt Highway and Gantzel Road
5. Hunt Highway and Florence Hospital Drive
6. Hunt Highway and Merrill Ranch Parkway
7. Hunt Highway and Fire Station #2
8. Hunt Highway and Attaway Road
9. SR 79 and Diversion Dam Road
10. SR 79 and SR 79B
11. SR 79B and Butte Avenue
12. Butte Avenue and Pinal Parkway

5.4 Existing Traffic Conditions

Traffic volume information serves to indicates existing roadway and/or intersection capacity and operational needs levels-of-service.

Available average daily traffic (ADT) counts obtained from the Town of Florence and supplemental counts obtained from the Maricopa Association of Governments (MAG) and ADOT Traffic Data Management System (TDMS) website were used to calculate the existing roadway level-of-service (LOS) within the study area. Since these traffic volumes only represent a small portion of roadway segments over a 24-hour period within the Town of Florence, traffic volume data from MAG Travel Demand Model (TDM) was obtained to calculate the roadway segment LOS for the entire Town based on the average annual daily traffic volumes (AADT). Based on discussions with MAG staff, the latest existing validated traffic counts are for the year 2015. Therefore, the output from MAG 2015 TDM is used to analyze the existing traffic conditions within the Town of Florence.

The data obtained from the MAG TDM includes the segment average weekday daily traffic volumes (AWDT), number of lanes, functional classification of the roadway and length of the roadway segment. A factor of 0.92 was applied to the AWDT to calculate the AADT on the roadway segments based on discussions with MAG staff. Figure 5-4 shows the 2015 AADT within the Town of Florence based on the MAG 2015 TDM.

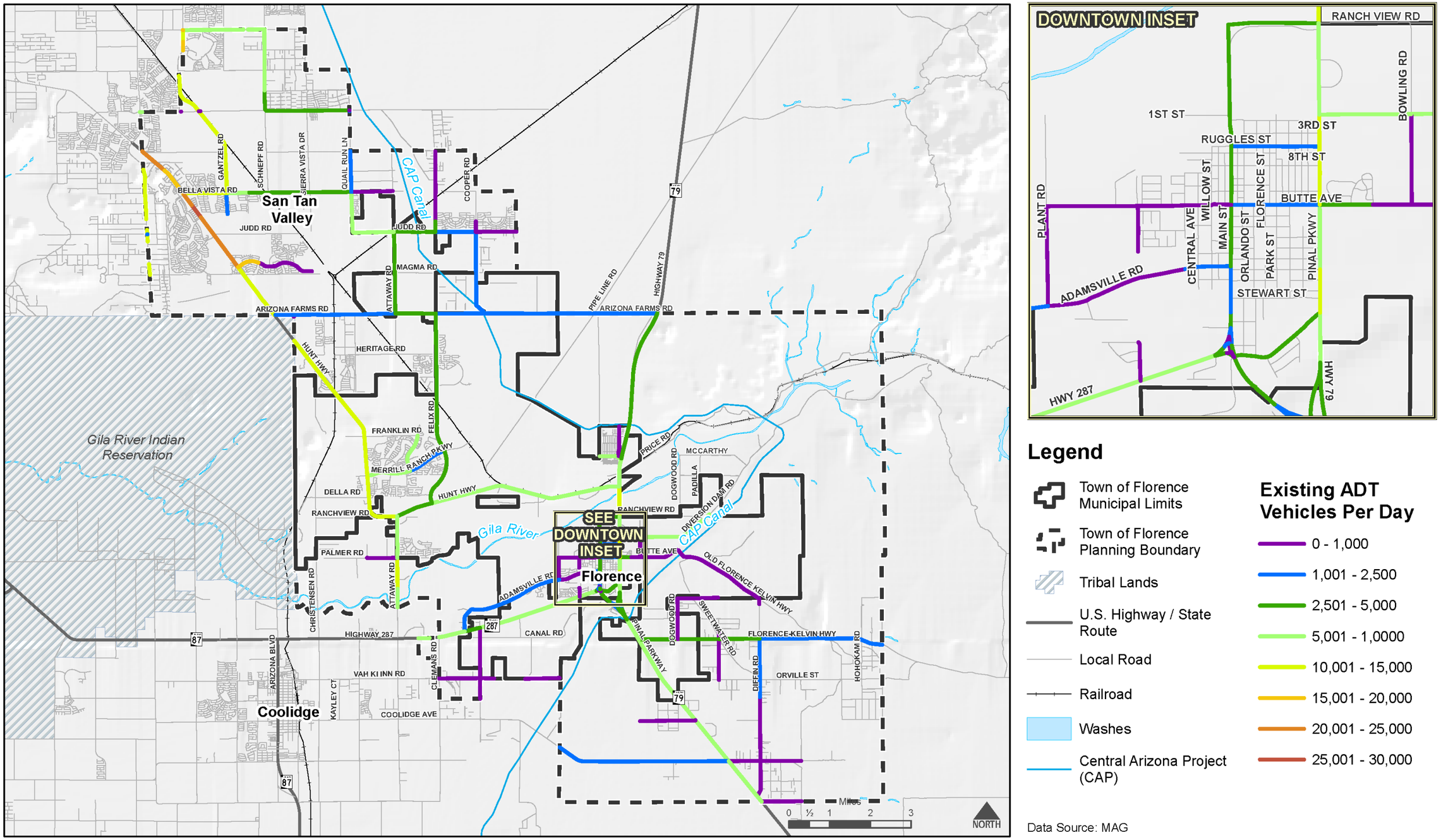


Figure 5-4: Roadway Segment Existing Average Daily Traffic Counts Volume (Existing Traffic Volume)

5.5 Roadway Segment Level-of-Service

For a planning level analysis, level-of-service (LOS) is determined based on the ratio of the traffic volume on the roadway to the capacity of the roadway. Table 5-1 below provides a general overview and illustration of the varying levels of service per the Transportation Research Board Highway Capacity Manual.

Table 5-1: Roadway Level-of-Service Characteristic Matrix

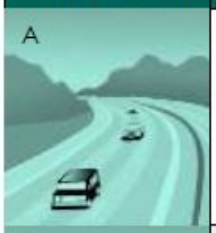
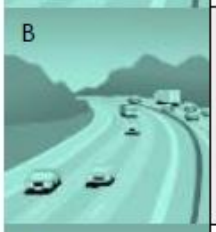
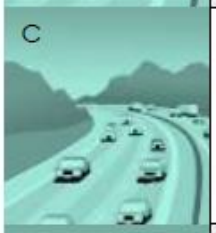
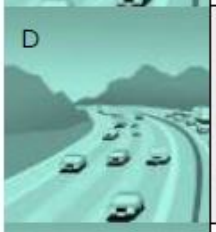
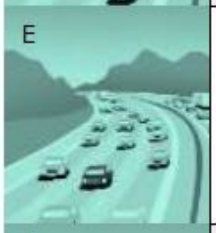
Level-of-Service	Characterized by TRB Highway Capacity Manual as:
A 	Primarily free-flow speed. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85 percent of the base free-flow speed.
B 	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67 percent and 85 percent of the base free-flow speed.
C 	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50 percent and 67 percent of the base-flow speed.
D 	Less stable condition in which small increases in flow may cause substantial increases in delay and decrease in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40 percent and 50 percent of the base free-flow speed.
E 	Unstable operation and significant delay. Such operation may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30 percent and 40 percent of the base free-flow speed.
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.

Figure 5-5 shows the 2015 roadway segment LOS within the Town of Florence based on the data obtained from MAG. Based on the 2015 travel demand daily traffic volumes, all the roadways within the Town of Florence are currently operating at a LOS "D" or better with the following exceptions (neither are within Town limits).:

- Hunt Highway between Stone Creek Drive and Paseo Fino Way – LOS "E", and
- Hunt Highway between Red Mountain Way and Copper Mine Road – LOS "E"

5.6 Existing Intersection Level-of-Service

Peak hour turning movement counts for the year 2017 were obtained from the Anthem at Merrill Ranch traffic study completed by YS Mantri & Associates. Morning and evening turning movement counts were available at the following intersections:

1. Hunt Highway and Arizona Farms Road
2. Arizona Farms Road and Attaway Road
3. Felix Road and Arizona Farms Road
4. Pinal Parkway and Arizona Farms Road
5. Hunt Highway and Merrill Ranch Parkway
6. Felix Road and Merrill Ranch Parkway
7. Hunt Highway and Attaway Road
8. Hunt Highway and Felix Road
9. Hunt Highway and Pinal Parkway
10. Attaway Road and Florence-Coolidge Highway

LOS can be calculated for roadway segments, intersections, and freeway mainline lanes and ramps. LOS estimates also can be calculated for different periods, including daily conditions and peak hour conditions. The LOS for roadway segments within the study area is discussed in the section titles Roadway Section Level-of-Service of this report. The LOS analysis discussed in this section focuses the intersection LOS during the peak hours at the intersections listed above. LOS based on peak hour turning movement volumes and anticipated delay is discussed in the following section.

The delay and LOS are calculated for the intersection and each approach. Table 5-2 on the following page lists the LOS criteria for signalized and unsignalized intersections as stated in the HCM manual.

Table 5-2: Level-of-Service Criteria at Signalized & Unsignalized Intersections

Level-of-Service	Average Control Delay	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Peak hour intersection LOS for the above listed intersections was obtained from the Anthem at Merrill Ranch Traffic Impact Study. Table 5-3 depicts the AM and PM peak hour LOS as obtained from the Anthem at Merrill Ranch Traffic Study.

Table 5-3: Level-of-Service Results

Intersection	Approach	2017 AM Peak		2017 PM Peak	
		LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
Felix Road and Merrill Ranch Parkway	Northbound	A	3.1	A	4.5
	Southbound	A	0.0	A	0.0
	Eastbound	A	9.4	A	9.9
	Westbound	-	-	-	-
	Overall	**A***	**4.6**	**A***	**4.9**
Attaway Road and Hunt Highway	Northbound	C	24.0	C	32.5
	Southbound	-	-	-	-
	Eastbound	C	25.9	C	20.3
	Westbound	E	57.2	C	22.0
	Overall	**C**	**30.1**	**C**	**25.9**
Hunt Highway and Felix Road	Northbound	-	-	-	-
	Southbound	B	10.3	B	10.4
	Eastbound	A	0.5	A	1.8
	Westbound	A	0.0	A	0.0
	Overall	**A***	**2.7**	**A***	**1.9**
Pinal Parkway and Hunt Highway	Northbound	A	1.8	A	2.7
	Southbound	A	0.0	A	0.0
	Eastbound	C	24.2	C	21.8
	Westbound	-	-	-	-
	Overall	**A***	**6.3**	**A***	**4.2**
Attaway Road and Florence/Coolidge Highway	Northbound	B	18.1	B	14.5
	Southbound	B	18.3	B	16.7
	Eastbound	B	19.1	C	24.1
	Westbound	C	21.8	C	23.2
	Overall	**B**	**19.4**	**C**	**21.3**
Hunt Highway and Arizona Farms Road	Northbound	A	0.0	A	0.0
	Southbound	A	1.4	A	1.2
	Eastbound	-	-	-	-
	Westbound	C	18.0	C	22.5
	Overall	**B***	**2.3**	**C***	**3.0**
Arizona Farms Road and Attaway Road	Northbound	-	-	-	-
	Southbound	B	11.3	B	10.7
	Eastbound	A	2.2	A	0.8
	Westbound	A	0.0	A	0.0
	Overall	**A***	**4.8**	**A***	**3.4**
Felix Road and Arizona Farms Road	Northbound	B	11.7	B	12.2
	Southbound	-	-	-	-
	Eastbound	A	0.0	A	0.0
	Westbound	A	2.0	A	1.9
	Overall	**A***	**3.5**	**A***	**3.2**
Pinal Parkway and Arizona Farms Road	Northbound	A	1.8	A	3.5
	Southbound	A	0.0	A	0.0
	Eastbound	B	13.3	B	13.6
	Westbound	-	-	-	-
	Overall	**A***	**3.8**	**A***	**3.4**
Hunt Highway and Merrill Ranch Parkway	Northbound	A	2.0	A	2.0
	Southbound	A	2.3	A	2.2
	Eastbound	-	-	-	-
	Westbound	B	19.8	C	26.0
	Overall	**A**	**3.9**	**A**	**4.6**

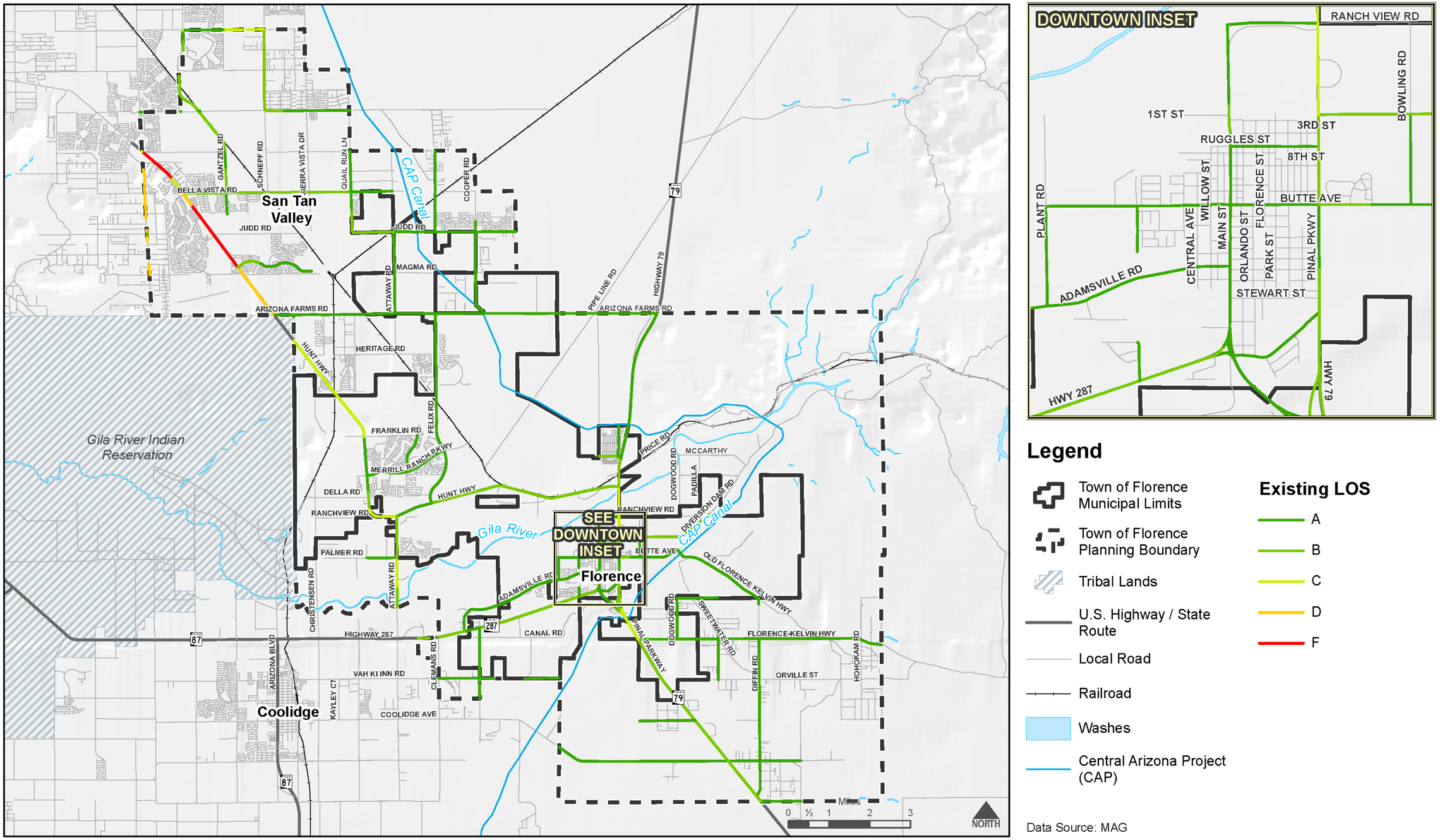


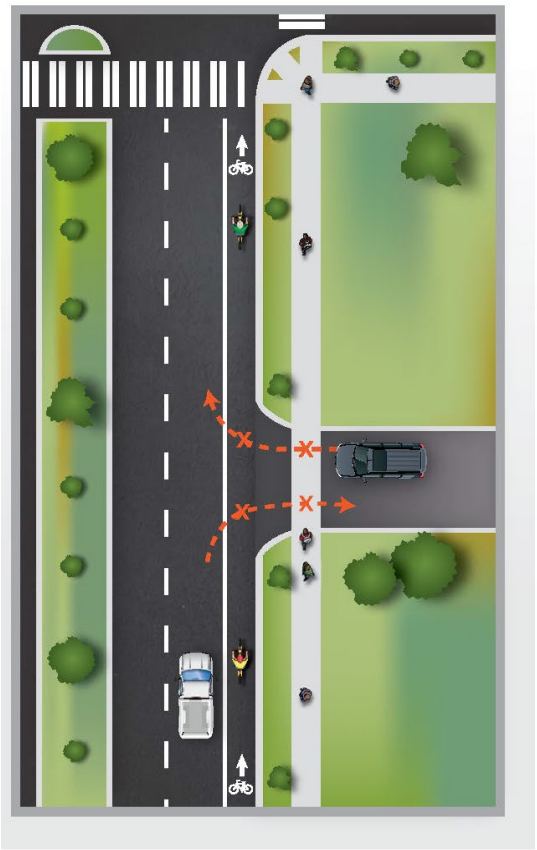
Figure 5-5: Roadway Level-of-Service

5.7 Access Management

Access management is defined as the process or development of a program intended to ensure that major arterials, intersections and freeway systems serving a community or region will operate safely and efficiently while adequately meeting the access needs of the abutting land uses along the roadway. Effective access management programs control the location, spacing, design, and operation of driveways, median openings and intersections to reduce the number of vehicular conflict points.

The 2017 Pinal County Access Management Manual includes design standards and access management guidelines for roadways within Pinal County, with select excerpts shown in Table 5-4. The 2020 Maricopa County Roadway design Manual was referenced for Design Speeds.

A raised median and consolidating driveways reduce conflict points.



Uncontrolled accesses create 8 potential conflict points at every driveway.

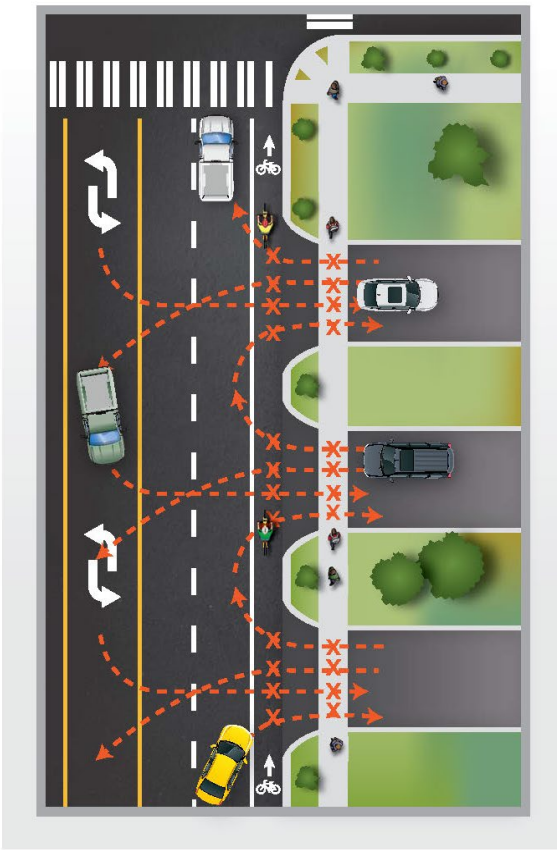


Table 5-4: Access Management Guidelines

Item	Parkways	Major Arterials	Minor Arterials	Collector Roads	Local Streets	Frontage Roads
Design Standards						
Number of Lanes	6	6	5**	2-3**	2	1-2
Lane Width	12'	12-13'	12-14'	12-20'	14-16'	12'
Shoulder Width	6' (outside) 4' (inside)	6.5' (bike lane)	6.5' (bike lane)	0-6.5' (bike lane)	n/a	2'-4'
Median Width	78'	14'	n/a	n/a	n/a	n/a
Design Speed (mph)	45-65*	45-65*	45-60*	25-50*	25-35*	25-35
Right-of-Way	200'	150'	110'	60'-80'	50'	within ROW of adj. roadway
Median Crossover Interval						
Urban	1/4 mile spacing	n/a	n/a	n/a	n/a	n/a
Rural	1/4 mile spacing	n/a	n/a	n/a	n/a	n/a
Access Management Guidelines						
Signalized Street Access Spacing[1]						
Urban	1/2-mile spacing	1/4-mile spacing	1/4-mile spacing	1/8-mile spacing[2]	n/a	n/a
Rural	1-mile spacing	1/2-mile spacing	1/2-mile spacing	1/4-mile spacing[2]	n/a	n/a
Unsignalized Street Access Spacing[1]						
Urban	n/a	660'	330'	330' (150' for minor collectors)	100'	n/a
Rural	n/a	1,320'	660'	660'	330'	n/a
Median Openings[1]						
Full Access	1,320'	1,320'	660'	n/a	n/a	n/a
Partial Access	660'	660'	330'	n/a	n/a	n/a
Frontage Road Access Spacing[3,4]						
One-Way	n/a	n/a	n/a	n/a	n/a	200'-425'
Two-Way	n/a	n/a	n/a	n/a	n/a	200'-510'
Driveway Spacing	360'	360'	360'	250'	75'	n/a
Corner Clearance	360'	360'	360'	250'	n/a	n/a

**See Maricopa Design Manual 2020 (both rural and urban range provided)*
***TWLTL = Two-way left-turn lane*
[1] Distance measured from intersection centerline to intersection centerline.
[2] Not applicable for minor collector roads.
[3] Distance measured from inside edge of pavement to inside edge of pavement.
4 Dependent on posted speed limit; see Table 5-5

Table 5-5: Frontage Road Access Spacing

Posted Speed (mph)	One-way Frontage Road* (feet)	Two-way Frontage Road* (feet)
30	200	200
35	250	300
40	305	360
45	360	435
50	425	510

* Distance measured from inside edge-of-pavement to inside edge-of-pavement.

5.8 Bridge Conditions

The locations and conditions of all the bridges located within the study area was obtained from ADOT Bridge Group. Based on the information obtained from ADOT, there are four (4) existing bridges that belong to Town of Florence and five (5) that belong to ADOT.

National Bridge Inspection Program (NBI) requires that all bridges be inspected every twenty-four (24) months unless other warranted by conditions. The inspection is completed by visual assessment, collection of standard 116 NBI fields data and seventy-five (75) supplemental state data fields. Bridges are considered as "Structurally Deficient" or "Functionally Obsolete" depending on their condition. A Sufficiency Rating of 0 to 100 is provided taking into account bridge condition, geometry, traffic and how well the waterway passes underneath the bridge. Sufficiency rating is also used to determine funding eligibility. A low sufficiency rating does not necessarily mean the bridge is unsafe or in need of immediate repair.

Table 5-5 lists the bridge sufficiency ratings within the study area obtained from the ADOT Bridge Group.

Table 5-6: ADOT Bridge Rating

Structure Number	Jurisdiction	Route Number	Road Name	Route Mile Post	Bridge Name	Structure Length (feet)	Deck Width Out-Out (feet)	Curve Length (feet)	Sufficiency Rating	
8215	Florence	0	Butte Ave	0	Flor-Casa Grande Br	53	22.6	0	F	37.3
8715	Florence	0	Arizona Farms Road	0	Az Farms Rd CAO Br	92	34.7	0		97.4
8839	Florence	0	Judd Road	0	Judd Rd-CAP Canal Br	100	34.7	0		97.4
9791	Florence	0	Butte Ave	0	Flor-Kelv Hwy CAP Br	79	34.8	0		97.1
132	ADOT	79B	SR B 79	132.8	Florence Canal Br	23	50.7	0		84.5
644	ADOT	79	SR 79	132.62	Casa Grande Canal Br	59	43	0		96.6
669	ADOT	79B	SR B 79	132.75	Casa Grande Canal Br	58	43	0		98.8
1416	ADOT	79	SR 79	132	US 79 CAP No 1 Br	205	64.2	0		93.0
501	ADOT	79	SR 79	135.54	Gila River Bridge	1,507	35	0		75.48

Source: Arizona Department of Transportation Bridge Group

5.9 Pedestrian & Bicycle Facilities

A complete, continuous network of pedestrian and bicycle facilities connects communities, residential areas and activity centers supporting alternative modes of transportation and

promoting outdoor recreation and safety. The Florence Active Transportation Plan (ATP) adopted in July of 2019 provided the Town with its first plan exclusively focused on identifying bicycle and pedestrian facilities within the town limits. The Florence ATP established clear bicycle and pedestrian paths, trails and routes that will provide safe and enhanced connections to and from existing and planned neighborhoods, parks and open spaces, community gathering centers, downtown, government offices, employment centers and other key destinations in Florence. While this plan is beginning to be implemented throughout the Town, the following is an inventory of existing pedestrian and bicycle facilities within the study area.

Pedestrian Facilities

Generally speaking, there are limited pedestrian facilities in the Town of Florence. Sidewalks and multi-use paths exist within Anthem at Merrill Ranch and in downtown Florence. With the exception of these pedestrian facilities, no official records of sidewalk locations or measurements currently exists in the Town of Florence. However, all future PUDs are required to construct pedestrian facilities and provide ADA accessible pedestrian connectivity.

Sidewalk Gap Analysis

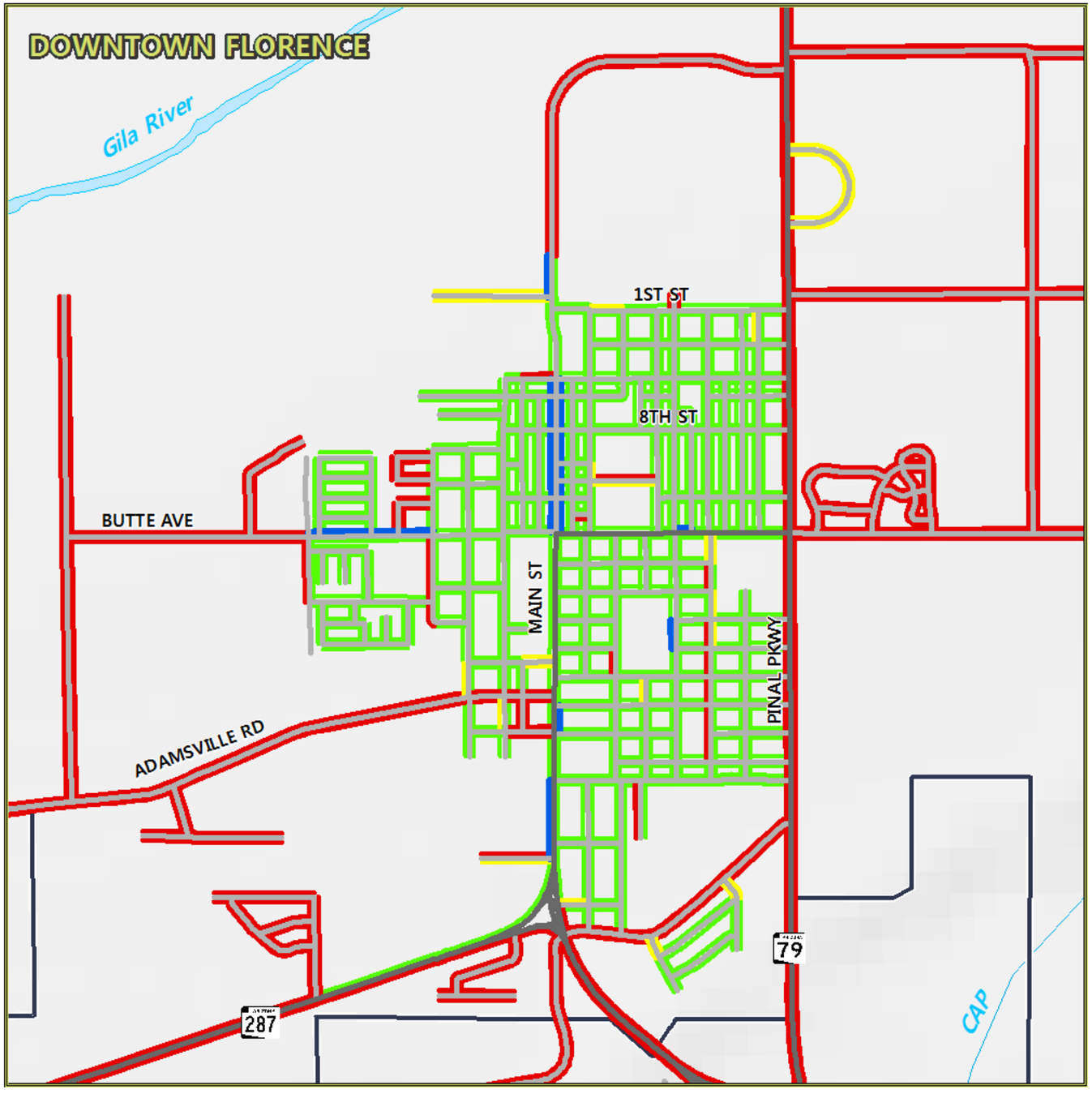
While the Anthem at Merrill Ranch Community has created a functional network of sidewalks, there are major gaps leading to and from the various access points of the development.

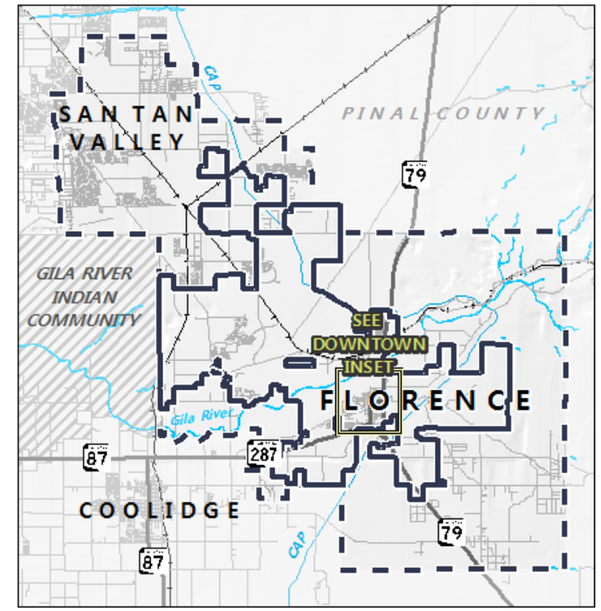
In the downtown core, the Town has provided sidewalks at a minimum of four (4) feet on nearly all streets, while occasionally five (5) feet, eight (8) feet, and ten (10) feet sections appear. On the retail section of Main Street there are raised and covered ten (10) foot sidewalks enhancing the pedestrian's comfort level.

The primary gaps, or largest gaps, are those along SR 79 between Florence Gardens and Downtown, Downtown and Adamsville, Downtown and the apartment complexes south of Stewart St., and Anthem at Merrill Ranch to Florence Gardens and Downtown. Additionally, the Gila River bridge has been a pinch point between the downtown users and users to the north. ADOT is constructing a new bridge over the Gila River complete with buffered space for people walking and biking allowing for facilities to create further connections. Another standout gap is the disconnect between downtown's sidewalk system and the major employers on the east side of Pinal Parkway Avenue.

Refer to Figure 5-6 on the following page for a detailed illustration of the existing pedestrian facilities in downtown Florence and the results of the sidewalk gap analysis.

Main Street at 8th Street looking north
Source: Arizona Brief





Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- U.S. Highway / State Route
- Local Road
- Railroad

Downtown Sidewalks

- Sidewalks 8' - 10'
- Sidewalks 4' - 5'
- Intermittent/Inaccessible Sidewalks
- No Sidewalks

Data Source: Town of Florence, Pinal County, ADOT

Figure 5-6: Downtown Sidewalk Network

Bicycle Facilities

The following describes the various bicycle facilities located throughout the Town and planning area as they exist today. However, please refer to Figure 5-7 on the following page for map of the existing and bicycle facilities.

US Bicycle Route 90

US Bicycle Route 90 is a 573-mile east-west bike route spanning from New Mexico to California through Tucson and Phoenix. This route is comprised of paved shoulders along Arizona State Highways, shared use paths, and local streets. The Town of Florence provides a crucial connection to US Bicycle Route 90 between I-10 and US 60. Riders exit I-10 at SR 87 to follow SR 87 north to SR 287, they then travel east on SR 287 to SR 79, and then travel north on SR 79 to US 60 to proceed through Apache Junction.

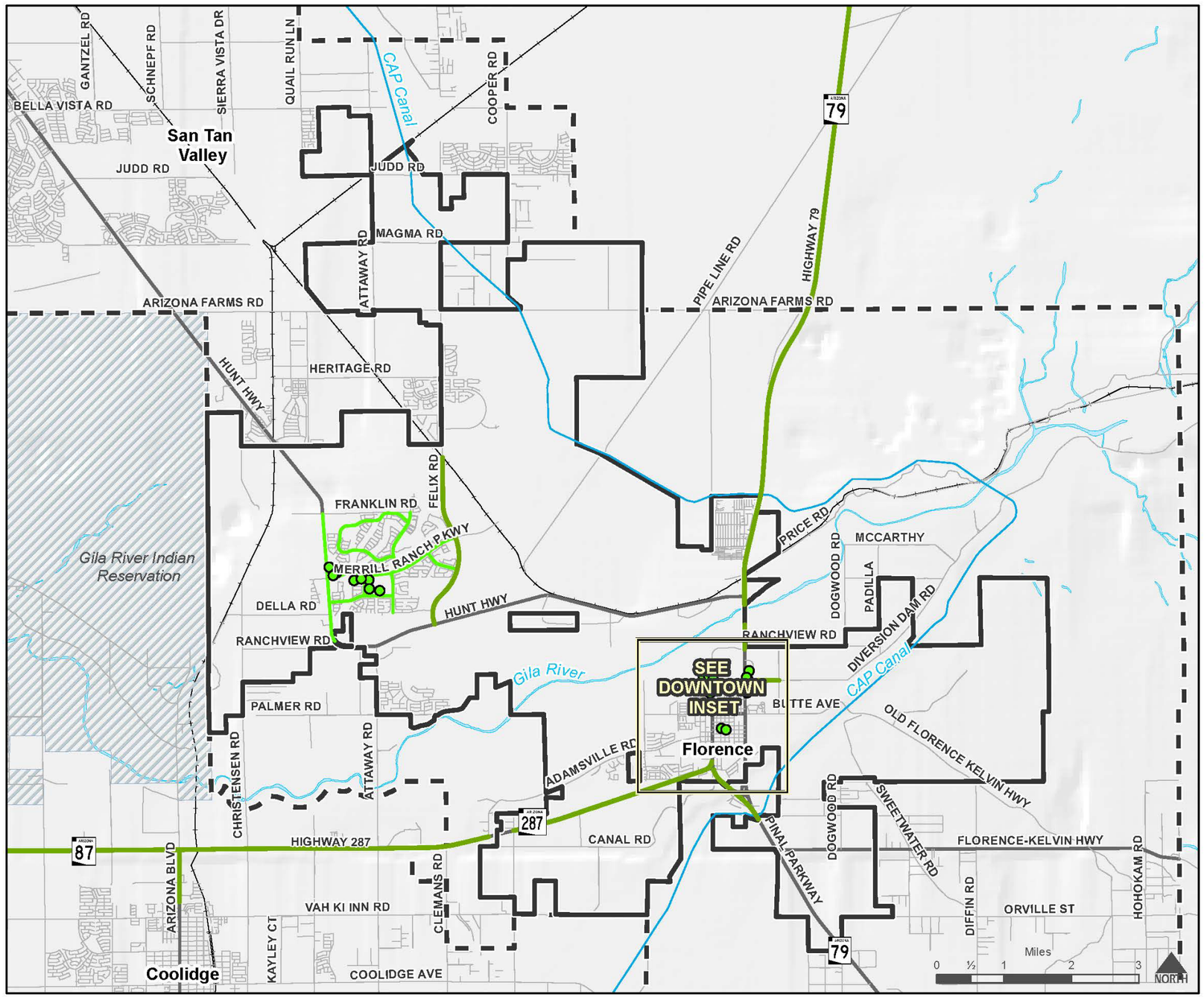
Paved Shoulders

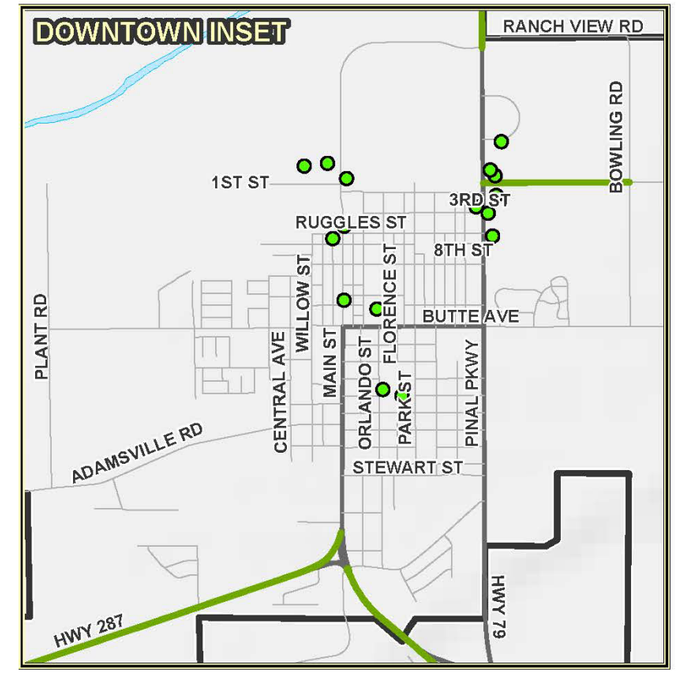
SR 79 has paved shoulders beginning at US 60 and continuing to Gila Drive. The paved shoulder continues south of downtown Florence terminating at the SR 287/SR 79 junction. Paved shoulders also exist along SR 287 between Main Street and Arizona Boulevard.

Bike Lanes & Multi-Use Paths

The Anthem at Merrill Ranch Master Planned Community has bike lanes on all Major and Minor Collectors either as an existing or a planned facility. The community also boasts multi-use paths throughout their entire development connecting amenities to bike lanes and ADA accessible

sidewalks. Bike lanes exist on Hunt Highway between Franklin Road and approximately one half-mile south of American Way.





Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- U.S. Highway / State Route
- Local Road
- Tribal Lands
- Railroad
- Central Arizona Project (CAP)
- Washes - NHD
- Bike Parking Facilities
- Bike Lanes
- Paved Shoulders

Figure 5-7: Existing Bicycle Facilities

5.10 Transit Services

The Central Arizona Regional Transit (CART) bus system is a fixed route service connecting Coolidge, Casa Grande, Central Arizona College and the Town of Florence. The CART bus system provides regional route services to neighboring communities for employment, medical and personal trips, as well as to Greyhound service. CART also connects to the Cotton Express at the Wal-Mart Transit Stop in Coolidge. From Wal-Mart, Florence residents can connect to additional needs via The Cotton Express which provides two circulator routes around Coolidge. There is also the potential for a northern expansion with an additional stop at the Anthem Hospital, one at the Florence Gardens Mobile Home area, and one at the San Tan Valley Central Arizona College Campus. This expansion could take another two years to come to fruition.

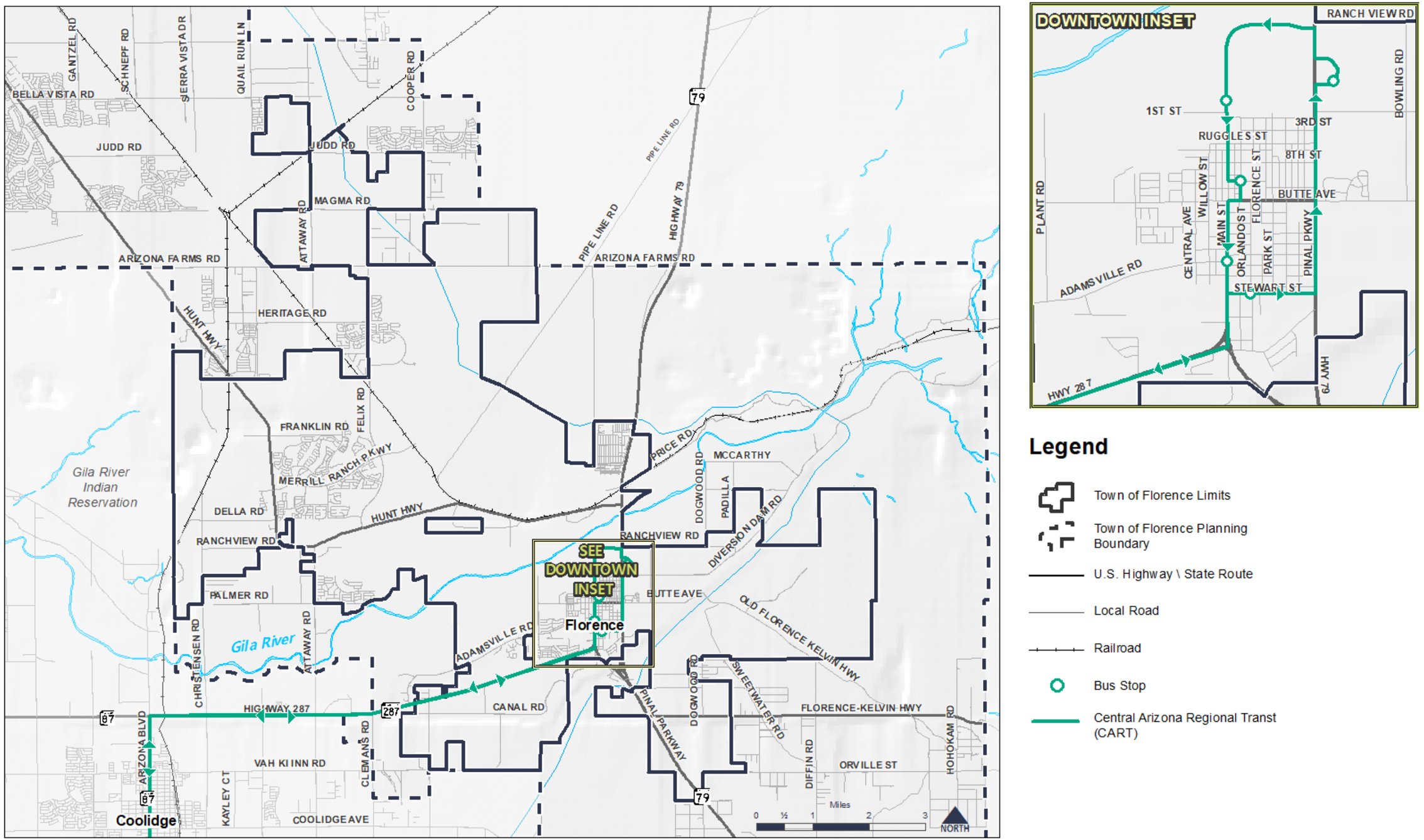
CART is funded by the FTA, ADOT, Central Arizona College, City of Coolidge, Pinal County and the Town of Florence. The CART system operates both in the eastbound and westbound directions beginning service in Florence at 6:37 AM and ending in Florence at 6:16 PM. The entire loop is 2.5 hours round trip. The fares for riding the CART are "exact fare only" and range from two (2) to four (4) dollars for the day, with monthly passes available. Dial-A-Ride service also exists as a county provided service throughout the Town of Florence.

As Figure 5-8 illustrates, the following stop locations are all within downtown Florence, although arrangements can be made to be picked up at other locations along the route:

- Florence Library/ Florence Town Hall (shelter planned)
- Adamsville Rd. & Main St.
- Stewart St. & Orlando St.
- Pinal County Administrative Complex (shelter planned), and
- Pinal County Courts (existing shelter)

CART bus traversing the roads of Florence, AZ

Source: Pinal Central



Legend

- Town of Florence Limits
- Town of Florence Planning Boundary
- U.S. Highway \ State Route
- Local Road
- Railroad
- Bus Stop
- Central Arizona Regional Transit (CART)

Figure 5-8: Existing Transit Service

6 Crash Analysis

A crash analysis was conducted for the study area to identify trends, patterns, predominant crash types, and high crash intersections. The purpose of the crash analysis is to discover safety hazard locations that need to be mitigated to help improve area safety.

Town of Florence Crash Data

Crash data for the five (5) year period from January 1, 2013 to December 31, 2017 was obtained from the Town of Florence. During that time, a total of 958 crashes were reported within the Town of Florence limits.

There was one fatality reported within the Town of Florence limits in the year 2014 at the intersection of Highway 79 and Florence-Kelvin Highway. 246 of 958 crashes (26%) within the study corridor resulted in an injury crash whereas 711 of 957 crashes (74%) resulted in a no injury crash.

ADOT Crash Data

Due to the limited nature of the crash data set provided by the Town of Florence, crash data was also obtained from the Arizona Department of Transportation Traffic Records Section for the same five (5) year period (January 1, 2013 to December 31, 2017) within the Town of Florence Municipal Planning Area. During that time, 1,923 crashes occurred within the Florence Municipal Planning Area.

The following sections further describe the ADOT crash data within the planning area for the five (5) year analysis period.

6.1 Crashes by Year

Figure 6-1illustrates the total number of crashes that occurred each year within the study area during the five (5) year period. There was a total of 1,923 crashes that occurred in the study area during this time. As shown in Figure 6-1, the year with the highest number of crashes in the planning area was 2016 (434 crashes).

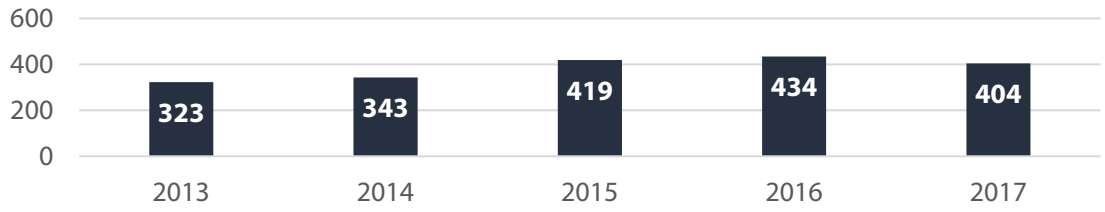


Figure 6-1: Total Crashes by Year

6.2 Injury Severity

There was a total of 19 fatalities reported within the planning area in the five (5) year study period: four (4) in 2013, one (1) in 2014, three (3) each in 2015 and 2016, and eight (8) in 2017. Of the 1,923 total crashes that occurred within the study corridor, 640 (33%) resulted in an injury crash, whereas 1,264 of 1,923 crashes (67%) resulted in a no injury crash. Figure 6-2 illustrates the number of crashes that occurred within the study area during the five (5) year analysis period based on injury severity.

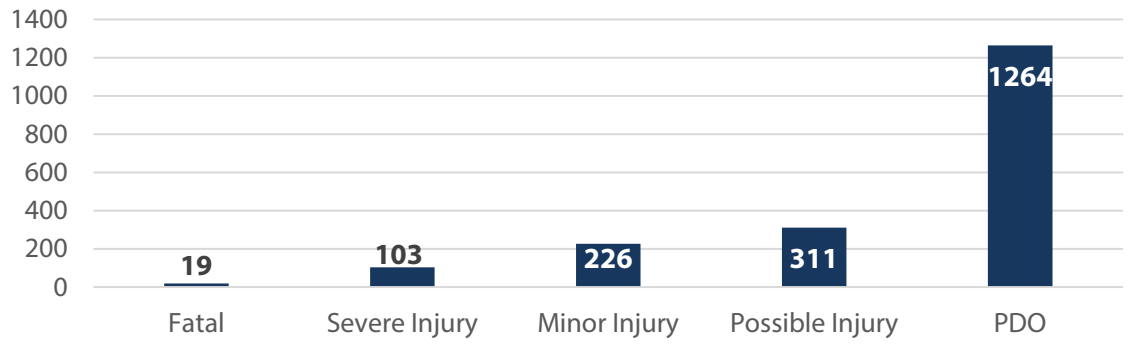


Figure 6-2: Percent of Crashes by Injury Severity

6.3 Collision Manner

Figure 6-3 illustrates the percentage of crashes that occurred within the planning area during the five (5) year study period by collision type (or manner). As shown in the Figure 6-3, sixteen (16) percent of the total crashes during the analysis year were single vehicle, thirty-three (33) percent were rear end collisions, twelve (12) percent were angled other than left-turn collisions and eighteen (18) percent were left-turn related crashes.

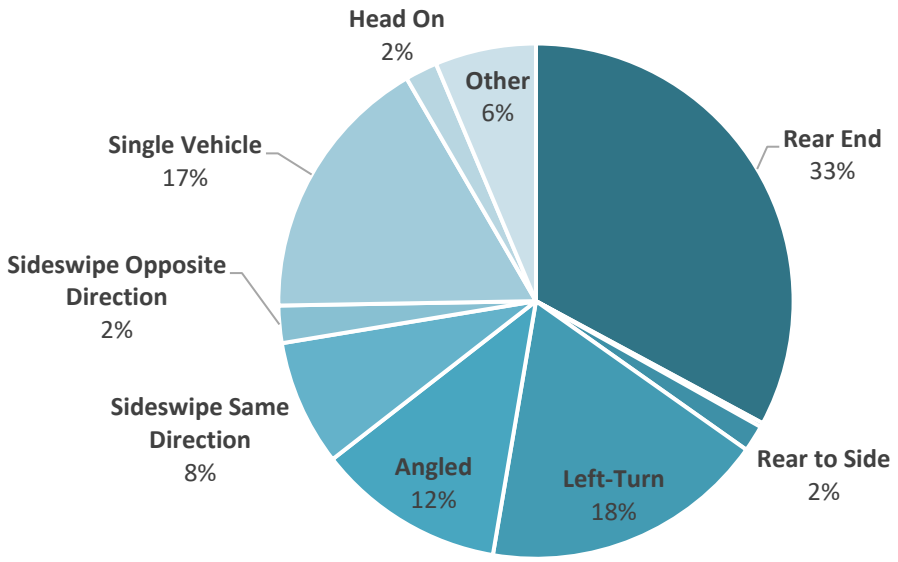


Figure 6-3: Percent of Crashes by Collision Type

6.4 Lighting Conditions

Figure 6-4 illustrates the percentage of total crashes that occurred within the planning area during the five (5) year analysis period based on the lighting conditions of the study area. As shown in the Figure, seventy (70) percent of the total crashes occurred during daylight and thirteen (13) percent of the crashes occurred during "dark not lighted" conditions.

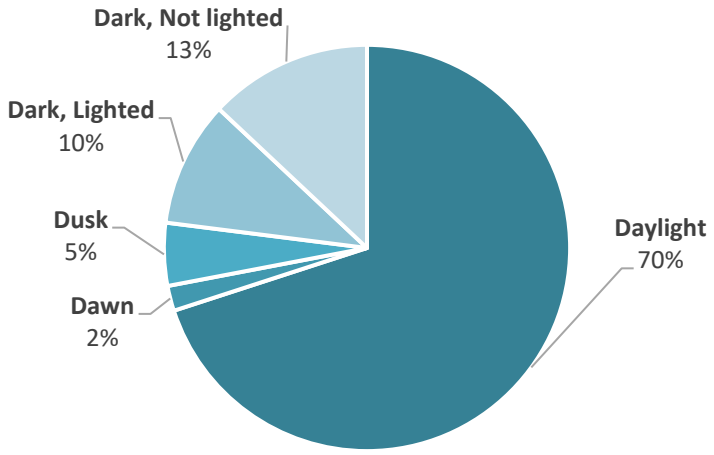


Figure 6-4: Percent of Crashes by Lighting Conditions

6.5 Pedestrian & Bicycle Crash Data Analysis

Figure 6-5 illustrates the total number of pedestrian/pedal cycle crashes that occurred within the planning area during the five (5) year analysis period. Based on the crash data, thirty-two (32) of the total 1,923 crashes (or 1.6%) were pedestrian/pedal cycle related collisions. Figure 6-7 depicts all the pedestrian and bicycle crashes within the planning area within the five (5) year analysis period.

Five (5) of the thirty-two (32) pedestrian/bicycle related crashes (16%) resulted in fatalities; one (1) in 2013 and two (2) each in 2015 and 2017. Four (4) of the five (5) pedestrian/bicycle related fatalities occurred during dark lighted conditions, and one (1) occurred during the daylight conditions. Drugs were a factor in two (2) of the reported fatalities. Of the remaining pedestrian related crashes, four (4) were no injury crashes and twenty- three (23) were injury crashes.

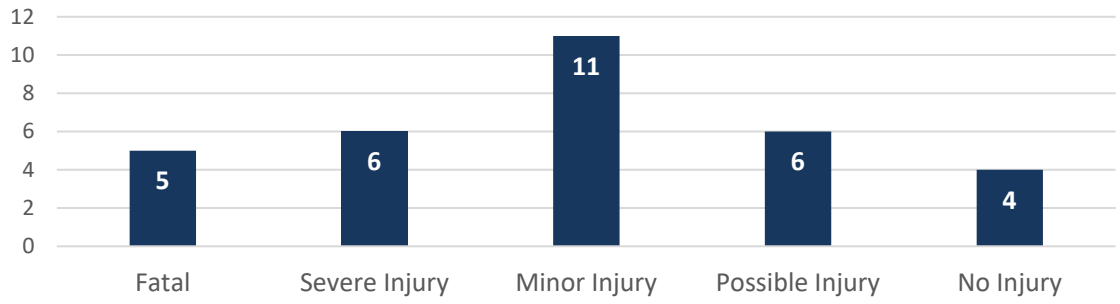


Figure 6-5: Pedestrian & Bicycle Crash Summary

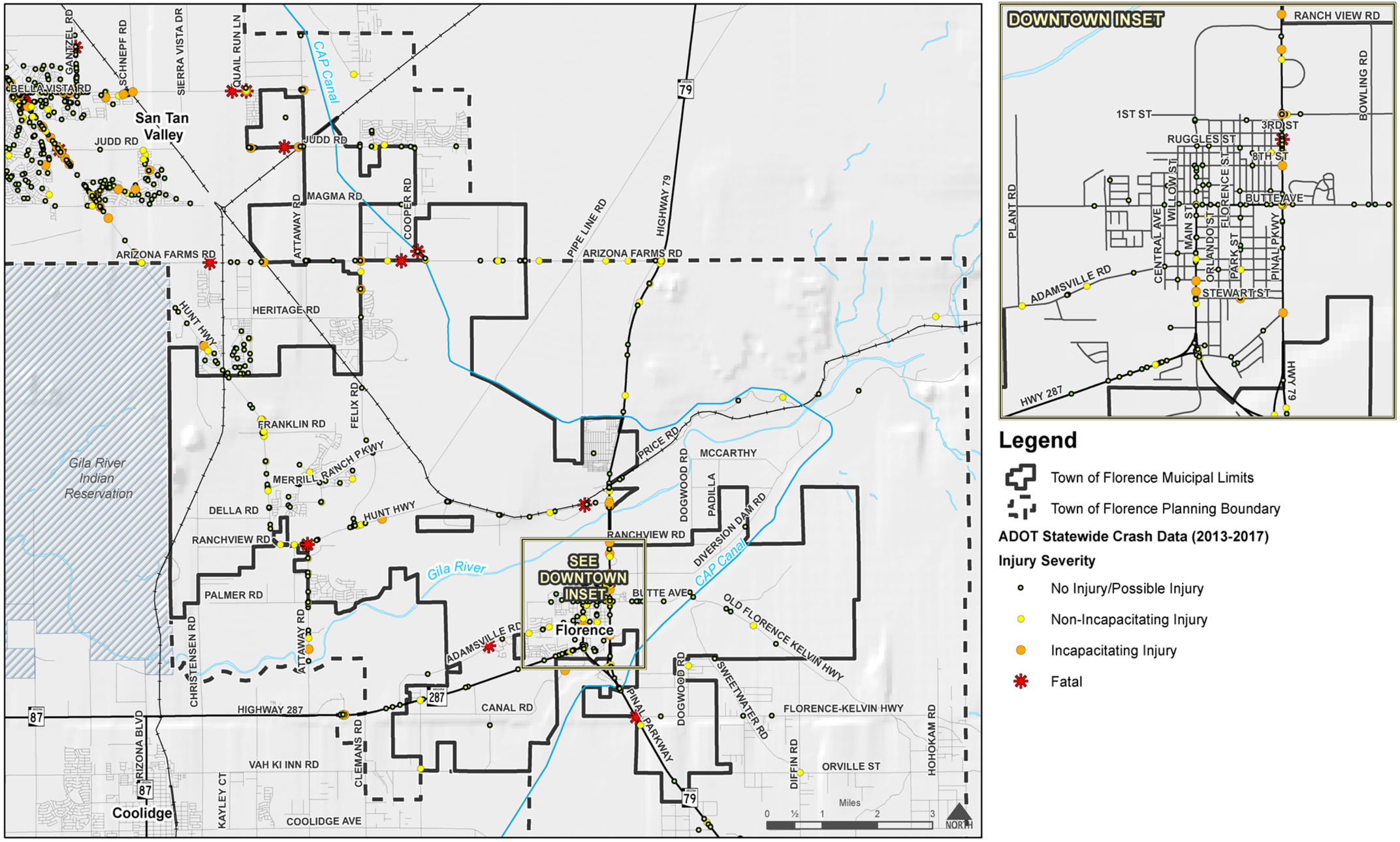
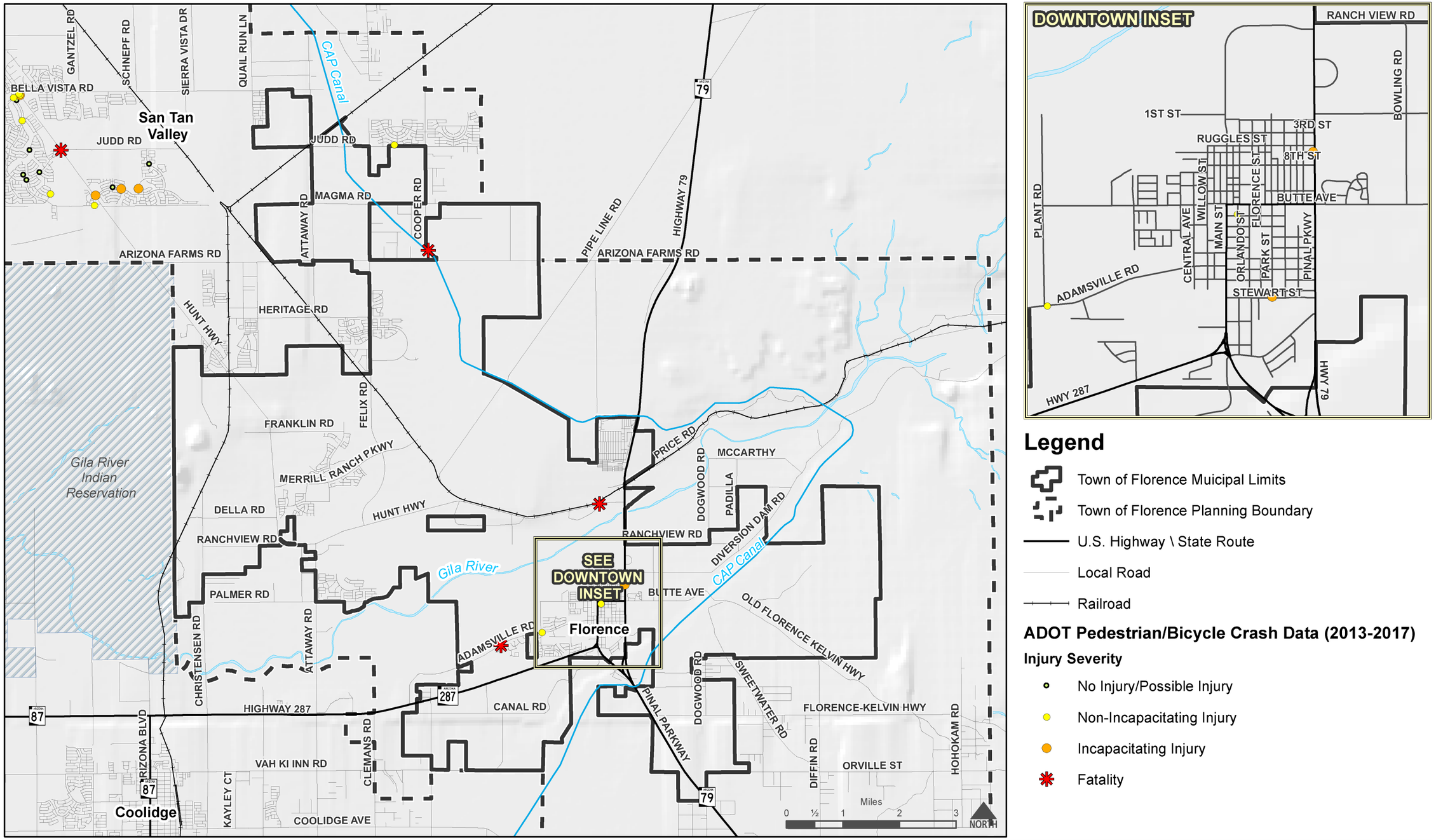


Figure 6-6: Location of All Crashes



Legend

- Town of Florence Muicipal Limits
- Town of Florence Planning Boundary
- U.S. Highway \ State Route
- Local Road
- Railroad

ADOT Pedestrian/Bicycle Crash Data (2013-2017)

Injury Severity

- No Injury/Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatality

Figure 6-7: Location of Crashes Involving Pedestrians

7 Public & Stakeholder Engagement

Public and stakeholder engagement for the Florence TPS was critical to the success in achieving project objectives, public acceptance of the Plan, and ultimately, Town Council adoption of the Plan. At key project milestones, briefings to Town Council and two (2) public open house meetings were conducted to inform the public on project status, updates and provide opportunities for residents and other stakeholders to offer their input and feedback. See Appendix C for Technical Advisory Committee meeting materials and detailed public meeting summaries.

7.1 Technical Advisory Committee (TAC) Meetings

TAC Meeting #1- February 20, 2018

The purpose of this meeting was to introduce the project and obtain the TAC's input regarding the scope, schedule, goals, and objectives of the Florence Transportation Planning Study, and to identify the roles and responsibilities of the group. The TAC shared various concerns within and around the Town of Florence and highlighted various studies that should be cross-referenced throughout the process. A thorough list of data collection needs was established, and necessary coordination began.

TAC Meeting #2- December 4, 2018

The purpose of this meeting was to review and compare anticipated development patterns, Roadway Functional Classifications, potential Community Facilities District (CFD) infrastructure investments, CIP project updates, the concurrent JLUS Study, Hazard Materials/Truck Route identification and future conditions traffic modeling. The potential alignment of I-11 and the North-South Corridor was discussed as was the progress of the reconstruction of the Florence River Bridge and the construction of the SR 79/ SR 287 roundabout.

TAC Meeting #3- March 29, 2019

The purpose of this meeting was to review Working Paper #2; remaining needs, future growth and vehicle trip projections, recommended roadway functional classifications and improvements, recommended intersection and safety improvements, roadway cross sections, additional recommendations and evaluation criteria. In addition, the TAC conducted a thorough review of the 2040 Functional Classification Map.

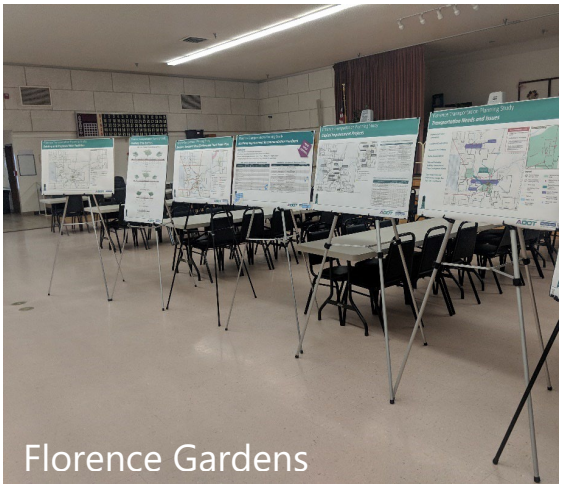
7.2 Public Open House Meeting #1

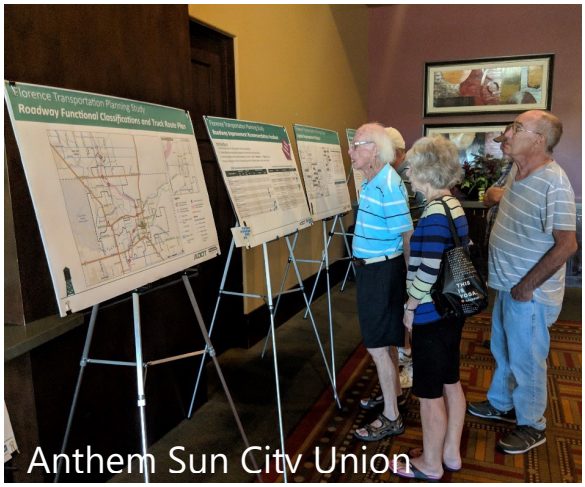
This meeting series was a combination of two (2) concurrent projects (The Florence TPS and the Florence ATP) due to their similar and potentially overlapping relationship and content. There were three (3) meetings spread throughout one day (April 18,2019) culminating in a City

Council Hearing at Florence Town Hall. The first meeting was held at Florence Gardens Community Center from 10AM to 11:30PM, the second was held at Anthem Sun City Union Center from 1PM to 2:30PM, and the third was held at the Florence Library/ Community Center from 4PM to 5:30PM. The boards from the meetings were then staged in the foyer of the Town Hall prior to the Town Council Hearing.

The purpose of these meetings was to present project recommendations and collect feedback from the public. The Florence Transportation Planning Study was in the initial stages of recommendations and presented roadway cross sections and updated roadway classifications for public review. The Active transportation Plan was in its final stages and contained trail locations and type recommendations, as well as trail type cross sections.

Participation at the Florence Gardens Community Center meeting and the Town Council Hearing were moderate, while turnout at the Anthem Sun City Union Center was large and an extensive amount of feedback regarding recommended improvements prioritization was received. No written comments were received at these meetings.


Florence Gardens



Anthem Sun City Union

7.3 Public Open House Meeting #2

The purpose of this meeting was to present the final recommendations of the Florence TPS to the public and to receive their input. It was scheduled for Tuesday, January 21st, 2020 at the Florence Town Hall from 4PMto 6PM in the Town Council Chambers Foyer. Boards were staged in the foyer of the Town Hall prior to the Town Council meeting to be held that evening at 6PM. Participants began arriving at 3:45PM eager to review the project, with a total of ten (10) attendees reviewing the exhibit and communicating with the study team. All participants were provided with comment cards and added to the study update mailing list; however, no written comments were received at the open house.

8 Future Growth, Vehicle Trip Projections & Roadway Network Needs

8.1 Growth Assumptions & Summary Travel Demand Model Year 2040 Findings

Based on discussions and coordination with MAG staff, a future travel demand model (TDM) model was established for the horizon year 2040. The output from the MAG 2040 TDM was used to analyze future traffic conditions.

To evaluate the operating status of the no-build conditions for the existing roadway network based on future traffic projections, MAG applied the Town of Florence 2040 anticipated population and employment growth to the existing 2015 roadway network, with the exception of the Sun City Boulevard extension, to determine the base future roadway network.

Based on the existing 2015 roadway network, Sun City Boulevard exists between Merrill Ranch Parkway and Franklin Road alignment. The MAG 2015 existing roadway network was revised to extend the Sun City Boulevard north of Franklin Road alignment and then east to connect to Felix Road south of the Copper Basin Railroad tracks.

Based on the data results obtained from MAG for the 2040 population and land use projections against the 2015 roadway network with the Sun City Boulevard extension, an exponential growth in traffic volumes of 0.25 percent to 27.5 percent with an annual average growth rate of four (4) percent on the roadway network was observed.

In order to evaluate the operating status and LOS implications of 2040 traffic volumes upon existing Florence roadways with the Sun City Boulevard extension (and thus determine what adjustments may be needed to Florence's Functional Classifications and/ or identify capacity-related roadway improvements), the methodology used to evaluate the LOS for the year 2015 is also used to evaluate the roadway network LOS for the 2040 no-build conditions. The 2015 number of lanes shown previously in Figure 5-1, with the added Sun City Boulevard extension in *Section 5.1 Roadway Network* were also used for the 2040 LOS analysis.

Figure 8-1 and Figure 8-2 illustrate the 2040 no-build traffic volumes and 2040 no-build LOS.

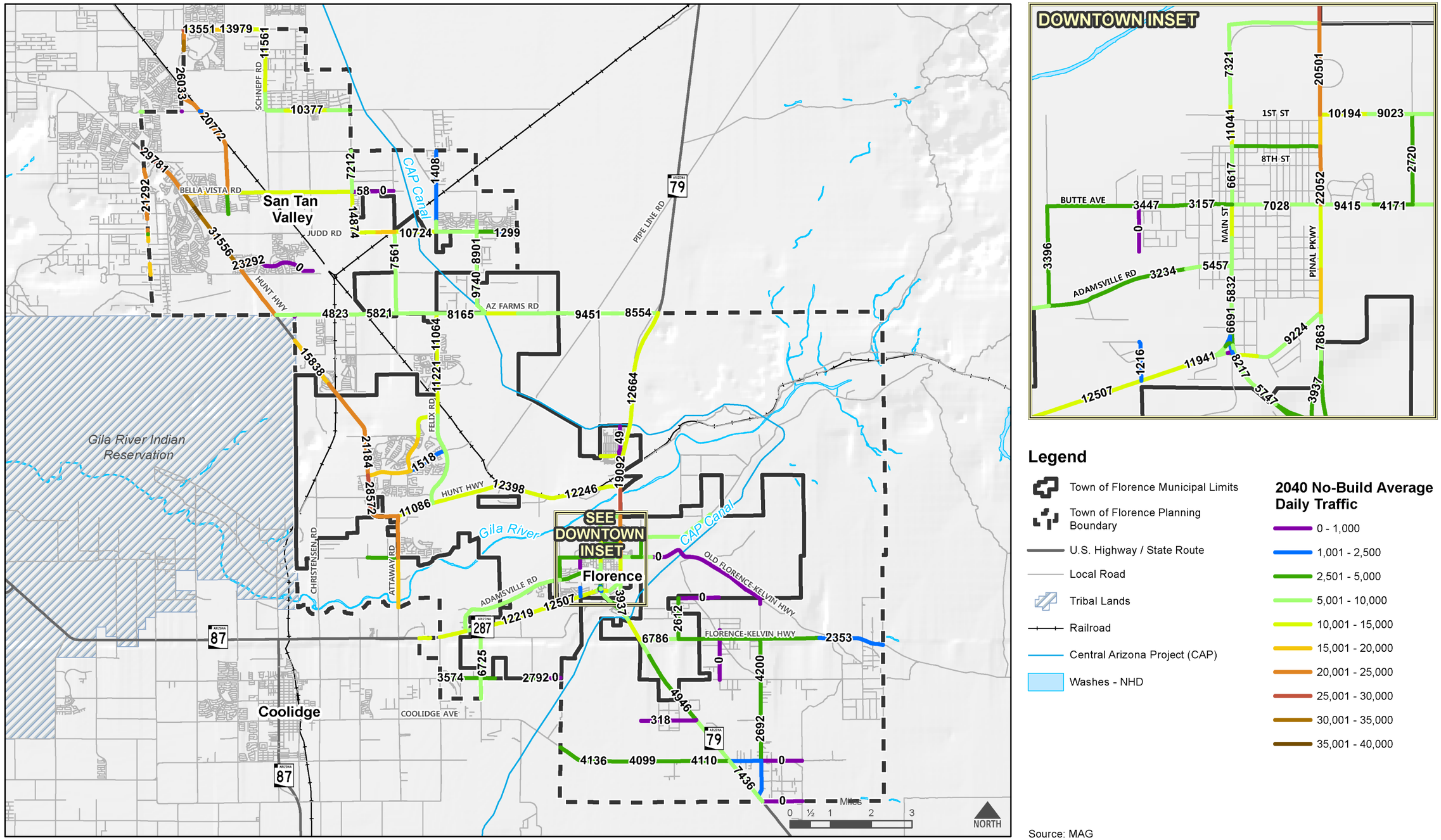


Figure 8-1: 2040 No-Build Average Daily Traffic

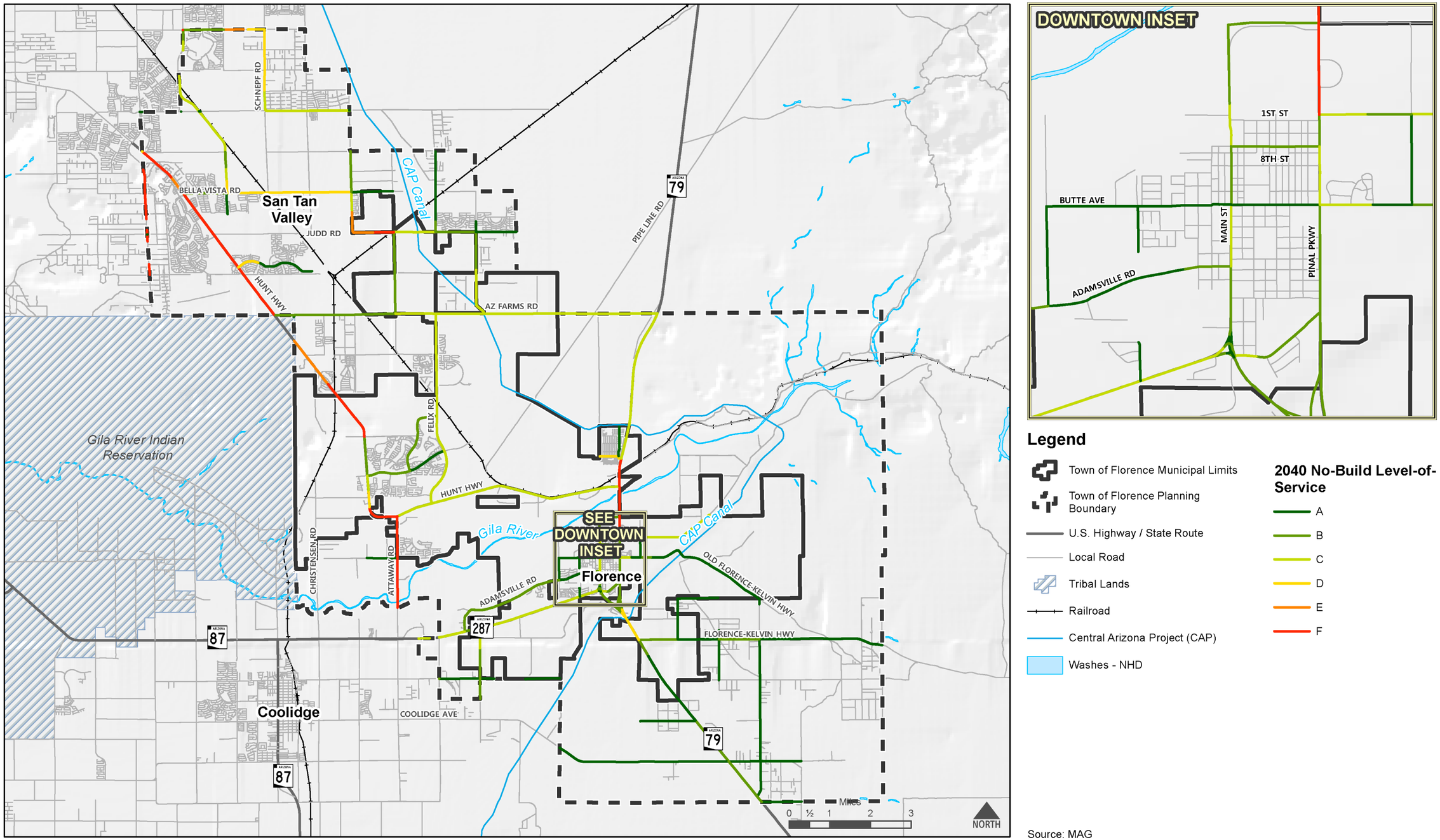


Figure 8-2: 2040 No-Build Level-of-Service

Interestingly, under the no-build 2040 travel demand traffic volumes, all roadways are expected to operate at LOS "D" or better with the following exceptions:

1. The following roadways/segments are expected to operate at LOS "E":
   - Judd Road between Quail Run Road and Attaway Road,
   - Quail Run Road approximately 0.5 miles north of Judd Road,
   - Hunt Highway between Paseo Fino Way and Bella Vista Road (outside of Town limits), and
   - Hunt Highway South of Arizona Farms Road and Mirage Avenue (outside of Town limits).

2. The following roadways/segments are expected to operate at LOS "F",
   - Hunt Highway between Stone Creek Drive and Paso Fino Way (outside of Town limits),
   - Hunt Highway between Bella Vista Road and Arizona Farms Road (outside of Town limits),
   - Hunt Highway between Mirage Avenue and Franklin Road Alignment (partially outside of Town limits),
   - Hunt Highway between Fire Station #2 to Attaway Road,
   - SR 79 between Gila Drive at Florence Gardens and 1st Street, and
   - Attaway Road south of Hunt Highway.

An important takeaway and overarching theme derived from this analysis indicates that the existing Florence Functional Classification system is largely oversized (surplus capacity) for many roadways. The analysis concludes that many of Florence's current roadways operate at an acceptable LOS (D or better), even under 2040 projected traffic volumes.

To further corroborate and support these conclusions, an additional LOS analysis was conducted by utilizing the existing (2008) Florence Functional Classifications with projected 2040 traffic volumes. As suspected, this analysis concluded that almost all roadways in this scenario would operate at a LOS A. Both findings then support the conclusion that the existing Functional Classifications are oversized, creating a surplus of unnecessary capacity and construction costs that should be adjusted to be more in line with future projected needs. Please see Section 9 *2040 Roadway Functional Classification* for recommended adjustments to the Functional Classification.

9 2040 Roadway Functional Classifications

Adjustments to the existing Functional Classification system were largely derived from the analysis of the projected growth and travel demand modeling results previously described in *Section 9.0 Future Growth, Vehicle Trip Projections, & Roadway Network Needs*. In some instances, the newly recommended Functional Classification system includes a reduction in the existing (2008) Functional Classification, adjustment in an alignment or addition/modification of bicycle and/ or pedestrian facility types, or the addition or elimination of roadway facilities altogether.

9.1 2040 Roadway Functional Classification Refinements

In no particular order, the following is a summary of changes recommended for the 2040 Functional Classification Plan – as depicted in Figure 9-1.

1. The former Functional Classification of "Major Arterial" is now referred to as a "Principal Arterial".
2. Orville Street is recommended as a Minor Collector (formerly Minor Arterial).
3. Christensen Road (alignment) through the Walker Butte PUD is recommended as a Major Collector (formerly Minor Arterial).
4. Elimination of existing Minor Collector circular network near Canal Street in favor of new roadway connection/alignment in this area.
5. Realignment of a Cooper Road southern extension just north of Arizona Farms Road, traversing south and east to its intersection with SR 79. This modification also includes the elimination of approximately 6.5 miles of Major Arterial roadways that were unnecessary and/or redundant.
6. Designate Heritage Road as a Principal Arterial (formerly Major Collector) and coordinate with Pinal County to identify this roadway as a Regionally Significant Roadway for Safety and Mobility instead of Hiller Road that currently carries this designation. It should be noted that the easterly extension of this roadway may need to be shifted slightly off the section line due to existing subdivision platting and lack of potential easement/right-of-way in select locations.
7. Eliminate the curvilinear extension of Attaway Road north of Hunt Highway.
8. Downgrade Felix Road, north of Judd Road, from a Major Arterial to a Major Collector with a 2040 LOS A or better with approximately 1,400 to 5,000 ADTs.
9. Downgrade Attaway Road, north of Arizona Farms Road, from a Major Arterial to a Major Collector that performs at a 2040 LOS B or better with 5,000 to 10,000 ADTs.
10. Downgrade River Road from a Minor Arterial to a Major Collector and modify the roadway network in this immediate area to improve efficiency and eliminate roadway redundancy. See Figure 9-1.
11. Downgrade Bella Vista Road from a Major Arterial to a Minor Arterial that performs at a 2040 LOS of B or better.

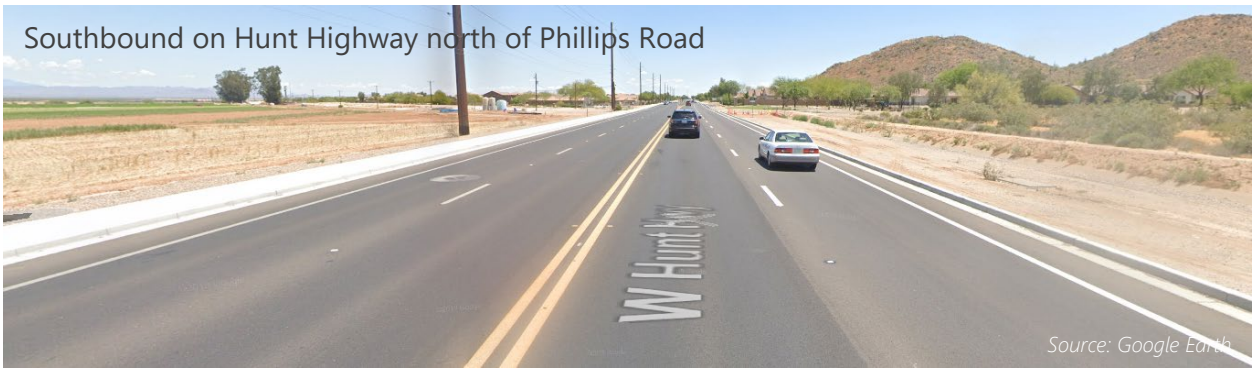
12. Downgrade Attaway Road, from Arizona Farms Road to Judd Road, from a Major Arterial to a Major Collector that performs at a 2040 LOS of B or better.
13. Downgrade Adamsville Road from a Minor Arterial to a Major Collector that performs at a 2040 LOS of B or better with 3,200 to 7,000 ADTs.
14. Downgrade Felix Road, from Hunt Highway north to Arizona Farms Road, from a Major Arterial to a Minor Arterial that performs at a 2040 LOS C or better with approximately 6,000 to 11,000 ADTs.
15. Downgrade the Florence-Kelvin Highway from a Major Arterial to a Major Collector that performs at a 2040 LOS B or better with 2,300 to 6,700 ADTs.
16. Downgrade Cooper Road, between Judd Road and Arizona Farms Road, from a Major Arterial to a Minor Arterial that performs at a 2040 LOS A or better with approximately 5,500 to 9,600 ADTs.
17. Downgrade Palmer Road, between Christensen Road and Attaway Road, from a Major Arterial to a Major Collector with a 2040 LOS A or better with approximately 2,700 ADTs.
18. Downgrade seven (7) north-south roadways connecting Florence-Kelvin Highway to Cactus Forest Road (including Dogwood Road, Diffin Road, Hohokam Road etc.) from Minor Arterials to Minor Collectors.
19. Downgrade Plant Road, from River Road to SR 287, from a Major Arterial to a Minor Arterial.

Westbound on Orville Street approaching Diffin Road
Source: Google Earth

Eastbound on Heritage Street approaching Felix Road
Source: Google Earth

Attaway Road north of SR 287
Source: Google Earth

Railroad crossing on Bella Vista Road
Source: Google Earth



Southbound on Hunt Highway north of Phillips Road
Source: Google Earth

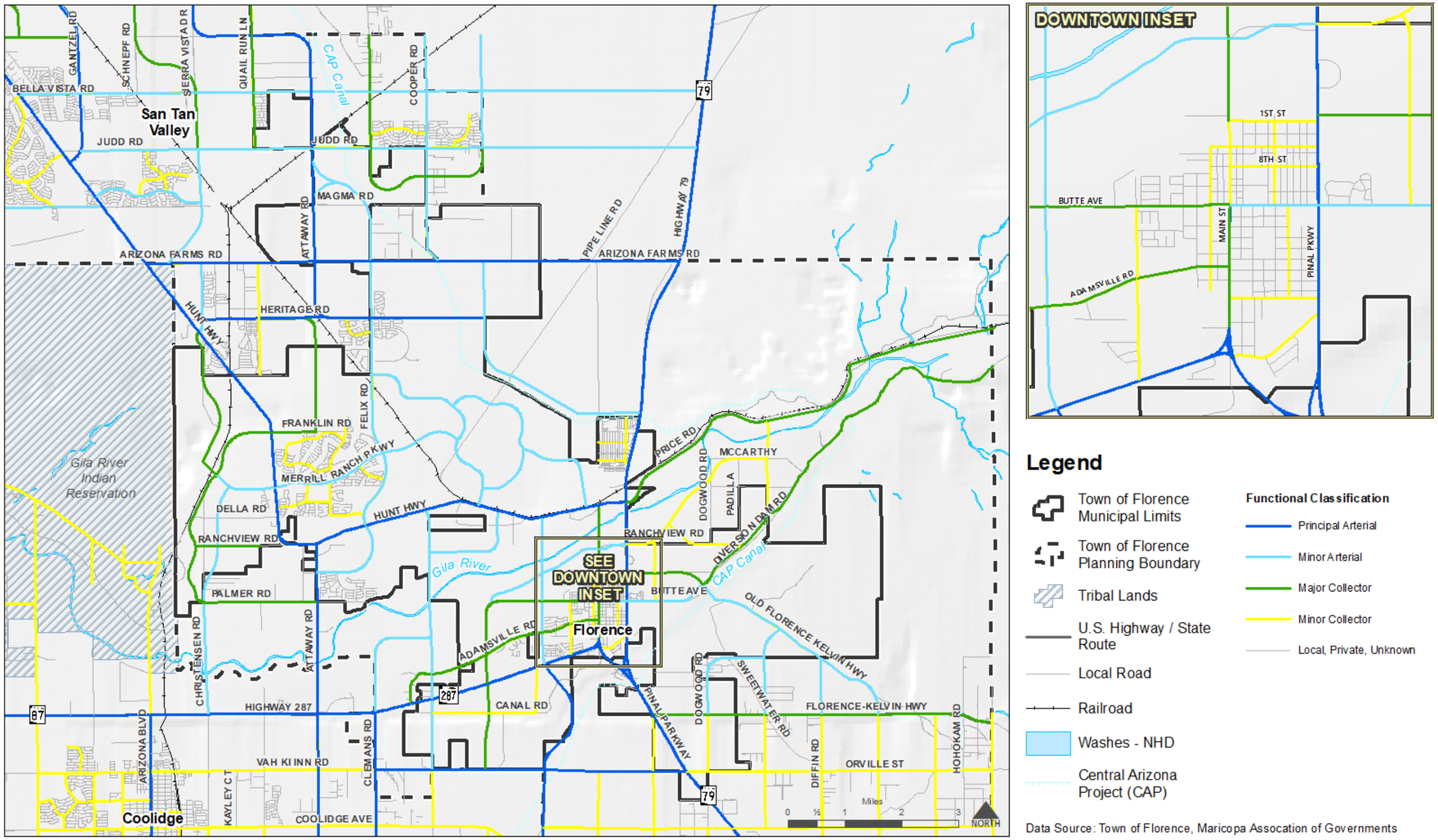


Figure 9-1: 2040 Roadway Functional Classification

9.2 Truck Route Plan

As Figure 9-2 illustrates, five (5) corridors have been designated as truck routes. In support of the existing and future planned commercial, agricultural, and employment-related land uses, including mission support of the Florence Military Reservation, a series of designated truck routes are recommended. The ADOT state highway system roadways that serve Florence and connect the Town to the region are the primary facilities used by commercial trucks today and will likely to continue to be the primary. It is necessary to support the state highways by establishing greater connectivity between the state highways and to nearby planned employment uses. The following Town of Florence roads and ADOT state highways are hereby identified as designated truck routes:

- Hunt Highway
- SR 287
- SR 79
- Attaway Road
- Arizona Farms Road

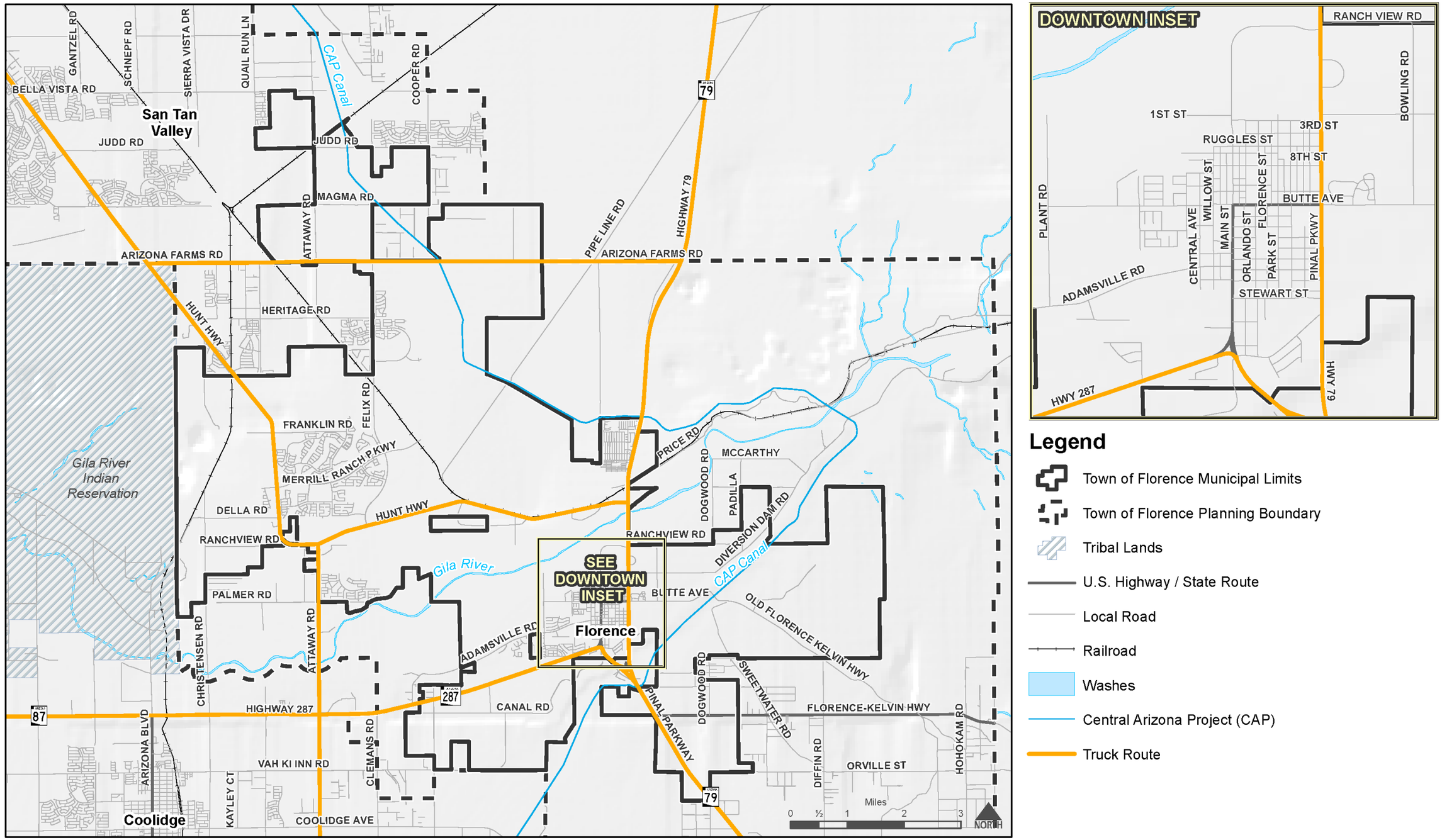


Figure 9-2: Truck Route Plan

10 Recommended Roadway Cross Sections

As previously discussed, the existing Town of Florence Functional Classification was established from the Coolidge-Florence SATS in 2008 and has remained in use. Project objectives include the need for this study to evaluate the existing Functional Classification system and identify any necessary adjustments to the existing functional classifications – both in terms of the definition and characteristics of each Functional Classification type, but also with the 2040 Functional Classification Map. The new Functional Classification 2040 recommendations in turn will be incorporated into the Circulation Element of the upcoming Town General Plan Update.

The American Association of State Highway and Transportation Officials (AASHTO) state in their *Policy on Geometric Design of Highways and Streets* (7th edition, 2018), a Functional Classification is a system that characterizes roadways by their position in the transportation network and the type of service they provide to motor vehicles. Each Functional Classification defines the role of each roadway in serving vehicle movements within the overall transportation system, but also carries certain expectations with respect to roadway design including roadway speed, grade, and vehicle capacity. Federal legislation continues to use functional classification in determining the eligibility for funding under the Federal-Aid program.

Furthermore, AASHTO offers guidance on the development of Functional Classifications in urban versus rural settings. The U.S. Code defines urban areas as places with a population of 5,000 or greater. Specifically, the Town of Florence would be classified as a "small urban area" with a population between 5,000 and 50,000. Accordingly, this guidance is used to develop the Functional Classification framework for the Town of Florence. The Florence Functional Classifications and their corresponding roadway cross sections are presented in the following sections.

A planning level opinion of probable cost estimate for each mile of roadway type is identified for each roadway. Please see Appendix B for a more detailed breakdown of each opinion of probable cost estimate. Planning level cost estimates for each typical roadway section were developed assuming new roadway construction at locations with flat terrain with no existing

infrastructure. New utility features or relocations of existing utility features were not considered in this estimate and right of way costs were also excluded from consideration. The costs for design, construction management and a contingency for unidentified items are included in the estimate along with the cost for the new construction items.

10.1 Parkway

Also known in Arizona as the "Arizona Parkway", this roadway is a divided roadway that can accommodate greater volumes of vehicles traveling at higher speeds. One of its most notable features is the 74-foot curbed and landscaped median that also facilitates U-turns and left turns for all vehicle types at locations other than at the signalized intersections. This permits a two-phase signal system that promotes uninterrupted flow by prohibiting left turns at the signal while requiring left turns and U-turns at a designated median break midblock between signalized intersections.

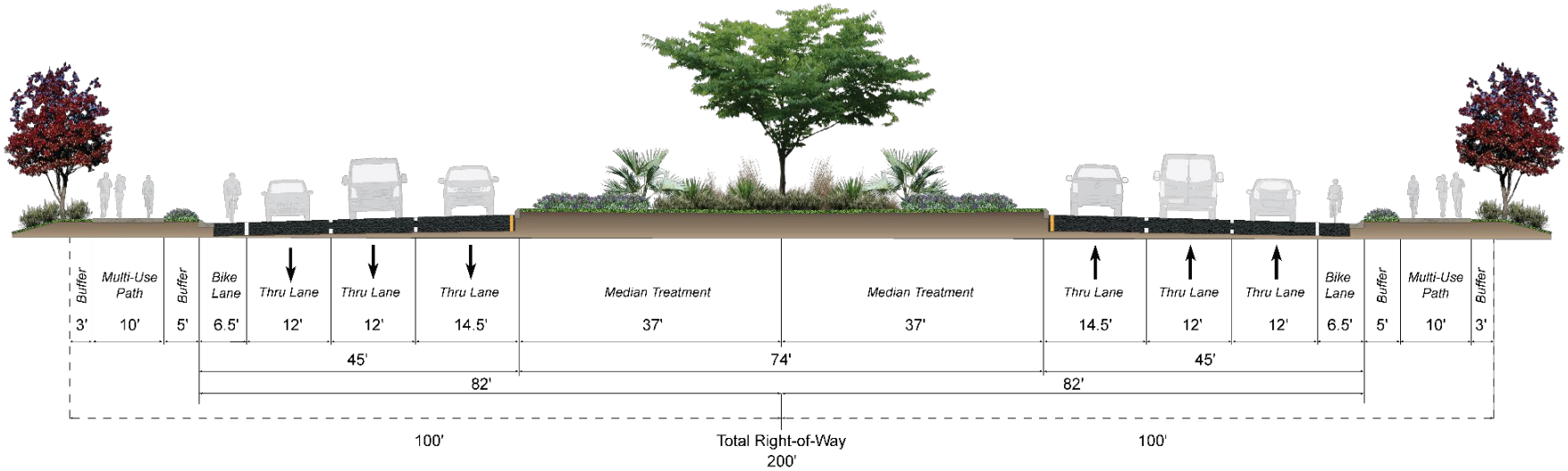


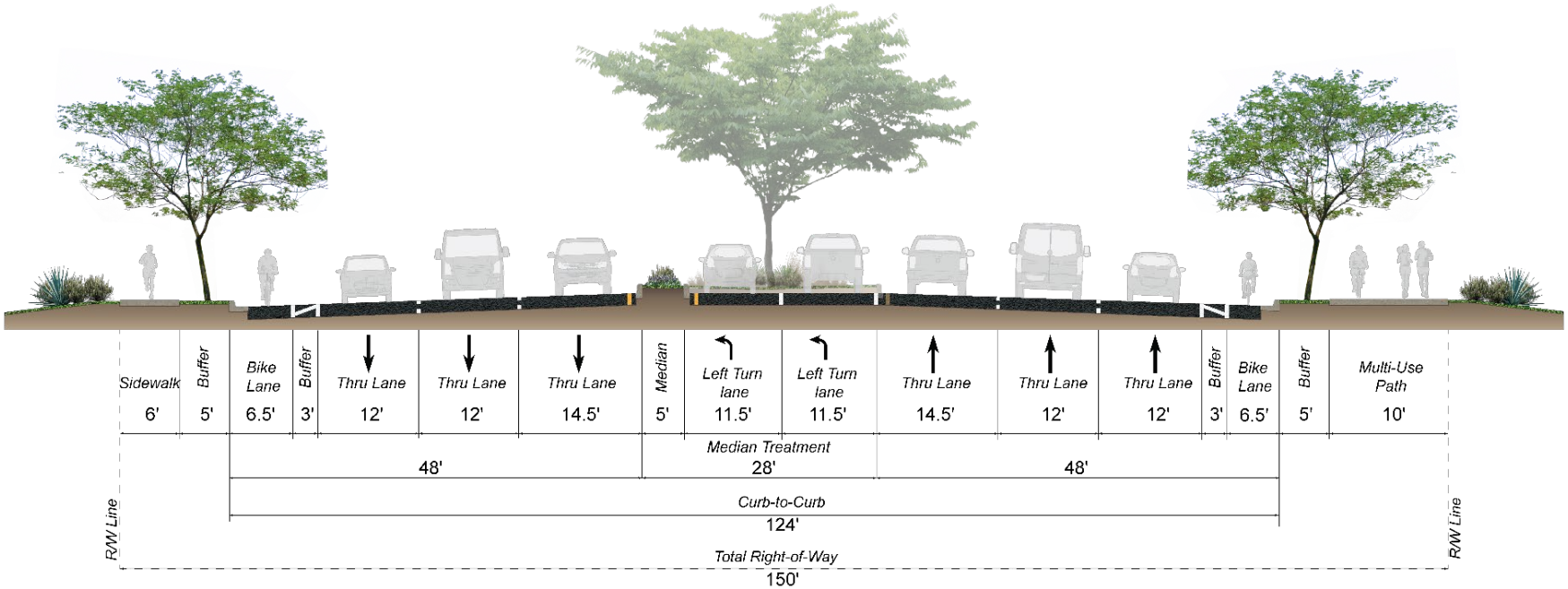
Figure 10-1: Proposed Parkway Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
200 Feet	6 Lanes	70,000 ADT	45-55 MPH	50 MPH	$1,212,112*

**Costs include all items shown in Cross Section divided by total number of vehicular lanes*

10.2 Principal Arterial

The Principal Arterial is often the most significant classification in that it carries the highest proportion of traffic in conventional urbanized areas. In Florence, these facilities will be limited in number and extent. A Principal Arterial supports the largest volumes of traffic at higher speeds and typically longer trip lengths, but also serves through travel and provides connection to large employment and/or activity centers. Principal Arterials are either fully or partially access controlled. This Principal Arterial supports dual left turn lanes in



each direction at signalized intersections; however, single turn lane is acceptable under appropriate volume/ synchro analysis.

Figure 10-2: Principal Arterial Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
150 feet	6 Lanes	45,000 – 50,000 ADT	45-55 MPH	45 MPH	$1,159,230*

**Costs include all items shown in Cross section divided by total number of vehicular lanes*

10.3 Minor Arterial

The Minor Arterial augments the Principal Arterial by serving moderately high daily traffic over shorter trip lengths. The Minor Arterial is a 4-lane facility. These roadways have more frequent driveway access to adjacent land uses and interconnect with collector roadway systems, serving trips or moderate length. Minor Arterials are the primary roadways on the 2040 Functional Classification Plan.

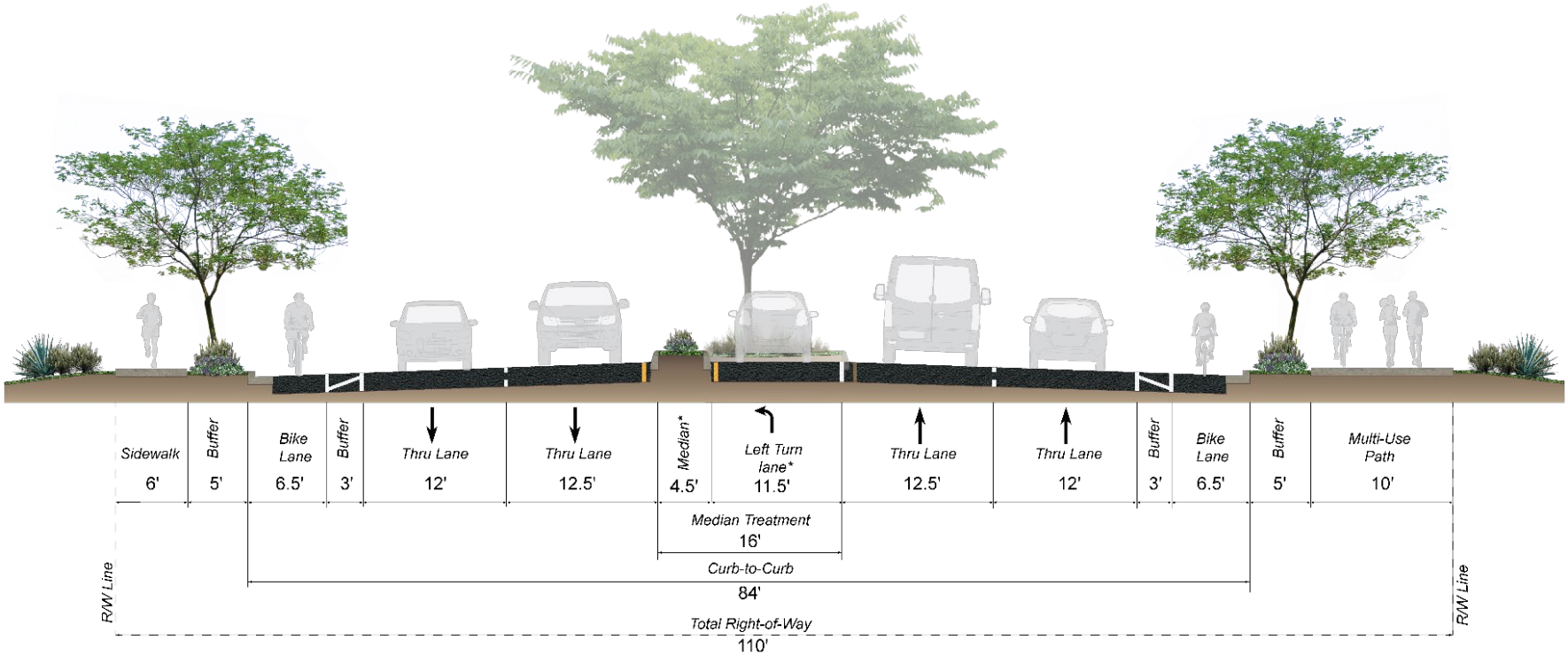


Figure 10-3: Minor Arterial Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
110 feet	4 Lanes	25,000 – 30,000 ADT	45-55 MPH	45 MPH	$1,357,249*

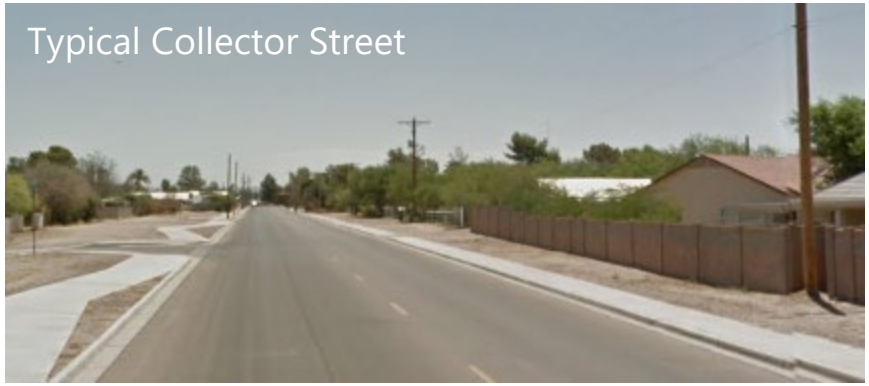
**Costs include all items shown in Cross section divided by total number of vehicular lanes*

10.4 Collector & Local Roadways

Collector roadways gather and channel traffic trips to and from arterial roadways and local streets. Collector roads commonly serve residential communities and employment core land uses. There are three types of Collector roadways depending upon the traffic and multimodal functional needs of the road, and density and intensity of the land uses it serves.

Meanwhile, local roadways are the most abundant type of road and is specifically designed to have high accessibility and to connect to collector and arterial roadways. Local roads are also typically designed to support slow speed travel and to discourage through traffic and typically only serve residential land uses, accommodating on street parking within the curb-to-curb pavement section. There are typically no on-street bicycle facilities on local roads due to the slower travel speeds of the vehicles.

Collector Roadway Types	Local Roadway Types
• Enhanced Collector • Major Collector • Minor Collector	• 60- Foot Local • 50- Foot Local


Typical Collector Street

Typical Local Street

Enhanced Collector Road

As the name implies, the Enhanced Collector is applicable to serving residential and/or commercial land uses whereby there is an added need or emphasis on enhanced or expanded mobility needs. These include oversized shared use paths, bicycle lanes/buffers, and on-street parking. Land uses being served by an Enhanced Collector may offer a commercial core area, village, central business district, business park or other development project with mixture of land uses at higher densities/intensities and/or may be seeking a unique character of place through the enhanced use of street trees, hardscaped plazas, public art and mobility options.

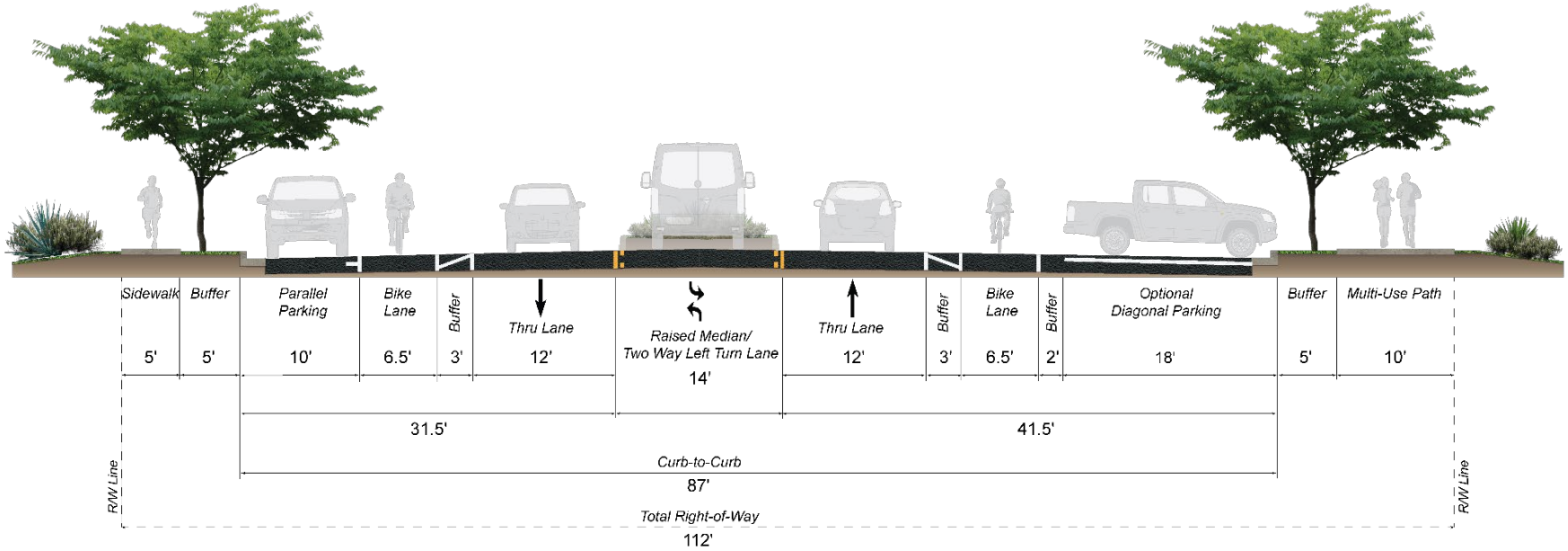


Figure 10-4: Enhanced Collector Road Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
112 feet	3 Lanes	15,000 – 17,500 ADT	25-40 MPH	35 MPH	$2,722,134*

**Costs include all items shown in Cross section divided by total number of vehicular lanes*

Major Collector Roadway

A conventional Major Collector roadway at 80-feet in right-of-way width provides connection from arterial streets to local streets over short distances and direct access to non-residential properties.

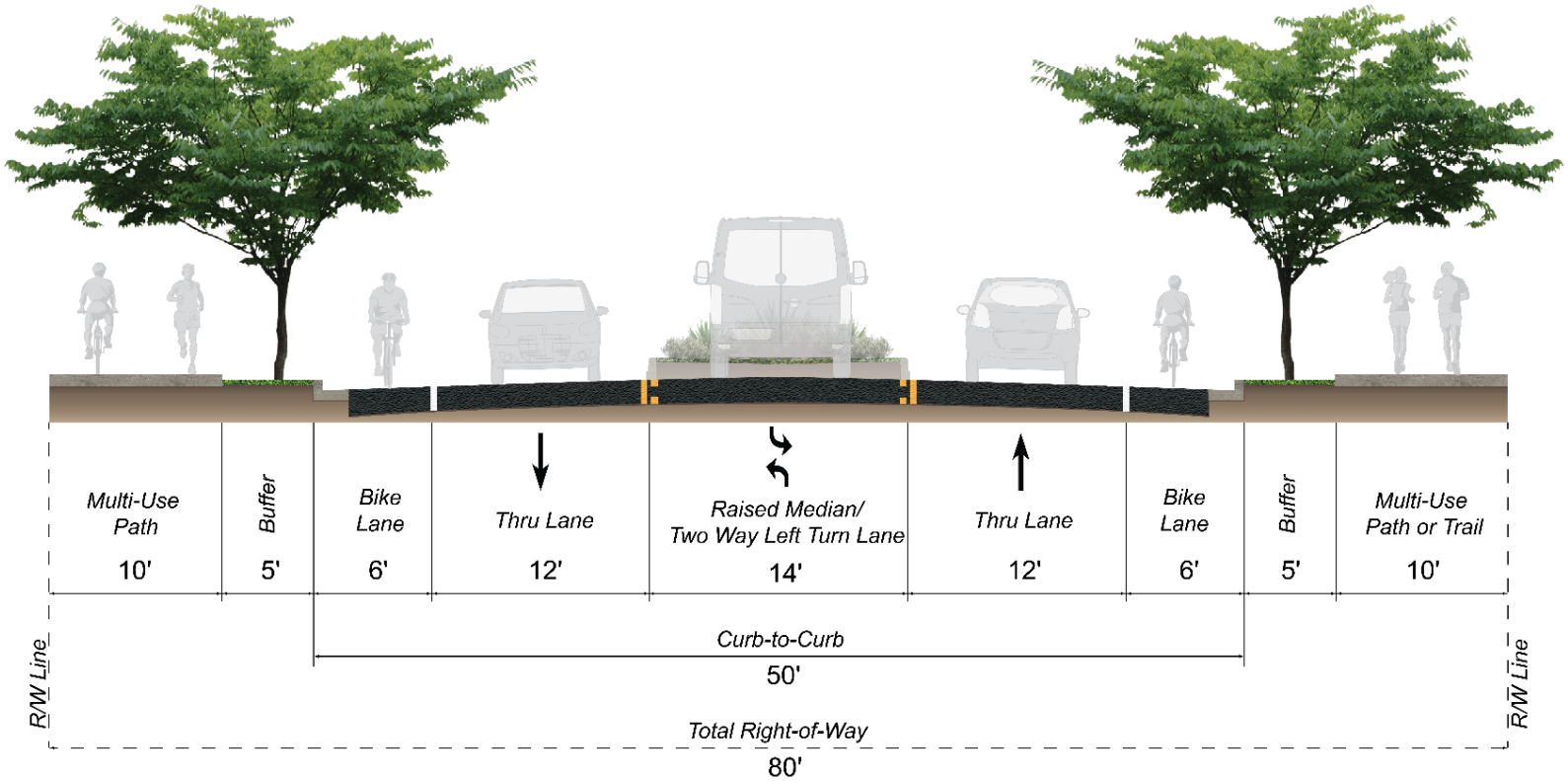


Figure 10-5: Major Collector Road Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
80 feet	3 Lanes	15,000 – 17,500 ADT	25-40 MPH	35 MPH	$2,283,958*

**Costs include all items shown in Cross section divided by total number of vehicular lanes*

Minor Collector

The Minor Collector is primarily intended to serve short trips, provide direct access to private properties, and accommodate on street parking. The Minor Collector contains optional bicycle lane and reduced landscaping areas than the Major Collector roadway. There is no median area and travel lanes are 11-feet rather than 12-feet. These roadways are not permitted in residential subdivisions and are instead ideal for infill, downtown and industrial developments

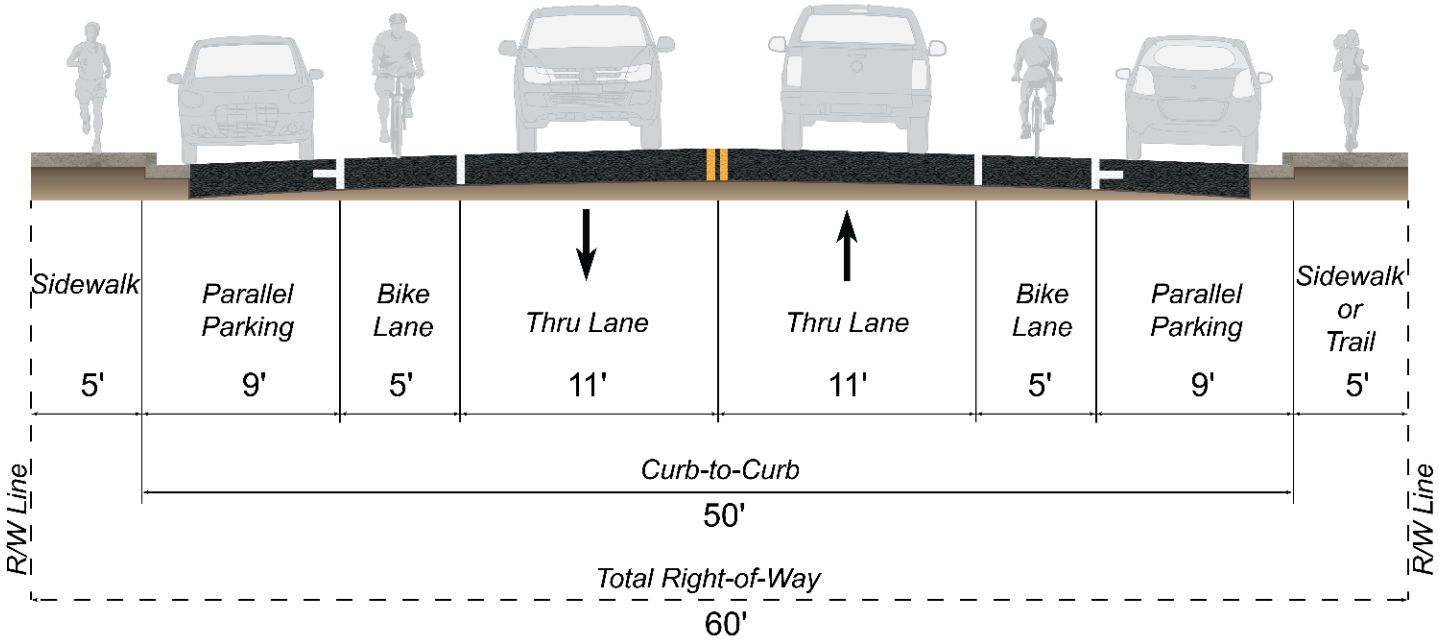


Figure 10-6: Minor Collector Road Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
60 feet	2 Lanes	15,000 – 17,500 ADT	25-40 MPH	30-35 MPH	$1,669,022*

**Costs include all items shown in Cross section divided by total number of vehicular lanes*

Local Road (50-Foot)

The 50-foot local road is not intended to support long distance travel or high-speed vehicles. This local road is designed to provide direct access to adjacent land uses as the origin or destination. The 50-foot local road is designed to only accommodate on street parking.

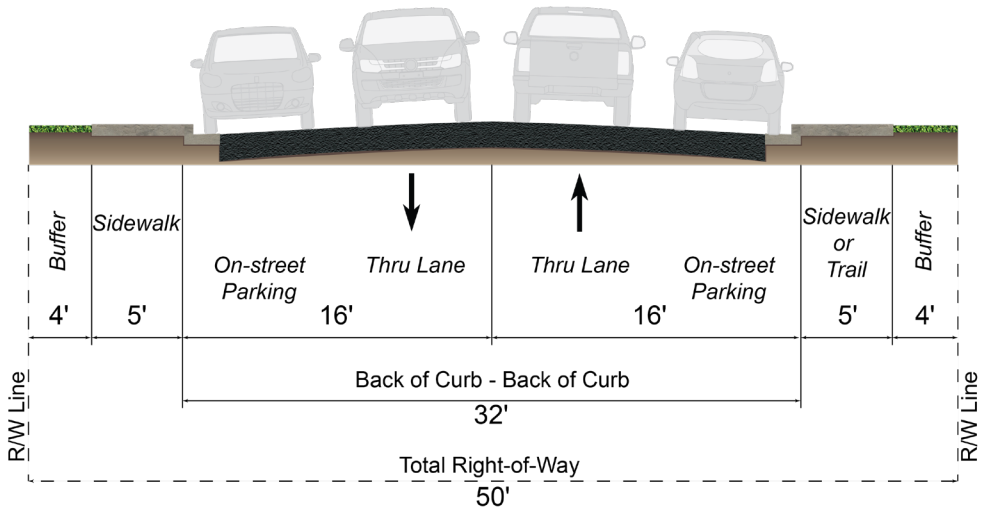


Figure 10-7: 50-Foot local Road Cross Section

Typical Design Features					
Right-of-Way Width	**Number of Lanes**	**Average Daily Traffic**	**Design Speed Limit**	**Posted Speed Limit**	**Cost Per Lane Mile**
50 feet	2 Lanes	5,000 – 7,500 ADT	25-35 MPH	25 MPH	$1,279,890*

**Costs include all items shown in Cross section divided by total number of vehicular lanes*

11 Recommended Roadway Improvements & Priorities

A variety of roadway improvements are identified based on discussions with Town of Florence personnel, projected 2040 traffic volumes obtained from MAG and the 2040 no-build LOS of the roadway segments, and technical analysis of the existing roadway framework. First, capacity improvements of significant corridors and paving of existing unpaved roadways are discussed. This discussion is followed by a summary of transportation-related improvements pulled from the Town's CIP (FY 2018-2019), as well as other capacity improvements derived from the results of the travel demand model for existing roadways that experience a LOS of E or F is located in Table 11-1.

11.1 Capacity Related Improvements to Existing or Planned Town Roads

North – South Corridor

The North-South Corridor will offer regional connectivity from US 60 to the north to I-10 to the south.

As noted in *Section 3.1*, the ADOT North-South Corridor Study has been undertaking its Draft Tier 1 Environmental Impact Statement (EIS) since October of 2016. This Florence TPS has acknowledged the results of the North-South Corridor Study will impact future roadway alignments and classifications in Florence. Public review of the Draft Tier 1 EIS began in September 2019 with public comments being accepted through October 29, 2019.

As shown in Figure 11-1, the Draft Tier 1 EIS has identified a preferred corridor, known as "Alternative 7, with the E1b and E3b options". As the Draft Tier 1 EIS preferred corridor still represents a preliminary recommendation until the Final Tier 1 EIS is formally released in the Winter of 2020, the Florence TPS is unable to precisely identify the final North South Corridor alignment at this time. Public comments and other agency inputs being received may alter the preferred corridor alignment that may be identified in the upcoming Final Tier 1 EIS; however, access points requested by the Town include: River Road, SR 287 and Hunt Hwy.

It should be noted that the preferred corridor illustrated in the Draft Tier 1 EIS represents a preliminary 1,500-foot corridor. If a preferred corridor alternative is selected, Future Tier 2 environmental studies would identify the specific location of the North-South alignment within the existing 1,500-foot corridor. Once the Tier 2 environmental studies are completed and the North-South alignment is determined, this Florence TPS will need to be updated to reflect the inclusion of this important regional roadway and how it may alter or influence other roadways in the Florence roadway network.

It is also noted that the recommended Functional Classifications for SR 79 and SR 287 are Principal Arterials at this time. If the construction of the North-South corridor comes to fruition, thereby providing traffic conveyance as a regional connector, consideration should be given to modify SR 79 and SR 287 as minor arterial functional classifications.

For purposes of the Florence Transportation Study, it is recognized that the initial two-lane facility is intended to be constructed with Pinal County RTA funding. While the Town of Florence does not plan to construct this facility, it may with the assistance of developments as it is recognized in this report as a high priority unpaved/planned roadway recommended for construction.

Figure 6.3-1. Preferred corridor: Alternative 7, with the E1b and E3b options

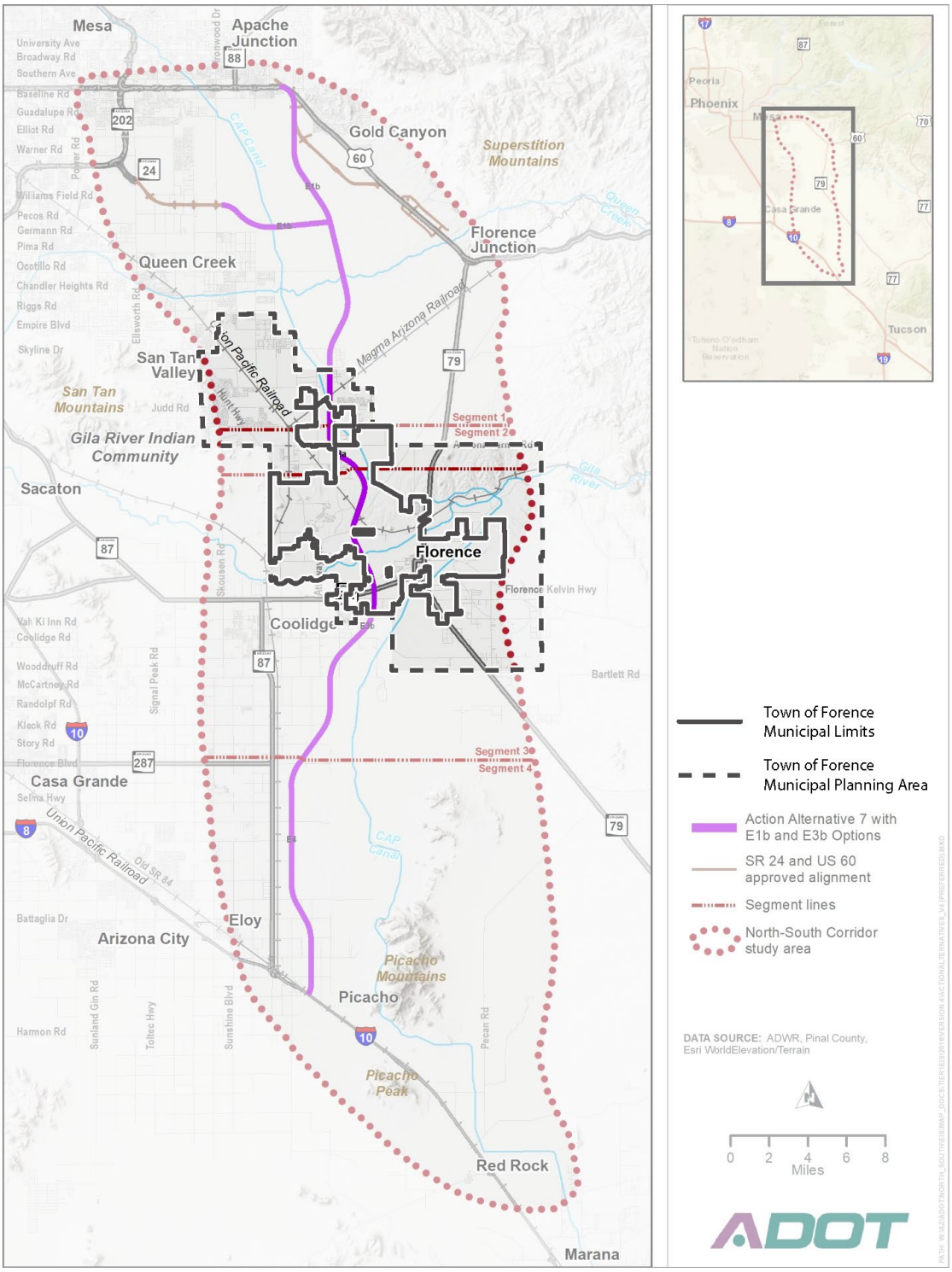


Figure 11-1: Preferred North-South Corridor Alignment as part of the Draft Tier 1 Environmental Impact Statement

Source: Arizona Department of Transportation

River Road/Butte Avenue

Previously identified as two (2) separate planned roadway facilities within proximity of one another, it is recommended that the existing planned roadway network in the immediate area just west of downtown (originating from the Florence North End Framework Study) be refined to a hybrid serving this immediate area. The current and future condition travel demand models, as well as the planned land uses in the area together suggest that this existing planned network of both River Road and the Butte Avenue extension yield a surplus of roadway capacity and thus not necessary to adequately service the area.

Capacity related roadway improvements recommended from the results of the travel demand model are found in Table 11-1 on the following page.

Butte Avenue west of downtown approaching Plant Road

Source: Google Earth

Table 11-1: Roadway Improvement Recommendations

Roadway Segment	2040 No-Build		2040 Built		Implementation Phase[1]	Cost[2]
	# of Lanes	LOS	# of Lanes	LOS		
Judd Road: Quail Run Road to Attaway Road	2	E	4	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$2,714,498
Quail Run Road: Judd Road to 0.5 miles North	2	E	3	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$1,141,980
Hunt Highway: Stone Creek Drive to Paseo Fino Way	4	F	6	C	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$2,128,878
Hunt Highway: Paseo Fino Way to Bella Vista Road	3	E	6	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$1,232,508
Hunt Highway: Bella Vista to Arizona Farms Road	2	F	6	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$10,644,387
Hunt Highway: S. of AZ Farms Road to Mirage Avenue	2	E	4	B	Short-Term: Coordinate with Pinal County Mid-/Long-Term: Construct upon annexation	$4,885,214
Hunt Highway: Mirage Avenue to Franklin Road	2	F	4	C	Near-Term Construction	$3,473,432
Hunt Highway: Fire Station #2 to Attaway Road	2	F	4	C	Near-Term Construction	$1,747,920
SR 79: Gila Drive to Hunt Highway	2	F	4	C	Mid-Term Construction	$1,568,647
SR 79: Hunt Highway to Ranch View Road	2	F	4	D	Long-Term Construction	$1,680,693
SR 79: Ranch View Road to 1st Street	2	F	4	C	Long-Term Construction	$1,187,690
Attaway Road: South of Hunt Highway[3]	2	F	4	C	Mid-Tern Construction	$13,653,927
					Total Cost	$21,787,071

[1] The Implementation Phase is a recommendation and is subject to change. Near-Term refers to 0-5 years, Mid-Term is 5-10 years, and Long-Term is 10+ years after publication

[2] Cost estimates are to be considered preliminary planning-level cost estimates

[3] First half-mile of this recommendation is within Town of Florence limits and coordination with Pinal County is required for the southern extension.

11.2 Priority Unpaved Road Gaps in the Florence Municipal Planning Area

Judd Road

Judd Road within the Florence Town Limits is currently paved as a two (2) lane roadway adjacent to Nevitt Farms (SRP), continuing to the west three (3) miles to access two (2) Pinal County residential subdivisions. Judd Road remains unpaved for approximately 3.5 miles in the Florence Municipal Planning Area from Hunt Highway to its existing terminus at Quail Run Lane. Since this unpaved road is currently within Pinal County jurisdiction, a recommendation for future paving will be long term and in conjunction with possible future annexation and or development activity in the area.

Heritage Road

Recognized as a longer-term reality due to its current Pinal County jurisdiction, paving Heritage Road will provide enhanced east-west connectivity. It is worth noting that the Pinal County RSRSM plan identifies Hiller Road (one (1) mile south of Heritage Road) as a regionally significant route. Analysis of existing land uses in this plan suggest that the existing mining operation along the Hiller Road alignment presents a significant physical obstacle to Hiller Road serving as a regionally significant route. It is therefore suggested that Heritage Road serve as a regionally significant route to compliment Arizona Farms Road (one (1) mile to the north) as there are no opportunities for additional east-west roadways until Merrill Ranch Parkway three (3) miles to the south.

11.3 Town of Florence CIP (FY 2018-2019) Roadway Improvements

Recommendations to modify various Functional Classifications may have an impact on future programmed CIP projects, additional discussion and analysis with the TAC to compare the Functional Classification findings and CIP projects is necessary prior to the prioritization of projects. Below is a listing of current Town of Florence CIP project relating to increasing roadway capacity.

1. Roundabout/Intersection Improvement SR 79 & SR 287 (Project # T-14) - $100,000 CIP funding for design in FY 2018-2019 and $1,096,074 in CIP funding for construction in FY 2019-2020 & (2nd line item) $403,926 in FY 2019-2020, $2,155,490 in FY 2020 – 2021.
2. Hunt Highway - Phase 1 Improvements at Franklin Road (Phase 1) (Project # T-65) - $40,000 in CIP funding FY 2019-2020 and $648,000 in FY 2020-2021
3. Hunt Highway - Phase 2 Reconstruction North of Franklin Road (Phase 2) (Project # T-72) - $800,000 CIP funding in FY 2018-2019.
4. Hunt Highway - Phase 3 Land Reconstruction (2,000 feet west of SR 79 to SR 79) (Phase 3) (Project # T) - $550,000 CIP funding in FY 2022/2023.
5. East 1st Street Pavement (Project # T-60) - $600,000 CIP funding in FY 2018-2019.

6. Centennial Park Ave (Butte Avenue to SR 287) (Project #T-48) - $76,000 in CIP funding FY 2020-2021 and $1,600,000 in FY 2021-2022.
7. Hunt Hwy - (Town Limits to SR 79) (Project #T-52) - $1,284,000 in CIP funding in FY 19-20.
8. Attaway Road/Hunt Highway Intersection Improvements (Project # T-62) - $700,000 in CIP funding FY 2018-2019.

12 Recommended Intersection & Safety Improvements

As previously noted, the Town of Florence is fortunate to not have had significant safety challenges (via statistical analysis) on its roadways. Both statistical and anecdotal evidence suggests that speeding is generally not a frequent or habitual problem and the crash analysis results suggest that there are no single intersection(s) that experience an unusually significant number of crashes.

Recommended intersection improvements are based on investigations and evaluation of experiences by Town staff, field investigations, safety concerns deduced from the crash data, and volume to capacity analysis of the projected 2040 traffic volumes. Please refer to Figure 12-1 for an illustration of the recommended intersection improvements described herein. Table 12-1 summarizes the recommended improvements in tabular format. Recommended intersection and/or safety related improvements are also described below:

Hunt Highway and Felix Road is an incomplete road section with poor lighting. The stop bar on Felix Road is too far removed from the intersection. Sight visibility needs to be improved, and pavement markings need to be refreshed. It is recommended to install lighting at this intersection to improve safety as well.

Hunt Highway and Arizona Farms Road is a Pinal County three (3) legged intersection (within the Florence Planning Area) with one (1) lane in each direction on Hunt Highway and one (1) lane in each direction on both Hunt Highway and Arizona Farms Road. This intersection is elevated and has a tight radius on the southeast corner. There is no curb, gutter, sidewalk nor roadway lighting in the vicinity of this intersection. Town of Florence personnel indicated that they receive numerous complaints regarding this intersection. It is recommended to reevaluate the curb radii at the intersection and likely increase the radius at the southeast corner of the intersection. Installation of lighting and refreshing pavement marking is also recommended.

Felix Road and Judd Road is multi-jurisdictional, with Judd Road under Pinal County and Felix Road under Town of Florence. No lighting exists on the west side of Felix Road nor on Judd Road. Intersection improvements and roadway lighting are recommended on Felix Road and on Judd Road.

Hunt Highway and Attaway Road is a recently signalized intersection. This intersection has sight visibility issues. Recommended intersection improvements include installing a northbound right-turn lane, installing stop bars/crosswalks, and refreshing striping to improve sight visibility/safety (FY 2018/2019).

Hunt Highway and SR 79 experiences heavy eastbound right-turn traffic volumes. A traffic signal warrant analysis is completed, traffic signal will be installed. Intersection improvements, including installing an eastbound right-turn lane, restriping the intersection and installing rumble strips, are recommended to improve the capacity (FY 2018/2019 and 2019/2020).

SR 287 and Attaway Road is a multi-jurisdictional intersection. This intersection is owned and maintained by the Town of Coolidge; however, the Town of Florence responds to the crashes due to the Town's proximity. Per Town's personnel, this intersection has the highest crash rate within Pinal County. An enhanced education and enforcement campaign may help in improving the safety at this intersection. It is recommended to complete a Roadway Safety Assessment (RSA) at this intersection.

SR 79B and SR 287 has capacity and driver orientation challenges. A new roundabout is currently in the design phases (FY 2020/2021 and 2021/2022).

Hunt Highway and Bella Vista Road is a Pinal County intersection (but in the Florence Planning Area) has had 240 crashes in the last five (5) years, including two (2) fatal crashes and fifty-nine (59) injury crashes. Sixty (60) of the 240 crashes were rear-end collisions and eighty-one (81) were left turn crashes. It is recommended to conduct an RSA at this intersection and review signal timing, clearance intervals and left turn phasing.

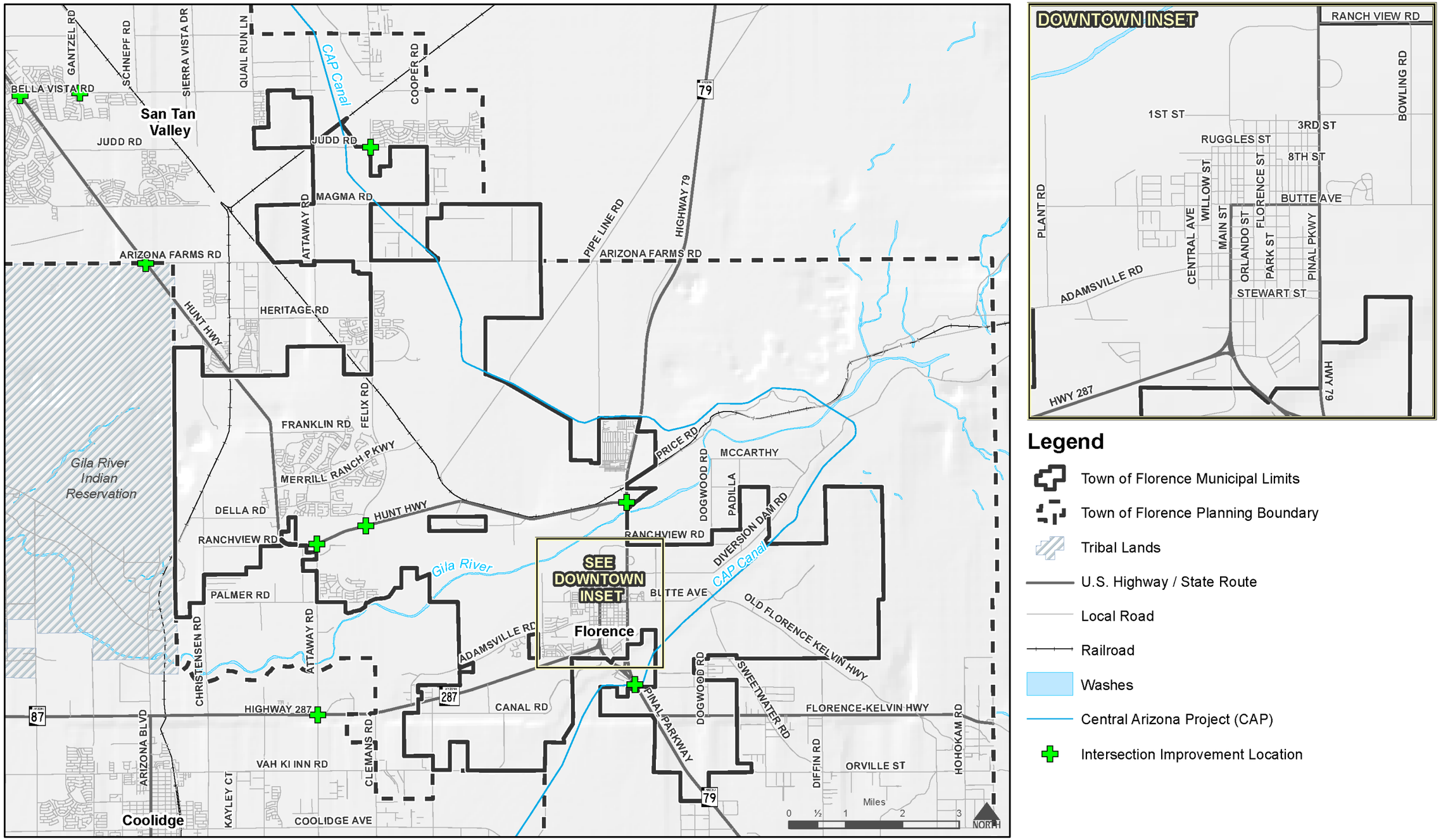
Bella Vista Road and Gantzel Road had eighty- eight (88) crashes in the last five (5) years with one (1) fatality and twenty-six (26) injury crashes. Of these crashes, fifty-two (52) were rear end collisions. It is recommended that an RSA be conducted at this intersection and review signal timing and clearance intervals.

Table 12-1: Summary of Recommended Intersection Improvements

Intersection Location	Concern	Recommendation	Implementation Phase[1]	Cost[2]
Hunt Highway/ Felix Road	Incomplete Intersection, poor lighting, sight visibility.	Install lighting at the intersection, refresh painting, install edge lines, intersection improvements to increase visibility.	Short-Term (design currently underway)	$65,100
Hunt Highway/ Arizona Farms Road	Elevated intersection, no lighting, tight radius.	Reevaluate radii, install lighting, refresh pavement marking.	Short-Term (Pinal County design currently underway)	$37,580
Felix Road/ Judd Road	Lighting, sight visibility.	Intersection improvement to improve sight visibility, lighting on the west side of Felix Road and on Judd Road	Long-Term	$50,174
Hunt Highway/ Attaway Road	Sight visibility, high northbound right-turn volumes.	Install a northbound right-turn lane, install stop bars/crosswalks, refresh striping.	Short-Term	$32,777
Hunt Highway/ SR 79	Heavy eastbound right-turn traffic volumes, safety.	Install an eastbound right-turn lane, install a traffic signal, restripe the intersection, install rumble strips.	Short-Term (In conjunction with ADOT bridge project to signalize the intersection in 2021)	$39,645
SR 287/ Attaway Road	High number of crashes, education and enforcement issues.	Coordinate with Coolidge to complete an RSA.	Short-Term	$25,000
SR 79/ SR 287	Capacity issues.	Roundabout is currently in the design phases.	Short-Term	N/A
Hunt Highway/ Bella Vista Road	Safety - high number of crashes, lot of rear-ends and left-turns.	Coordinate with Pinal County to complete an RSA, evaluate left-turn phases, review signal timing and clearance intervals.	Short-Term	$25,000
Bella Vista Road/ Gantzel Road	Safety – high number of crashes, lot of rear-ends.	Complete an RSA, review signal timing and clearance intervals.	Short-Term: Conduct RSA Mid-Term: Construction	$25,000
			Total Cost	$300,276

[1] The Implementation Phase is a recommendation and is subject to change. Near-Term refers to 0-5 years, Mid-Term is 5-10 years, and Long-Term is 10+ years after publication

[2] Cost estimates are to be considered preliminary planning-level cost estimates



Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- Tribal Lands
- U.S. Highway / State Route
- Local Road
- Railroad
- Washes
- Central Arizona Project (CAP)
- Intersection Improvement Location

Figure 12-1: Intersection & Safety Improvements

13 Recommended Pedestrian & Bicycle Facility Improvements

As documented earlier in Section 5.9 *Pedestrian & Bicycle Facilities*, Florence currently has a limited inventory of existing bicycle facilities (bicycle lane and/or multi-use paths). The existing bicycle facility infrastructure is limited to the collector roadways serving Anthem at Merrill Ranch, a small segment of Hunt Highway and the existing paved shoulders along the ADOT state highways serving Florence.

It is important to note that dedicated bicycle lanes and/or multi-use paths (that are separated from the roadway to accommodate bicycle and pedestrian modes together) are designated on Parkways, Principal Arterials, Minor Arterials, and Major Collector roadways. Bike lanes and/or signed bike routes are optional on Minor Collector roadways. Please see the representative roadway cross sections for these roadway types in Section 11 *Recommended Roadway Cross Sections* to illustrate the bicycle lane in relation to the other roadway features.

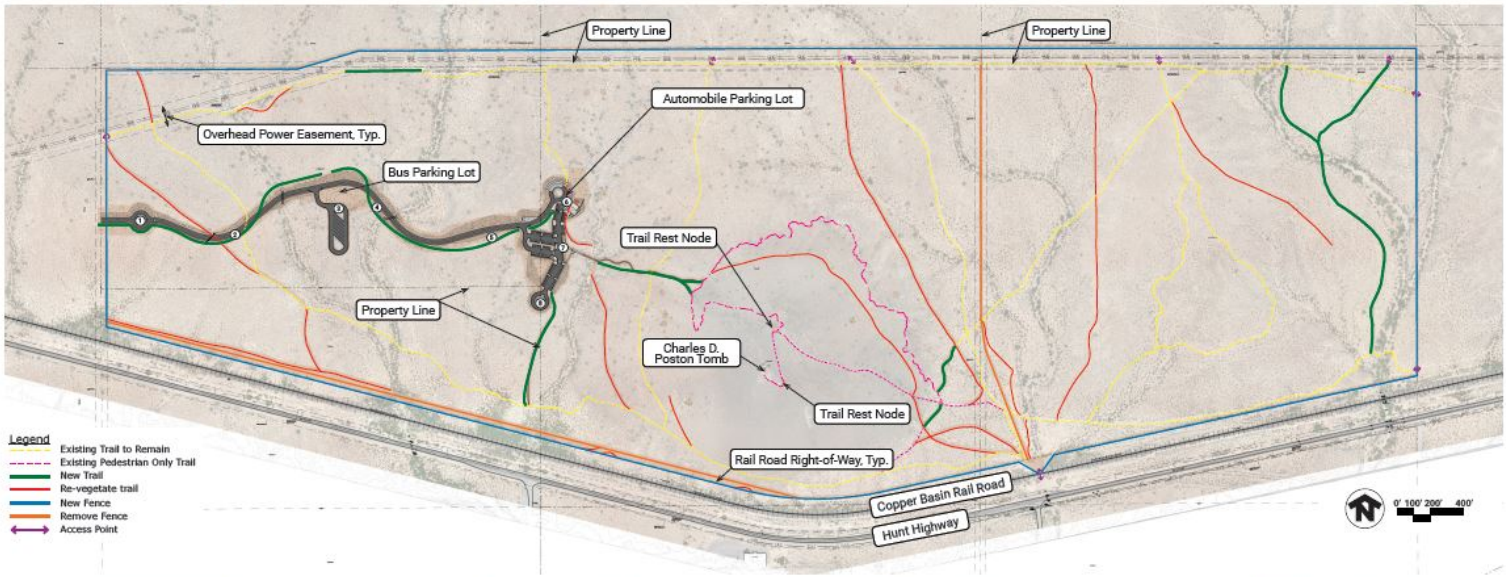
The recommendations set forth are made concurrent with the 219 Florence Active Transportation Plan (ATP), which utilized public survey findings and stakeholder feedback, as well as existing conditions both researched and observed. Recommendations are separated into on-street facilities and off-street facilities. The on-street facilities were determined through the newly recommended Functional Classifications presented in Section 11 *Recommended Roadway Cross Sections*, which created an opportunity to plan and construct an interconnected network of bicycle facilities along Florence roadways. Refer to Figure 13-1 for the recommended pedestrian and on-street bike facilities.

However, considerations were also made for the off-Street facilities network as part of the development of the 2019 Florence ATP. See Figure 13-2 of this document for a map graphically illustrating the recommended off-street pedestrian and bicycle infrastructure. For more detailed information pertaining to pedestrian and bicycle recommendations please review the 2019 Florence ATP. The ATP contains components such as multimodal facility definitions and hierarchy, facility design standards, a detailed implementation and action plan, facility cross sections, and recommended pedestrian and bicycle-related policies.

A map of the complete on- and off-street pedestrian and bicycle network can be viewed in Figure 13-3.

Poston Butte Trail Head

The Town of Florence is currently working with the Bureau of Land Management (BLM) to acquire another 200+ acres adjacent to the butte to preserve additional open space and expand hiking, biking and equestrian trails for recreation use. Proposed trails in the expansion would connect to all future bicycle/pedestrian access points and corridors.



Poston Butte Open Space & Trails Development

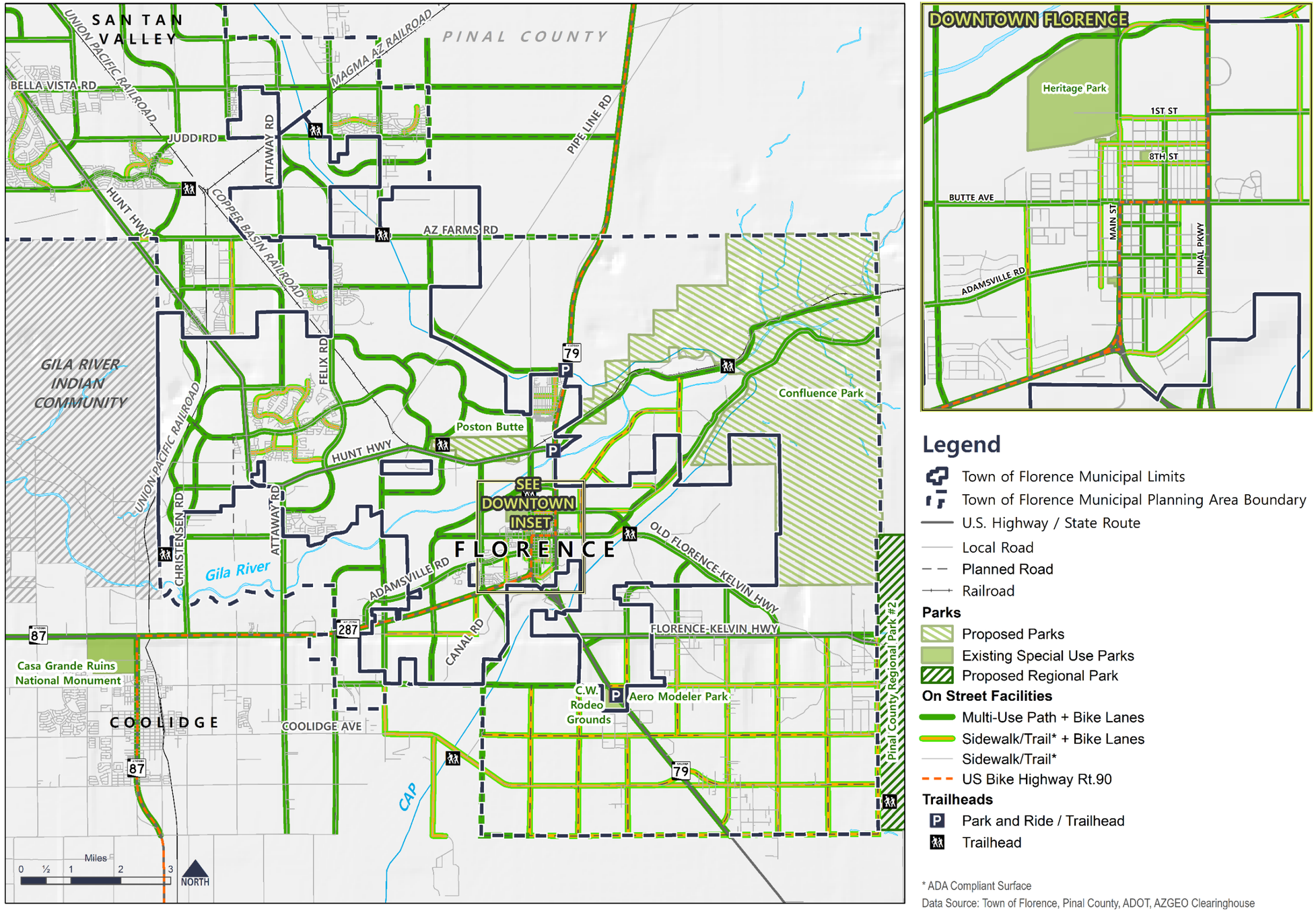


Figure 13-1: On-Street Bicycle & Pedestrian Facilities

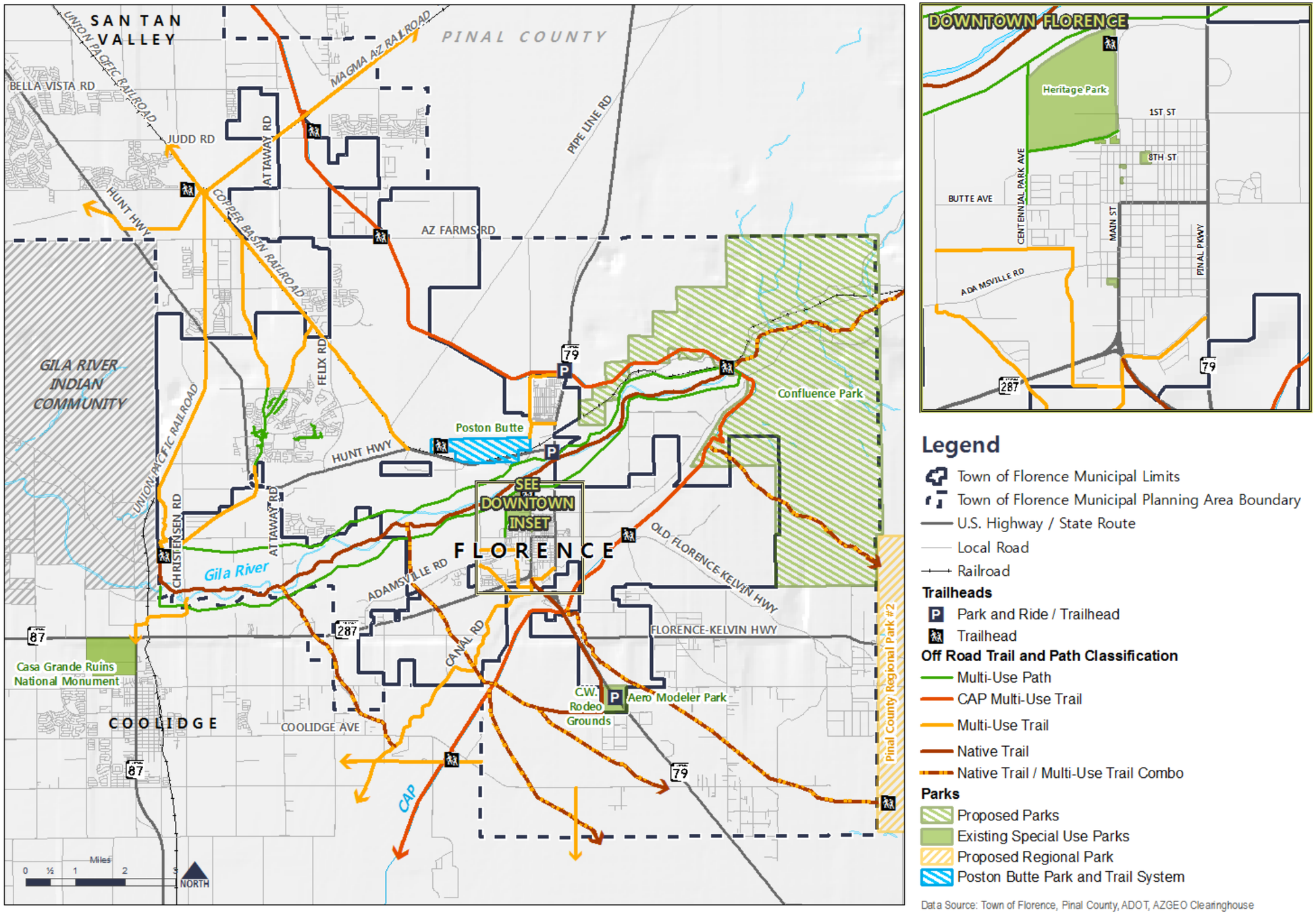


Figure 13-2: Off-Street Pedestrian & Bicycle Facilities

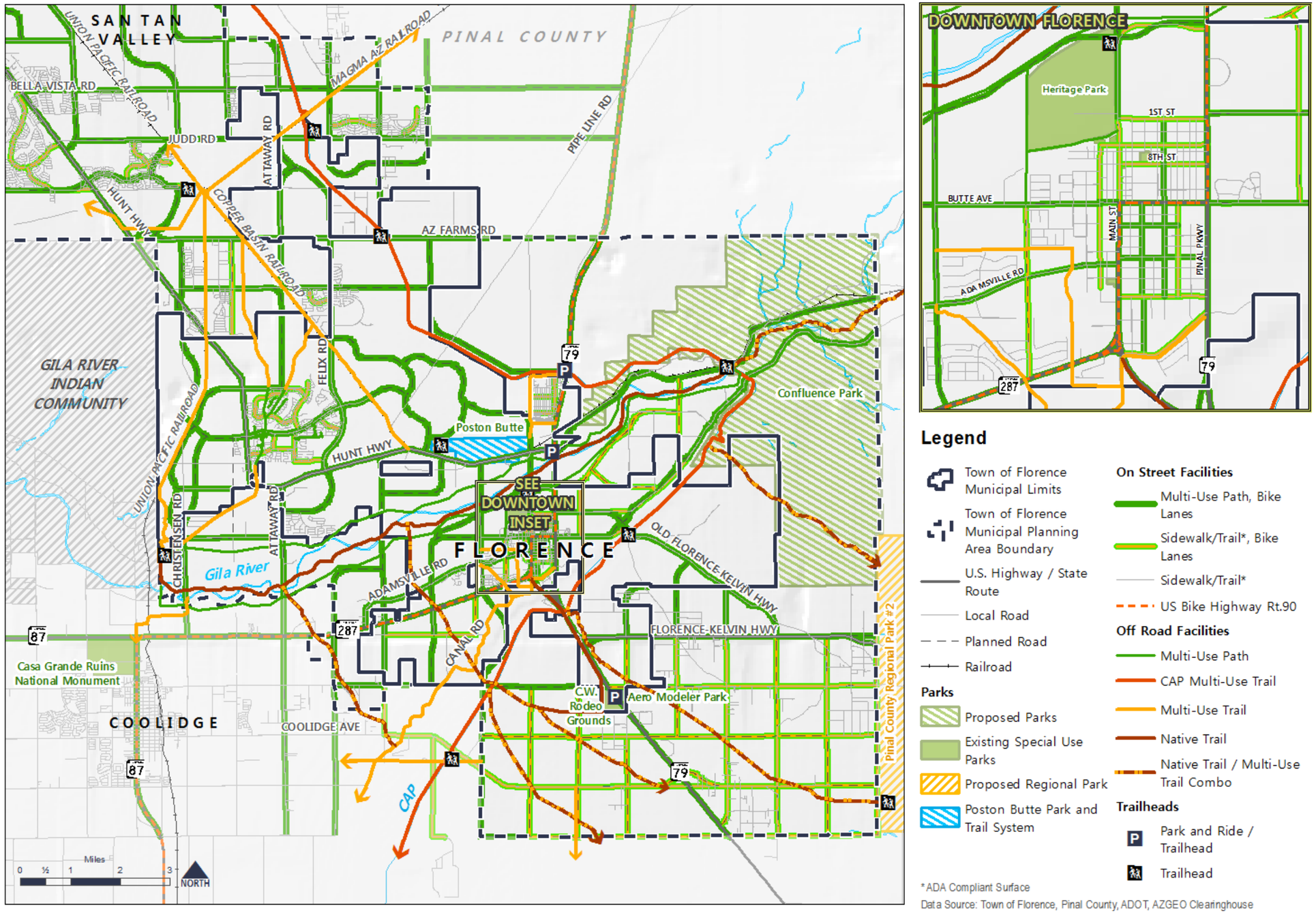


Figure 13-3: Combined On- & Off-Street Facilities Map

14 Recommended Town Policies & Regulations

Previously summarized in Section 3.4 *Town Regulations & Policies*, are the desired policies and/or regulations that the Town of Florence would like to achieve in the Florence Transportation Study. In no particular order, the following suggested policies are offered for consideration.

14.1 Sight Visibility Triangle

At public street intersections, it is an important safety consideration to maintain unobstructed views on corner properties. Below is a sample definition of a sight visibility triangle describing the application of the concept, including limits of encroachment and sight obstructions to enhance safety and visibility. A sample graphic illustrating the concept is also provided in Figure 14-1.

Sight Visibility Triangles at Corners: No walls, fences, buildings, structures, landscaping or other visual obstruction in excess of two (2) feet in height (measured from the top of the street curb at each end of the sight visibility triangle) shall be placed on any corner lot within a triangular area formed by the curb lines and a line connecting them at points thirty-three (33) feet from the intersection of lines, extended from the back of curbing. There shall be an exception for any existing trees to remain within the area of the visibility triangle but shall be maintained at a minimum height of ten (10) feet, as measured from finished grade to permit unobstructed visibility for automobile drivers.

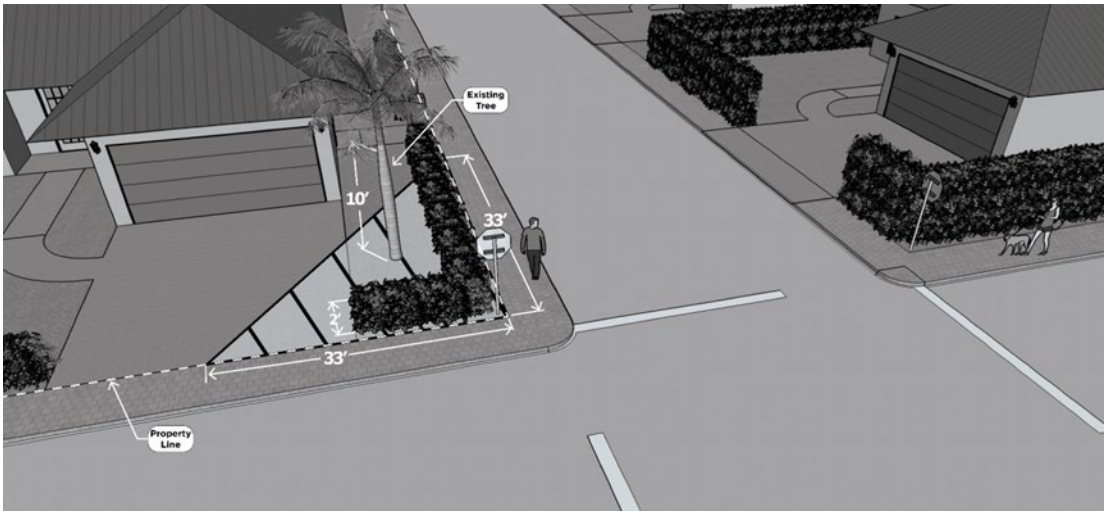
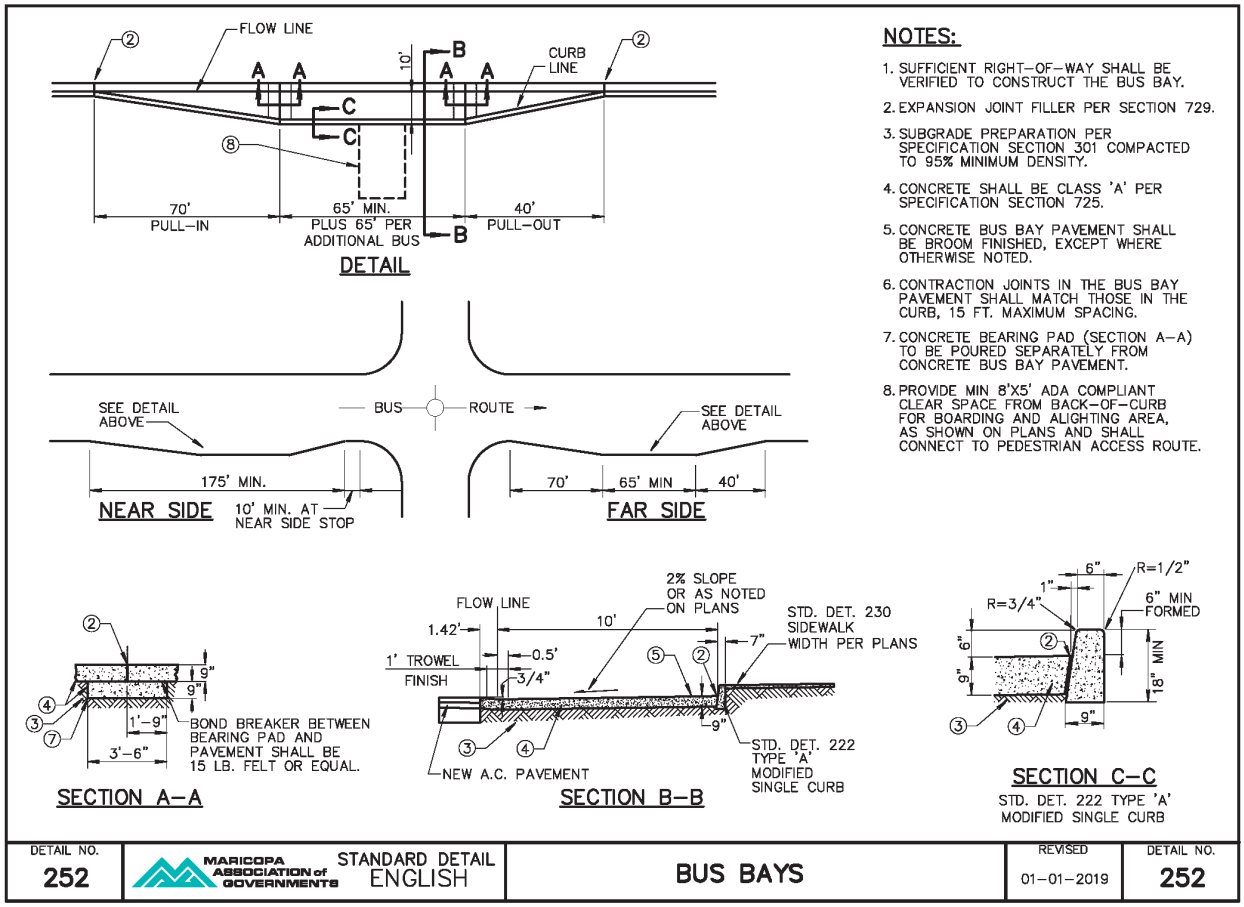


Figure 14-1: Sight Visibility Triangle

14.2 Public Transportation Bus Turnout

Incorporating the design of a bus turnout into an existing or planned roadway requires an



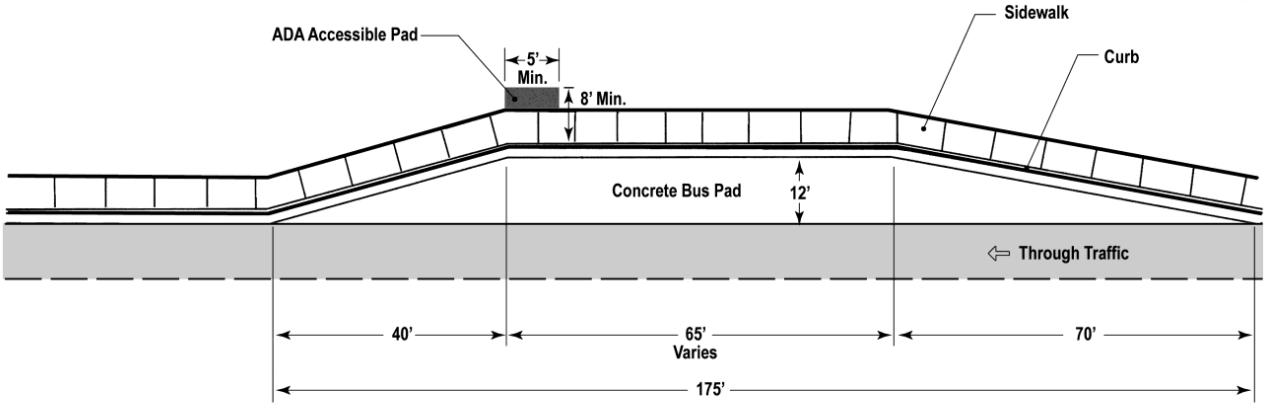
engineered design specific to the operating and geometric characteristics to that particular roadway. The representative bus turnout standard detail is the MAG Standard Detail 252 shown in Figure 14-2. Should there be a need or opportunity to incorporate a bus turnout on an ADOT owned state highway, Figure 14-3 identifies an ADOT-approved bus turnout. It should be noted that ADOT has a bus stop encroachment permit application procedure (with submittal requirements and drawings) that must be followed to obtain approval for a bus stop in the ADOT right-of-way.

Figure 14-2: MAG Bus Turnout Specifications

Figure 14-3: ADOT ADA Accessible Pad Location at Bus Pullout

14.3 ADOT Best Practices for Bus Stop Location and Design

1. Sidewalk connections may be expanded from the bus stop ADA accessible pad to any existing adjacent sidewalk facility to support access generators (i.e., apartments, residential developments, businesses, government facilities).
2. Locate the bus stop to allow bus driver clear visibility of waiting passengers and to allow them a view of the on-coming bus.
3. Driveway access should be minimized within the bus stop area, both to allow greater visibility for all drivers.
4. Areas identified within an intersection view angle or clear zone shall remain unobstructed.
5. The passenger loading area should be at the far end of the bus stop and within ten (10) feet of bus shelter or bus stop sign.
6. Provide sufficient clear space for wheelchair lift deployment at bus stops, per ADA regulations. In general, this is a minimum of sixty (60) inches parallel to the roadway and ninety-six (96) inches perpendicular to the roadway.
7. When possible, the slope of a bus stop pad shall match slope of the adjacent sidewalk; ADA regulations allow a two (2) percent maximum slope.
8. If bus stop furniture is placed, the agency will be solely responsible for liability,



ADA ACCESSIBLE PAD LOCATION AT BUS PULLOUT

operations, and maintenance. Typical forms of bus stop furniture include shelters, benches, trash receptacles, and signs.

9. Provide a minimum forty-eight (48) inch clearance between bus stop furniture and street furniture components to allow for wheelchair circulation.
10. A minimum seven (7) foot vertical clearance between the underside of a shelter canopy and sidewalk surface is required.
11. A minimum two (2) foot horizontal clearance between shelter canopy and face of curb is required.
12. Where seating under shelter is provided, per ADA regulations a space for seating of a person in a wheelchair is required under the shelter a forty-eight (48) inch by forty-eight (48) inch clearance area is required for wheelchair seating space and forward and side approach of a wheelchair.
13. Bus stop signs shall meet all applicable ADA regulations.
14. Any change in local, state, or federal law which necessitates the modification of an existing bus stop will be the responsibility of the Permittee.

14.4 Complete Streets & Adaptive Street Projects

Complete Streets are the modern approach planners, engineers, and other city officials are taking to create roads that are equally safe and navigable for all of modes of transportation. According to Smart Growth America, complete streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. This means transportation agencies and municipalities alter their historical perspective on how roads should be used and designed. An adopted Complete Street Policy allows a community to direct their transportation planners and engineers to regularly design and operate the entire road right-of-way to allow safe access for all users, regardless of age, ability, or mode of transportation. In theory, this would create a complete street network that would enhance mobility and safety for drivers, transit users, pedestrians, and bicyclists.

The following planning, design, and engineering principles could support the implementation and maintenance of Complete Streets within Florence.

- Complete Streets are designed to serve all roadway users: pedestrians, bicyclists, transit riders, motorists, and heavy vehicles/freight regardless of age or mobile ability.
- Complete Streets will be designed and constructed with every new roadway or retrofit project, including roadway improvement and widening projects.
- Complete Streets will be designed and constructed within the context that they serve.
- Complete Streets Policy will apply to private roads but should be evaluated case-by-case in order to apply the policy.
- Complete Street elements will be designed and constructed to enhance the safety of all roadway users.
- Complete Street improvements may be achieved incrementally as retrofitting improvements are achieved.

- Complete Streets may not be applicable on every street, in which case exceptions may be applied.

Potential for Implementation

The concept of a Complete Street is most suitable in the planning and design of larger roadways that can safely support multiple types of roadway users, such as arterial and collector roadways. However, the local street network needs to be included because they complement the arterial and collector roadway network by providing connectivity for motorists, bicyclists, pedestrians, and transit users. Additionally, the local streets need to be considered in order to achieve a Complete Street network. In fact, as noted in Figure 14-5 (Downtown Florence Rights-of-Way map), many of the streets within downtown Florence are classified as local streets which possess ample opportunities for incorporating Complete Street improvements.

Communities at times can be concerned about the higher level of investment associated with Complete Street projects. However, the concept of Adaptive Streets is becoming a popular alternative whereby lower cost/short-term improvements can promote the conversion of a typical road into a Complete Street. This approach could be a favorable approach to a few of Florence's existing downtown roadways that have surplus rights-of-way.

Adaptive Street Projects

Adaptive Street projects are cost-effective ways to experiment with new public spaces and street improvements. Particular to Florence, there is a desire for the TAC to collaborate with the consultant team to evaluate the existing rights-of-way in downtown Florence, review the Adaptive Street concepts presented here, and determine if there is a suitable location for the potential application of Adaptive Street concepts.

Focused on creating inexpensive, temporary solutions, the Adaptive Streets projects include two types of projects:

1. Pavement to Parks projects, which create opportunities for public spaces ("park-lets") in underutilized roadway/right-of-way space, and
2. Tactical Urbanism projects, which employ the same low-cost, temporary street treatments as Pavement to Parks, but primarily focus on improving safety and mobility in the public right-of-way, rather than providing placemaking opportunities.

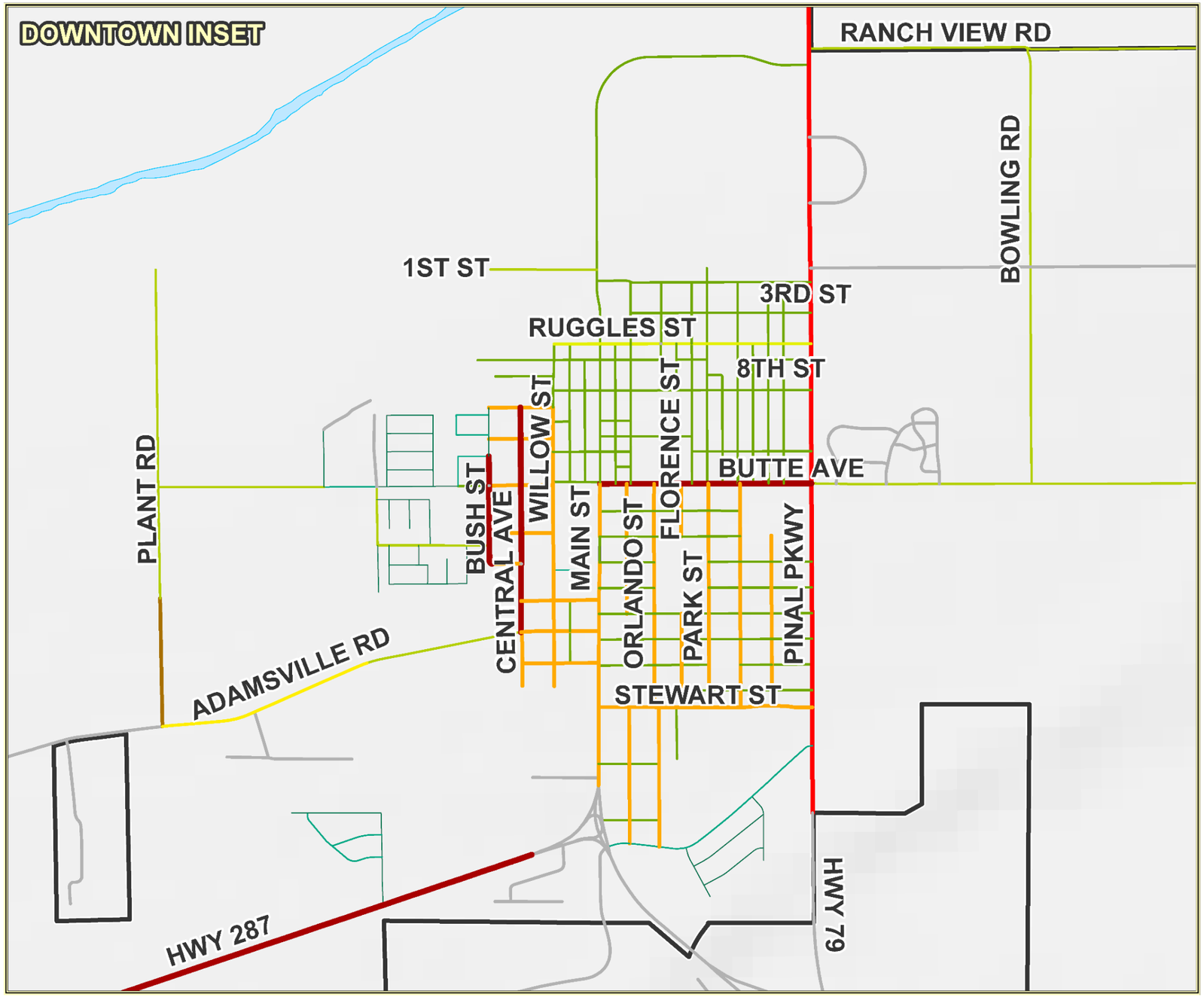
The projects are intended to last about one (1) to three (3) years, which allows for them to be constructed quickly, and easily improved upon according to community feedback. Projects which are successful will transition into permanent infrastructure, while unsuccessful projects will simply return to their previous configuration. Adaptive Street projects demonstrate an established effort to implement quick and economical treatments that enhance the function of streets. Adaptive Street Projects are characterized in four features:

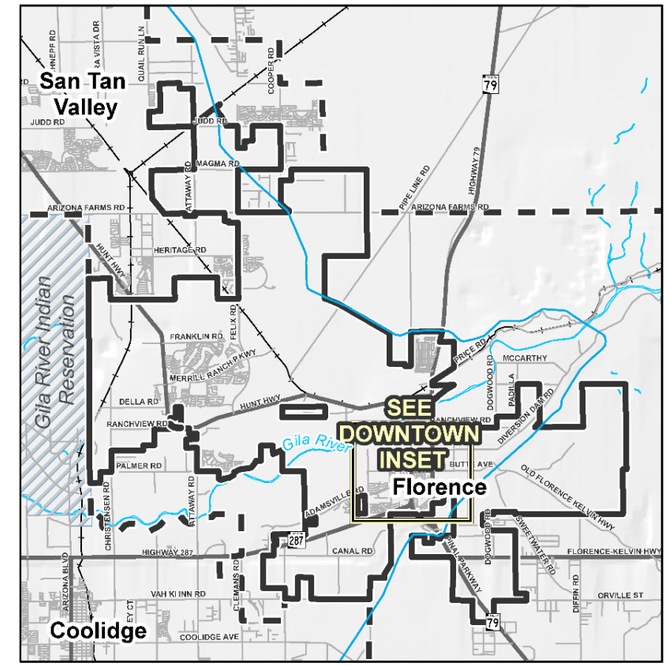
- Short-term - Construct projects quickly and allow community stakeholders to provide feedback before permanent improvements are made
- Low-cost - Use simple, temporary materials to reduce design and labor costs and to expand the reach of the program (i.e., painted temporary curb bulb outs with oversized planters)
- Adaptable - Design improvements to be scalable and temporary so that changes can be made based on performance evaluations and community feedback
- Community-oriented - Ensure that projects address community needs and are universally accessible, regardless of age or ability

The Adaptive Street and Tactical Urbanism projects are experimental and cost-effective ways of creating public space as well making improvements to the streets. By implementing tactical urbanism principles and adaptive street projects, streets within Florence can quickly and cheaply transform into vibrant spaces for community gathering while offer a corridor for safe and easy mobility for all users, regardless of age or ability.

Source: City of Tucson, Az

Figure 14-4: Tucson/ Living Streets Alliance Tactical Urbanism Example





Legend

- Town of Florence Municipal Limits
- Town of Florence Planning Boundary
- Tribal Lands
- U.S. Highway / State Route
- Local Road
- Railroad
- Washes
- Central Arizona Project (CAP)

ROW

- Less Than 50'
- 50'
- 60'
- 64', 66', 68'
- 70'
- 78'
- 80'
- 88'
- 90'
- 100' or Greater
- Unknown

Data Source: Town of Florence

Figure 14-5: Downtown Florence Roadway Rights-of-Way

14.5 Enhanced Mobility and Connection of Florence's Residential Communities

The Town of Florence is requesting that the Florence TPS establish policies that will require the improvement of bicycle and pedestrian facilities within new subdivisions as well as connection between subdivisions (or residential communities) in the subdivision platting submittal and review process. Below are some possible policies that the Town may wish to consider.

1. The Town of Florence shall promote future development plans that provide opportunities for residents to engage in public activities locally through enhanced greenspace and recreation opportunities; enhanced transportation options for the community, including improved pedestrian and bicycle infrastructure; and the connection of the Town through streetscape corridors.
2. The Town shall update the Zoning Ordinance to institute a development standard that requires a path or trail connection between all existing and proposed neighborhoods.
3. New subdivisions should be connected to existing adjacent developments, or provide stub streets to future development areas, to allow for strong internal pedestrian, bicycle, and automobile connectivity. Cul-de-sacs should only be reserved for use when physical site constraints are present, and pedestrian connectivity to adjacent facilities should be paramount.
4. The incorporation of "complete streets" should be utilized to enable safe, attractive, and comfortable travel for all users, including automobiles, pedestrians, bicyclists, and transit. The design of residential streets in these suburban neighborhoods should promote slower vehicular speeds, as well as provide on-street parking, and bicycle and pedestrian facilities.
5. All residential developments shall include active and passive open space areas designed, located, and oriented to provide high pedestrian accessibility. The design and placement of public off-street pedestrian trail connections to adjacent development is highly encouraged.
6. Connect residential and non-residential sites with interior and exterior sidewalks, trails, and paths to adjacent neighborhoods to reduce vehicle use and enhance community health and air quality.

Source: Google Earth

15 Funding Sources

15.1 Federal Funding Sources

Surface Transportation Block Grant Program (STBGP)

Managed through the Federal Highway Administration (FHWA), the Surface Transportation Block Grant Program (STBGP) was reestablished through the Fixing America's Surface Transportation (FAST) Act in 2015. The primary purpose of the FAST Act is to provide long-term funding certain for surface transportation infrastructure planning and investment. The FAST Act maintains a focus on safety, keeping intact the established structure of the various highway-related programs, and has had a continuous effort to streamline project delivery. The FAST Act is set to authorize $305 billion over FY 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs.

The FHWA apportions funding for each state as a lump sum that is then divided among apportioned programs that become obligated for transportation alternatives, planning and research, and bridges not located on Federal-aid highways. Monies are also sub-allocated for government agencies in proportion to their relative share of the state's population. Based on Florence's current population, projects eligible for funding are identified through competitive evaluation through Central Arizona Governments (CAG) and the MAG.

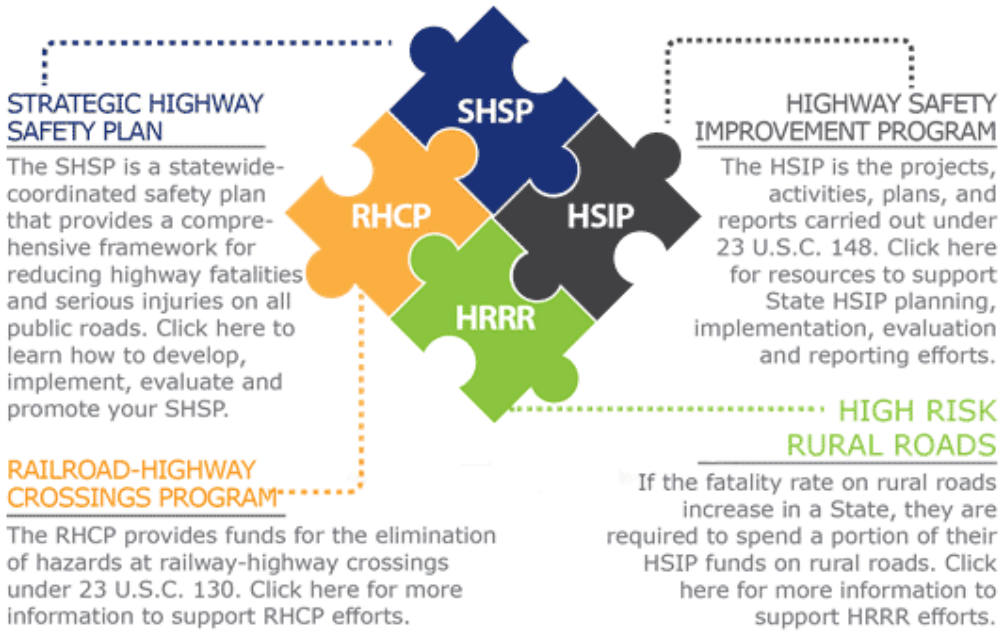
Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is another available federal-aid program with the purpose of minimizing traffic fatalities and serious injuries on all public roads, including non-state-owned roads, as well as roads within tribal lands. The HSIP project generally always use data-driven and strategic approaches for improving highway safety with a focus on performance.

The HSIP consists of three (3) main components (Figure 15-1), the Strategic Highway Safety Plan (SHSP), State HSIP or program of highway safety improvement projects and the Railway-Highway Crossing Program (RHCP), In addition, Arizona and some other states also have a High Risk Rural Roads (HRRR) program if they had increasing fatality rate on rural road. Refer to ADOT's HSIP Manual to see if any roads in Florence meet the requirements of a HRRR.

Each year, HSIP funding is appropriated through a competitive application process administered by ADOT. ADOT agencies and local agencies prepare applications through their respective COGs/MPOs. Eligible projects are prioritized based on a benefit/cost ratio. In Arizona, HSIP funding in FY 21-22 was approximately $56,520,000 that funded thirty-one (31) local projects and sixteen (16) state projects. For FY23 and FY24, there is approximately $35 million of HSIP funding for Arizona each year.

Figure 15-1: FHWA HISP Components



Source: Federal Highway Administration (FHWA)

Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant program

The BUILD Transportation Discretionary Grant Program is highly competitive federal grant program that invests in road, rail, transit and port projects that promise to achieve national objectives. Previously known as Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grants, Congress has dedicated nearly $7.1 billion for ten rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

The eligibility requirements of BUILD are broad and allow project sponsors at both the State and local levels to use funds for multimodal and multi-jurisdictional projects that are more difficult to support through traditional DOT programs. BUILD can fund port and freight rail projects, for example, which play a critical role in our ability to move freight but have limited sources of Federal funds. BUILD can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional Federal programs which provide funding to very specific groups of applicants. This flexibility allows BUILD and agencies at the State and local levels to work directly with a host of entities that own, operate, and maintain much of the transportation infrastructure, but otherwise cannot turn to the Federal government for support.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides funding for eligible transportation projects, programs, and operational strategies that essentially reduce

emissions and contribute to the attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide and particulate matter. Examples of eligible projects include transit vehicle replacement, transit facility development, non-recreational trails, and bicycle sharing programs. CMAQ funds are apportioned to the states and are administered through state DOTs and/or MPOs, and eventually determine the selection of the CMAQ projects; however, FHWA requires an analysis of project emissions benefits as part of the funding criteria.

All CMAQ projects must meet all FHWA requirements and must be included in the MPO's current transportation plan and Transportation Improvement Program, where applicable, and in the current State Transportation Improvement Program. CMAQ typically requires a twenty (20) percent local match. State funds, donations from non-federal third parties, or in-kind donations from local governments may be used to satisfy the local match.

Federal Transit Administration (FTA): Formula Grants for Rural Areas - 5311

This program provides capital, planning, and operating assistance to states, federally recognized Indian tribes, and state or local government authorities to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destinations. FTA generally requires a local match between twenty (20) percent to fifty (50) percent depending on the type of project.

Federal Transit Administration (FTA): Rural Transportation Assistant Program - 5311(b)(3)

This program provides a source of funding to assist in the design and implementation of training and technical assistance projects and other support services tailored to meet the needs of transit operators in nonurbanized areas. Eligible recipients include states, local governments, and providers of rural transit services. Funds may be used to support nonurbanized activities in four categories: training, technical assistance, research, and related support services. There is no Federal requirement for a local match.

Federal Transit Administration (FTA): Enhanced Mobility of Seniors and Individuals with Disabilities Program - 5310

The purpose of the program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in all areas – large urbanized (over 200,000), small urbanized (50,000-200,000), and rural (under 50,000). Eligible projects include both traditional capital investment and nontraditional investment beyond the Americans with Disabilities Act (ADA) complementary paratransit services.

Federal Transit Administration (FTA): Access and Mobility Partnership Grants

Access and Mobility Partnership Grants seek to improve access to public transportation by building partnerships among health, transportation and other service providers. This program provides competitive funding to support innovative projects for the transportation disadvantaged that will improve the coordination of transportation services and non-emergency medical transportation services. There are two (2) funding opportunities under the initiative: The Innovative Coordinated Access and Mobility (ICAM) Pilot Program and Human Services Coordination Research (HSCR) grants. A local match ranging from twenty (20) percent to fifty (50) percent is required depending on the type of project.

15.2 State Funding Sources

Arizona Department of Transportation Local Public Agency

The purpose of the ADOT LPA is to provide guidance with project delivery and oversight to local public agencies such as counties, towns, cities and tribal governments. The ADOT LPA assists the project sponsor and project managers with delivery of federal funded local government projects and will provide oversight and monitoring of federal funded local projects. ADOT LPA links local government project planning with project development. Programs include:

- Transportation Alternative Program (TA)
- Safe Routes to School
- Off System Bridge Program
- Highway User Revenue Fund (HURF) Exchange

The three (3) acceptable administration options in which LPA projects may qualify for federal funding include:

- ADOT Administered Project (AA)
- Self-Administered Project (SA)
- Certification Acceptance (CA)

Highway User Revenue Fund (HURF)

The Arizona Highway User Revenue Fund (HURF) was established in 1974 and is the primary source of revenues available for highway construction and transportation in Arizona. The collections for HURF come from gasoline and use fuel taxes, motor carrier fees, vehicle license tax, motor vehicle registration fees, and other miscellaneous fees. The HURF revenues are then distributed to counties, cities, towns and the State Highway Fund. Since Florence is within the MAG Planning Boundary, HURF would generally be distributed through the MAG Transportation Improvement Program.

Vehicle License Tax (VLT)

The Vehicle License Tax (VLT) is includes as part of a motorist's annual fee to register a vehicle. The fee is based on the assessed value of the vehicle. The funds generated through the State's VLT are merged with the State's HURF.

15.3 Regional Funding Sources

Pinal Regional Transportation Authority

In 2015, the Regional Transportation Authority (RTA) was established by the Pinal County Board of Supervisors to be a public improvement and taxing subdivision of the State of Arizona to coordinate multi-jurisdictional transportation planning, improvements, and funding. On November 7th, 2017, Pinal County Voters approved a 20-year regional transportation plan and a ½ cent excise tax to fund the plan of improvements identified for the RTA. The Pinal RTA has been the subject of litigation over the past couple of years, and recently the Arizona Court of Appeals has confirmed the validity of the Pinal RTA and there is currently $29 million in collected revenues that is ready to be utilized to construct roadway improvements in Pinal County.

Maricopa Association of Governments Transportation Improvement Program (TIP)

The Maricopa Association of Governments (MAG) Transportation improvement Program (TIP) serves as a five (5) year guide for the preservation, management and expansion of public transportation services across Maricopa County and portions of Pinal County. Through the five (5) year TIP, MAG will list Calls for Projects, which are listings of project opportunities they have available funding for.

Maricopa Association of Governments Traffic Signal Optimization Program (TSOP)

Projects launched through this program provide technical assistance to member agencies. This helps to improve traffic signal coordination and enables optimization and review of operations through simulation modeling. Signal optimization is performed for the following reasons:

- To adjust signal timing to account for changes in traffic patterns due to new developments and traffic growth
- To reduce motorist frustration and unsafe driving by cutting down stops and delays
- To improve traffic flow through a group of signals, which reduces emissions and fuel consumption
- To postpone the need for costly long-term road capacity improvement by improving traffic flow with existing resources

The TSOP has been championed by the MAG Intelligent Transportation Systems Program to provide traffic engineering assistance for refining signal operations across the MAG region.

Typical TSOP projects cost about $30,000, with projects involving multiple agencies or coordination with freeways costing as much as $50,000.

Maricopa Association of Governments - Safe Routes to School Funds

Each year MAG budgets approximately $400,000 for non-infrastructure projects related to Safe Routes to School. In fall of 2017, a call for applications occurred and 39 projects were awarded. While much of the money has been allocated, there is two (2) million dollars remaining for projects through fiscal year 2022, specifically for Priority 2- SRTS Support Activities.

Maricopa Association of Governments - Design Assistance Program

The MAG Design Assistance Program was created to assist communities by funding infrastructure projects related to bike, pedestrian, and shared-use facilities such as multi-use paths. A request for projects for Design Assistance funding is released by MAG in May each year. Types of projects that are eligible for Design Assistance funding include: projects that facilitate safe crossings and access to bike/pedestrian facilities, bike and pedestrian access to transit, and bike and pedestrian facility construction and improvements (sidewalk improvements, bike lanes and shoulders, safety improvements, and signing, marking and wayfinding). Applicants interested in using design assistance funds must create preliminary scoping documents for each project.

Local Transportation Assistance Funds II (LTAF)

The Local Transportation Assistance Funds II (LTAF), House Bill 2594, is a public transportation fund that is funded through the Arizona lottery proceeds.

15.4 Local Funding Sources

General Fund

Local taxpayer dollars are deposited in the General Fund, along with utility license fees, business license fees, transient lodging taxes, state shared revenues, interest income, and miscellaneous revenues and beginning cash balances. This portion of the budget is comprised largely of discretionary funds, since the Mayor and Council can allocate the funds to programs and services in any area. In other words, there are few restrictions on how these resources may be allocated. General fund dollars should avoid being spent on transportation projects as the General Funds are generally used to support Town services such services as police, fire and parks, as well as planning, community development and administrative support services.

Capital Improvement Plan (CIP)

Florence, like many municipalities, utilizes a CIP to forecast, plan, design and fund critical infrastructure needs of the community. Each year, various infrastructure project needs are identified and prioritized according to their merit and need. These potential infrastructure projects are then evaluated against likely operating revenues and financing options. Capital projects typically differ from annual operating expenses in that they involve large dollar amounts which typically require special financing since the infrastructure assets have a longer life span. The CIP then establishes a schedule and funding for each project to ensure community infrastructure needs and goals are evaluated on an annual basis.

Bonds

Municipal bonds are securities that are issued for the purpose of financing the infrastructure needs of the issuing municipality. Infrastructure project supported through bond funds can vary, but typically include streets and highways, bridges, sewer and water systems, power utilities, and various public projects. In Arizona, municipal bonds are typically be general obligations of the issuer as opposed to being secured by a specific revenue source. Tax Increment Financing is not an authorized means of funding in Arizona.

Development Impact Fees

A fee imposed on property owners and/or developers by municipalities for new infrastructure that must be built or expanded in size/capacity due to the impact of new property development. These fees are designed to offset the impact of the additional development and residents on the municipality's infrastructure and services. The Town of Florence does currently impose a roadway development impact fee.

Community Facilities District (CFD)

A Communities Facility District (CFD) is a special purpose, tax levying public improvement district of the State of Arizona which may only be located within the corporate boundaries of a municipality causing its creation. CFD's allow a city or town to deal with the costs of new growth through public financing mechanisms that assess only the lands and landowners that benefit from the specific improvements, infrastructure or enhanced municipal services provided by the District. In Florence, some infrastructure for the Merrill Ranch master planned community was constructed with funding through two CFD's.

Improvement District

Though less common than the CFD financing instrument in Arizona, an Improvement District allows a local government agency to levy and collect special assessments on property that is within the boundaries of the improvement district for the purpose of making infrastructure improvements within the improvement district.

Private Funds

Private funds may come from developers, homebuilders or property owners to aid the development, construction, and operation of transportation and other infrastructure facilities that are necessary to serve the needs of the incoming development.