SONOMA COUNTY AIRPORT SMART STATION SPECIFIC PLAN + EIR
EMPLOYMENT INVESTMENT AREA PROFILE

JANUARY, 2016

PREPARED BY:

EMPLOYMENT INVESTMENT AREA PROFILE

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EXECUTIVE SUMMARY

This Employment Investment Area Profile (EIA Profile) outlines existing opportunities and constraints and will serve as a reference in the development of the Sonoma County Airport SMART Station Specific Plan (Specific Plan). A large majority of the land in the Specific Plan Area (SPA) has been designated by the Association of Bay Area Governments (ABAG) as the Sonoma County Airport Employment Investment Area (EIA). According to ABAG's description, "Employment Investment Areas are significant centers of economic activity that can be enhanced by local-serving retail, pedestrian and bicycle access improvements, focused growth around station areas, and last mile transportation solutions. Planning for Employment Investment Areas provides an opportunity to increase travel options for commuters, focus new jobs in locations accessible to the region's workforce—including transit dependent households—and allow employees to walk to daytime destinations, such as restaurants and coffee shops, that today would require auto trips."

The Specific Plan Area (SPA is subject to development regulations set forth in the 1984 Sonoma County Airport Industrial Area Specific Plan. The SPA is comprised of approximately 807 acres of land near the Charles M. Schulz - Sonoma County Airport (Figure 1). It is located near the geographic center of Sonoma County, and surrounded by the Town of Windsor to the north, the unincorporated communities of Larkfield-Wikiup to the east, the City of Santa Rosa to the southeast, and the Charles M. Schulz - Sonoma County Airport to the west. The Sonoma-Marin Area Rail Transit (SMART) and freight corridor runs directly through the SPA in a north-south direction.

This document analyzes existing assets and opportunities within the SPA, focusing on the historical context, employer characteristics, demographic and socio-economic characteristics of residents, the land use and urban design context, circulation, and infrastructure. Demographic and socio-economic characteristics of residents residing within the SPA and residents living in the vicinity (an area defined as SPA+) were analyzed. Key findings from the report are summarized below:

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Chapter 2. Historic Context

- Over the last century the SPA has transformed from an agricultural area into an employment center for industrial and manufacturing businesses.

3

Chapter 3. Employer Characteristics

- The Sonoma County Airport Employment Investment Area (EIA) covers 592 acres between Hwy 101 and the Charles M. Schulz - Sonoma County Airport.
- There are roughly 390 businesses and 7,700 employees operating in the EIA according to the Sonoma County Economic Development Board. The majority are small businesses.
- Roughly two-thirds of EIA businesses occupy facilities of less than 10,000 sq. ft.
- Manufacturing and Retail businesses employ the largest share of EIA employees.
- The total on-site sales volume within the EIA is nearly $2.2 billion. Businesses classified as Wholesale Trade account for 43% of total sales ($933 million), but employ just 6% of the EIA workforce.
- Employment in the EIA is concentrated along the North Laughlin Corridor, which houses Charles M. Schulz - Sonoma County Airport facilities and several large commercial centers, and along Aviation Blvd. in the northeast edge of the EIA.
- An online survey of EIA businesses conducted in April and May, 2016 collected 64 responses. Over 60% of the businesses that responded to the survey have been located in the EIA for over 10 years.
- The business outlook for firms within the EIA is strongly positive. Nearly 90% of respondents indicated "Very Strong" or "Moderately Strong."
- Over the next five years, 67% of survey respondents indicated that they do not expect their land and facility needs to change. Approximately 30% anticipate a need to expand their facilities either in their current location or in a new facility.
- About 39% of respondents agreed that the arrival of the station and train operation will be helpful to their business.
- Traffic congestion—particularly on Airport Boulevard and Aviation Boulevard—and the lack of pedestrian amenities are considered key constraints in the area.
- Almost 77% of EIA businesses felt additional stores and services are needed, especially full-services restaurants, grocery stores or convenience markets, bars or drinking places, and coffee shops.

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Chapter 4. Demographic and Socio-Economic Characteristics Of Residents

- The SPA contains relatively few residents, however the area surrounding the SPA (referred to as SPA+) had a total population of 2,470 residents in 2015.
- The SPA+ population grew between 2000 and 2010, but leveled off thereafter.
- From 2000 to 2015, owner occupied housing units decreased countywide, but the decline has been more dramatic in the SPA and SPA+.
- Median household income in the SPA is 6% above the county median, while the SPA+ median income was 32% below the county level in 2015.
- The majority of SPA and SPA+ workers are employed in white-collar occupations.
- In the SPA and SPA+, the vast majority of workers commute to work alone.

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Chapter 5. Land Use and Urban Design Context

- The General Plan 2020 is a fundamental tool in guiding change and growth. The General Plan designations within the SPA are mainly industrial and commercial.
- The SPA includes land zoned primarily for industrial and commercial zoning, consistent with the General Plan designations within the SPA. There are very few residentially zoned lands which are generally located at areas between the SMART Rail Corridor and Highway 101. Each zoning district provides for allowable uses and specific development standards unique to each zone.
- The Airport Industrial Area Specific Plan was initially adopted in 1984 and most recently amended in 2009.
- The Specific Plan process aims to update this existing policy document to reflect changes in existing land use and current planning, climate adaptation, health policy goals, and address changes in traffic patterns.
- Recently updated in 2016, the Comprehensive Airport Land Use Plan (CALUP) contains criteria to evaluate the compatibility between aircraft operations and future development, including noise and land use compatibility standards.

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Chapter 6. Circulation

- The primary transportation focus of the SPA will be connections within the area, and between adjacent neighborhoods, and planned development areas.
- The SPA is an employment center that is primarily accessibly be car.
- With planned SMART rail service, the SPA will be more accessible for employee, resident and visitor trips. Extending, re-activating, and intensifying land uses within the existing and future street network to create a denser and continuous grid of complete streets will support non-driving connections.
- Charles M. Schulz - Sonoma County Airport and commercial uses will be important components for creating a vibrant area.
- A critical opportunity will be to "knit together" individual redevelopment sites and existing buildings in a way that prevents each development site from being an isolated "island".

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Chapter 7. Infrastructure

- Water, sewer, and storm drain infrastructure has been developed and extended throughout the SPA to service existing land uses.

CHAPTER 1 | INTRODUCTION

- SPECIFIC PLAN AREA
- EIA PROFILE OVERVIEW

1. INTRODUCTION

The Employment Investment Area Profile (EIA Profile) outlines existing opportunities and constraints serving as a reference to the development of the Sonoma County Airport SMART Station Specific Plan (Specific Plan). The EIA Profile is broken down into seven sections, including the following topics:

- The historical context of the Specific Plan Area (SPA) and past Specific Plan efforts;
- Socio-economic characteristics of the Employment Investment Area (EIA), including a look at employment sectors, number of employees, and business outlook of the EIA;
- Demographic characteristics such as population, households, ethnicity, and age;
- Existing SPA land uses and urban design context, including relevant plans and policies as well as existing zoning and associated development standards;
- Circulation infrastructure, such as sidewalks, bicycle lanes, and road widths; and
- Existing and needed infrastructure within the SPA.

This analysis sets the stage for the Specific Plan effort and will help identify potential issues that may impact the planning process.

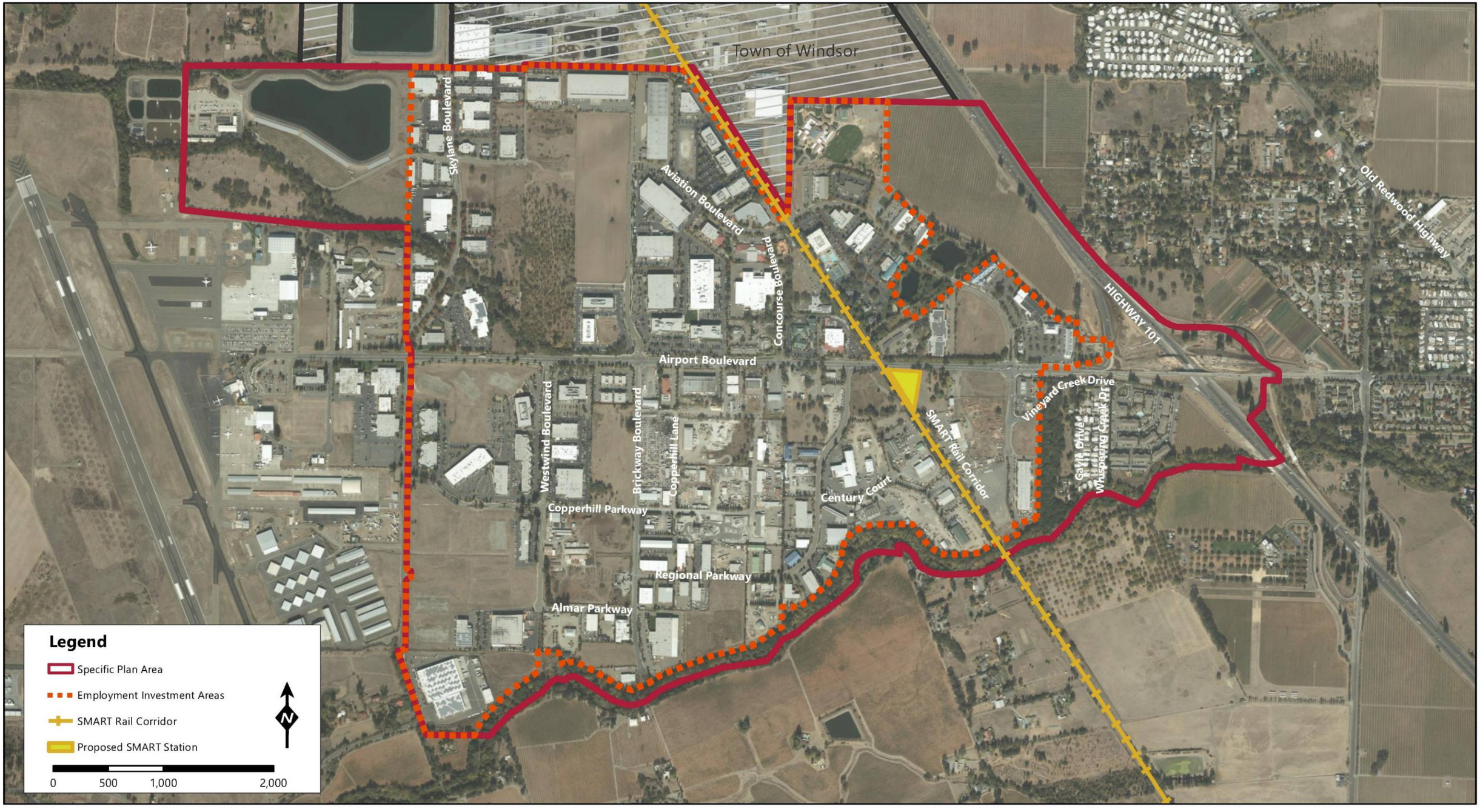
1.1. SPECIFIC PLAN AREA

The SPA is comprised of approximately 807 acres of land near the Charles M. Schulz - Sonoma County Airport. It is located in central Sonoma County surrounded by the Town of Windsor to the north, the unincorporated community of Larkfield-Wikiup to the east, the City of Santa Rosa to the southeast, and the Charles M. Schulz - Sonoma County to the west. The existing Northwest Pacific Railway and Sonoma-Marin Area Rail Transit (SMART) corridor runs through the SPA in a north-south direction (see Figure 1).

The SPA boundary is defined by the Town of Windsor limit to the north, and generally runs along the eastern edge of Highway 101 to the east, the southern banks of Mark West Creek to the south, and N Laughlin Road to the west. The SPA also includes a portion of land west of Skylane Boulevard. The SPA consists of properties ranging in size from approximately half an acre to 100 acres located between the Charles M. Schulz - Sonoma County Airport, Highway 101 and the SMART station at Airport Boulevard.

A portion of the SPA has been designated as an Employment Investment Area (EIA). This is a regional land use designation adopted by ABAG to implement the Bay Area's Jobs-Housing Connection growth strategy and other regional efforts in order to integrate transportation investments with land use planning. The EIA boundary generally aligns with the SPA boundary, but is smaller in size and exists within the SPA. The EIA runs along the Town of Windsor limit to the north, and stretches eastward to the vineyards but west of Highway 101, slightly west of Skylane Boulevard, the northern banks of Mark West Creek to the south, and along N Laughlin Road to the west (but not encompassing the Sonoma County Water Agency facility).

Figure 1 - Airport SMART Station Specific Plan Area Map



Sonoma County Airport Smart Station Specific Plan | Project Area

Source: County of Sonoma and ESRI GIS data, map prepared by M-Group

While the SPA is predominantly employment commercial and industrial job center, there are a small number of residences within the SPA boundaries, and adjacent larger residential areas. A profile of residents living within the SPA and surrounding areas is summarized below and discussed in more detail within Chapter 3. The SPA+ boundary, as described in Chapter 3 (Figure 4), captures the SPA boundary and neighborhoods within Census Block Groups surrounding the SPA. Census Block Groups are the smallest geographic areas for which detailed Census demographic and socio-economic data is available. A more detailed summary of findings is available in Appendix A.

Summary of Geographic Areas

Area	Acreage
Employment Investment Area	592
Specific Plan Area	807
Specific Plan Area+	5,226

Existing land uses within the SPA include industrial, commercial, agricultural, open space, public/quasi-public, and residential, with some vacant lands scattered throughout. Heavy industrial use areas are primarily located south of Airport Boulevard, while industrial parks and retail commercial uses are north of Airport Boulevard. Most open space areas between Highway 101 and the SMART Rail Corridor protected through long-term easements held by the Sonoma Land Trust and Sonoma County Agricultural Preservation and Open Space District. Some of these lands are also designated as Community Separators which according to General Plan Policy LU-5b seek to avoid commercial and industrial development within their boundaries in order to provide visual relief between urban areas.

The SPA is accessed by four primary routes including Airport Boulevard from Highway 101 to the east, North Laughlin Road to the south, and Skylane Boulevard from Shiloh Road to the north.

1.2. EIA PROFILE OVERVIEW

This document analyzes existing assets and opportunities within the SPA and the immediate surrounding context, focusing on demographic and socio-economic conditions as well as land use patterns. This EIA Profile is organized as follows:

2 ***Chapter 2. Historic Context***
A brief overview of the historic context of the SPA and its transformation from an almost exclusively agricultural area into an industrial area with a strong workforce.

3 ***Chapter 3. Demographic and Socio-Economic Characteristics Of Residents***
A description of the demographic and socio-economic characteristics of residents in the SPA and surrounding neighborhoods (SPA+). Results are compared with Sonoma County as a whole and include analyses of population, race/ethnicity, age, education, and household numbers, income, and size, industries and occupations of employment.

4 ***Chapter 4. Employer Characteristics***
A profile of employers in the Sonoma County Airport Employment Investment Area (EIA), describing industry sectors, firm size, on-site revenues, as well as the results of a business survey that provides insight into the outlook for EIA businesses over the next 5 years.

5 ***Chapter 5. Land Use and Urban Design Context***
A synopsis of the existing land use and urban design setting, such as relevant land use plans, standards, guidelines, and resources. Additional details are provided on existing land uses and zoning within the SPA, as well as other requirements such as building heights, massing/scale, setbacks, parking, and design guidelines.

6 ***Chapter 6. Circulation***
An overview of existing multi-modal circulation facilities and conditions, including bicycle lanes, road widths, sidewalks, and pedestrian crossings. This section also identifies transportation-related opportunities present within the SPA and in relation to the proposed SMART station.

7 ***Chapter 7. Infrastructure***
A summary of existing infrastructure conditions, including the sewer system, water mains, and storm drain system.

CHAPTER 2 | HISTORIC CONTEXT

2. HISTORIC CONTEXT

Throughout its history, the SPA transformed from an agricultural area comprised of grazing land, orchards, and vineyards into an employment center with a concentration of industrial and manufacturing uses. The timeline below illustrates key historical events for the area.

Specific Plan Area (SPA) Timeline

Pre WWII
Plan Area primarily agricultural uses such as grazing land, orchards, and vineyards

1939
Joint venture initiated between County and Civil Aviation Agency to construct airport

1943 to 1946
Army Air Corps takes over airport and completes its construction to operate facility for fighter training of nearly 10,000 stationed men; laid out grid of roads within Plan Area to provide access to barracks; returns airport to County in 1946

source: sonomacountyairport.org

1970s
Previous efforts and studies indicate no sewer system installation allowed prior to development of comprehensive land use plan

Post WWII to 1980
Plan Area remains largely agricultural with some development of non-agricultural uses

1975
Water Quality Control Board Plan adopted for basin and existing Health Department requirements create virtual ban on all new construction within Plan Area pending installation of sewer system

Pre 1984
Plan Area exhibits lack of adequate sewer facilities and a major problem for property owners and regulatory agencies for more than a decade

1978
Sonoma County Commercial/ Industrial Study and Larkfield-Wikiup Study authorized by County to help clarify land use and sewage issues; studies indicate industrial development within Plan Area and recognize need for sewer infrastructure for future development

1982
County Service Area #31 (Airport-Larkfield-Wikiup) established in response to a community-led effort to develop a sewer system (financing via multi-service assessment district); County Board of Supervisors amends Commercial/Industrial Study to designate parcels north of Airport Boulevard as short range industrial and authorizes preparation of Airport Industrial Area Specific Plan

1984
Board of Supervisors adopts Airport Industrial Area Specific Plan

1987
Board of Supervisors adopts three separate requests to amend the Airport Industrial Area Specific Plan

2015
County receives grant from the Sonoma County Transportation Authority with funds from the One Bay Area Grant to update the Airport Industrial Area Specific Plan

Sonoma County
Airport SMART Station
Specific Plan

CHAPTER 3 | EMPLOYER CHARACTERISTICS

- EMPLOYERS WITHIN EIA
- BUSINESS OUTLOOK REFLECTED BY ONLINE SURVEY

3. EMPLOYER CHARACTERISTICS

The following chapter summarizes the characteristics of the businesses located within the Sonoma County Airport Employment Investment Area (EIA). The EIA includes 592 acres of the 807 acres of the SPA (Figure 4). The profile below describes the industry sectors, size of businesses by number of employees, and business revenues operating in the EIA. A survey of existing businesses was conducted to understand opportunities and constraints, as well as amenities and services desired.

3.1. EMPLOYERS WITHIN EIA

According to the Sonoma County Economic Development Board there are approximately 385 businesses with 7,683 employees in the EIA. The majority of EIA businesses are considered small with two thirds employing fewer than 10 employees. This correlates with the size of business facilities: two thirds are under 10,000 square feet.

Figure 2 - EIA Businesses by Number of Employees

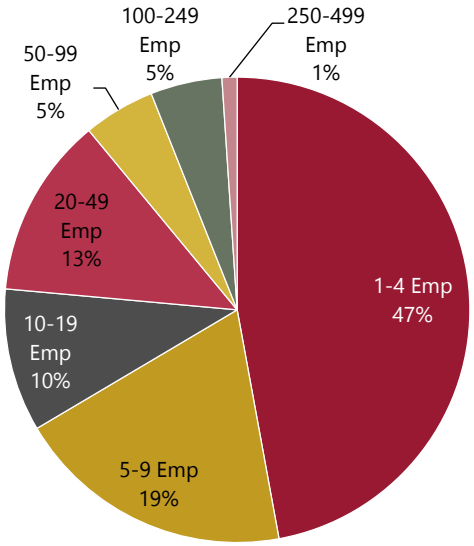


Figure 3 - EIA Businesses by Facility Size

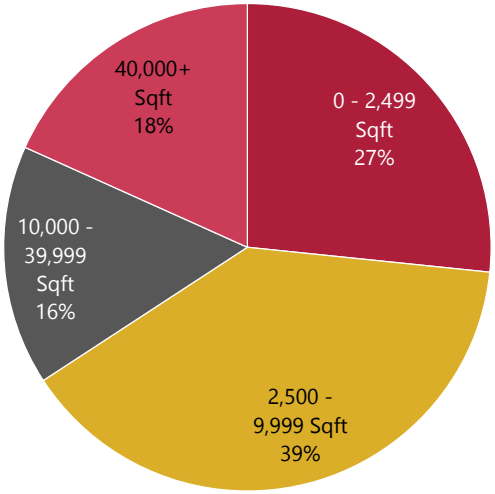
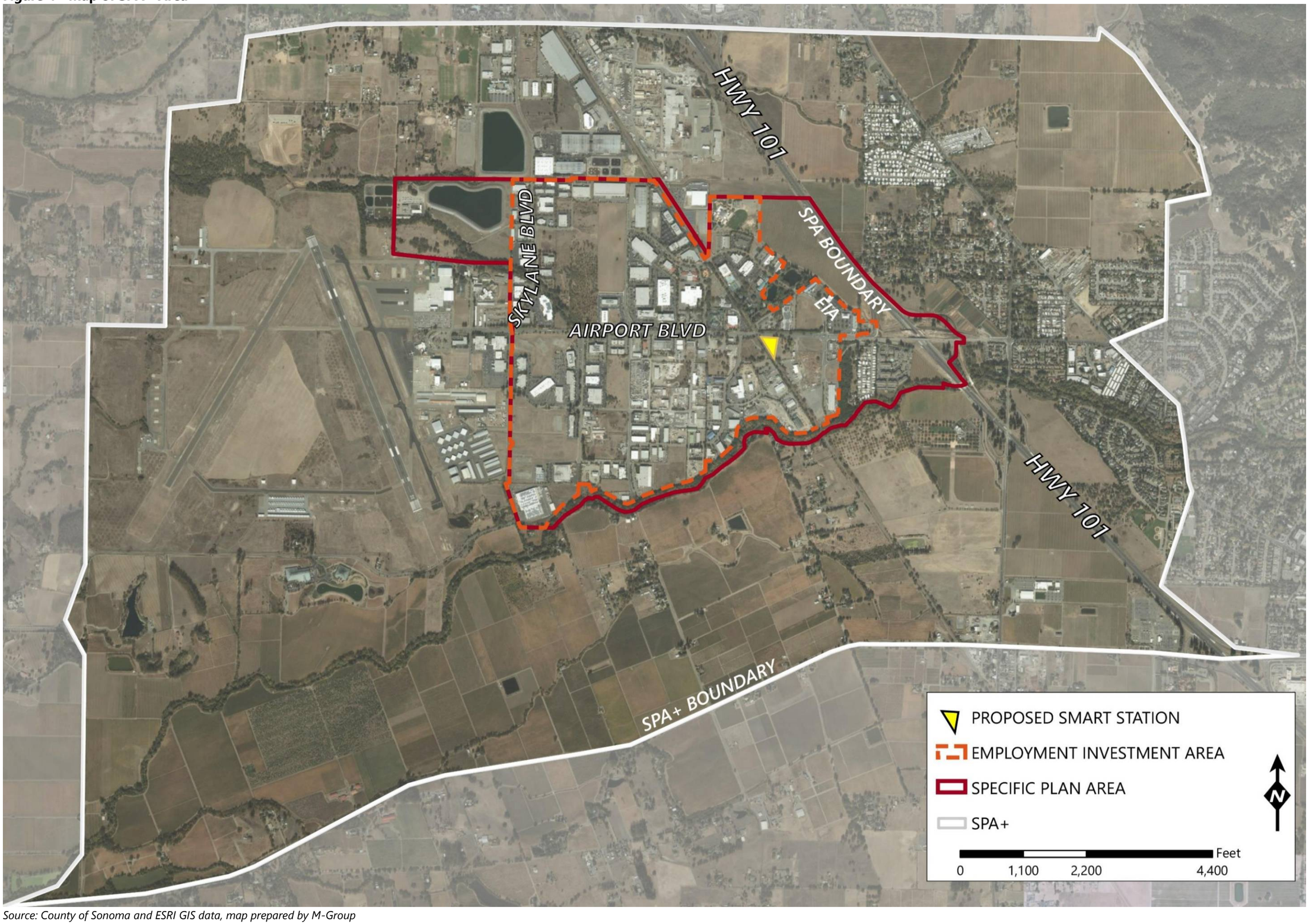


Figure 4 - Map of SPA+ Area



Source: County of Sonoma and ESRI GIS data, map prepared by M-Group

The highest employment concentrations within the EIA are in the following sectors: manufacturing including wine production (1,479 employees), retail trade including those in the wine industry (1,032 employees), public administration (973 employees), professional and technical services (869 employees), construction (704 employees), health care and social assistance (603 employees) and wholesale trade (489 employees).

Figure 5 - EIA Industries by Employees

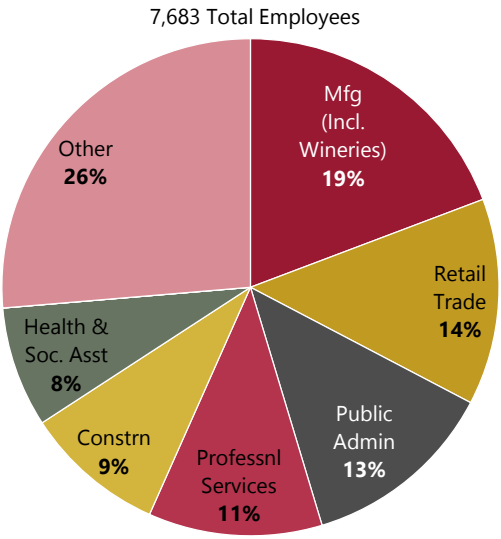


Figure 6 - EIA Industries by On-Site Sales

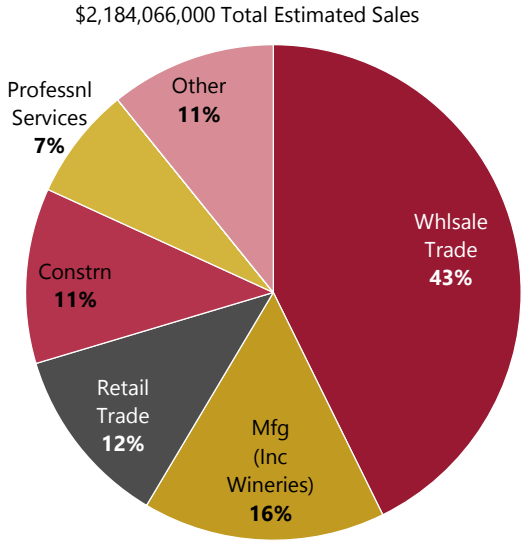


Table 1 - Composition of Businesses in Sonoma County Airport Employment Investment Area

Industry Classification	Employees	Share	On-Site Sales	Share
Manufacturing (includes Wineries)	1,479	19.30%	$345,717,000	15.80%
Retail Trade	1,032	13.40%	$258,290,000	11.80%
Public Administration	973	12.70%	-	0.00%
Professional, Scientific and Technical Services	869	11.30%	$160,903,000	7.40%
Construction	704	9.20%	$250,013,000	11.40%
Health Care and Social Assistance	603	7.80%	$69,520,000	3.20%
Wholesale Trade	489	6.40%	$932,993,000	42.70%
Adm, Support, Waste Mgmt & Remediation Svcs	432	5.60%	$75,581,000	3.50%
Education Services	316	4.10%	$915,000	0.00%
Arts, Entertainment and Recreation	143	1.90%	$8,517,000	0.40%
Transportation and Warehousing	141	1.80%	$24,676,000	1.10%
Finance and Insurance	142	1.80%	$21,406,000	1.00%
Accommodation and Food Service	108	1.40%	$7,705,000	0.40%
Real Estate and Leasing	97	1.30%	$23,937,000	1.10%
Other Services (Repair, Personal and Social)	86	1.10%	$2,274,000	0.10%
Information (Motion Picture and Tele Production)	48	0.60%	$1,367,000	0.10%
Management of Companies and Enterprises	15	0.20%	-	0.00%
Agriculture (Vineyards and Ranch)	6	0.10%	$252,000	0.00%
Total	**7,683**	**100%**	**$2,184,066,000**	**100%**

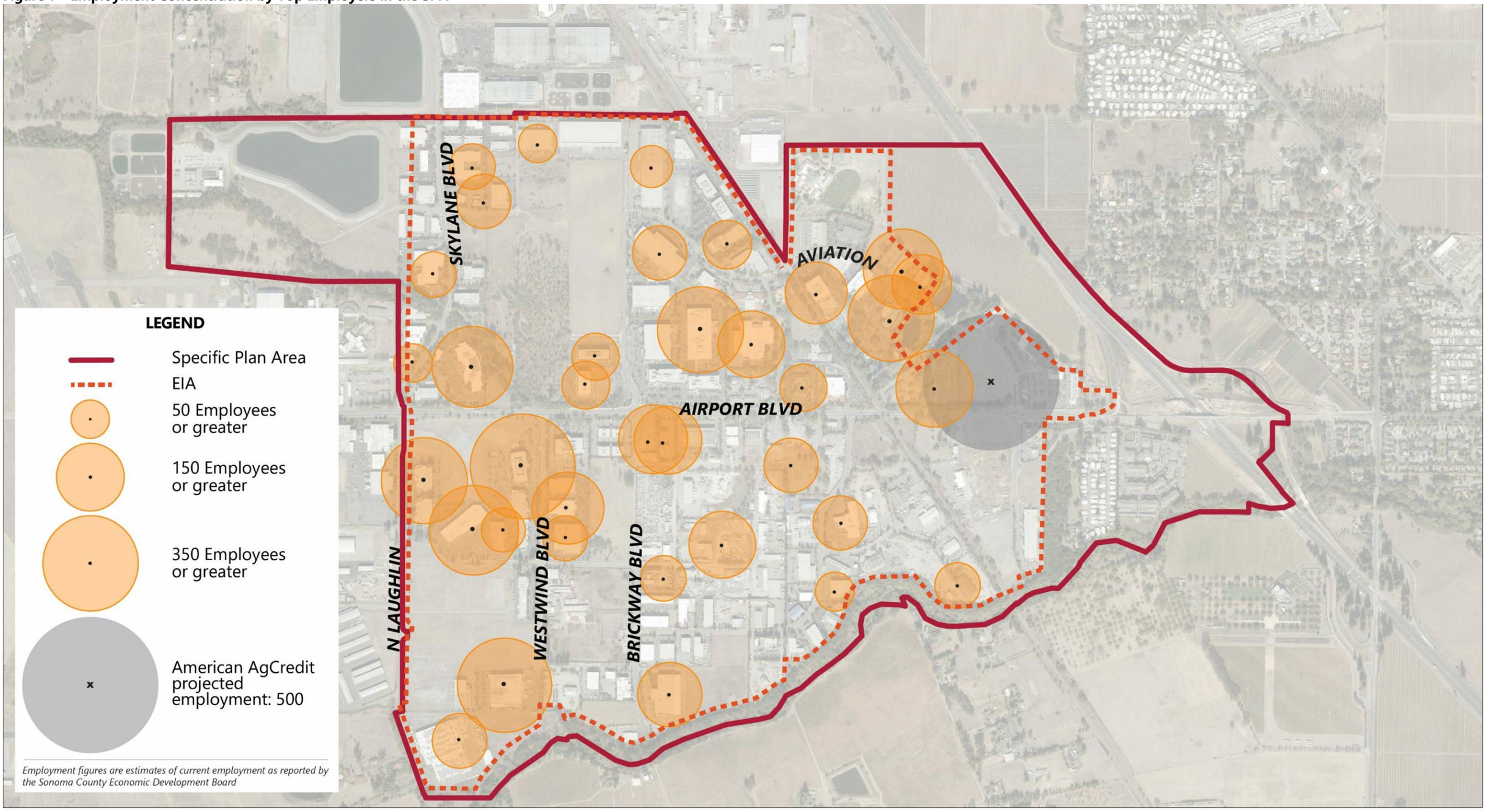
Source: Sonoma County Economic Development Board

Employment in the EIA is concentrated along the North Laughlin Corridor where several large commercial centers are located, and along Aviation Boulevard at the north east edge of the EIA. Figure 7 illustrates the concentration of employment across the top employers in the EIA.

3.2. BUSINESS OUTLOOK REFLECTED BY ONLINE SURVEY

An online survey was conducted in April and May of 2016 to solicit input from employers and property owners located in the EIA about their business outlook, opportunities and constraints, and amenities and services desired. A total of 64 survey responses were submitted. The responses are summarized below and presented in Tables 2 through 9 below. The survey instrument is attached in Appendix B.

Figure 7 - Employment Concentration by Top Employers in the SPA



Sonoma County Airport Smart Station Specific Plan | Employee Concentrations

Source: Sonoma County Economic Development Board
Note: American AgCredit recently established their headquarters in the SPA at 400 Aviation Blvd. The facility is expected to house approximately 500 employees after consolidating the firm's other offices at the new headquarters.

3.2.1. EMPLOYMENT GROWTH, FACILITIES EXPANSION AND/OR RELOCATION PLANS

Over 60% of the businesses that responded to the survey have been located in the EIA for over 10 years; nearly one quarter have been in the EIA for more than 20 years. For most (77% of survey respondents), the EIA is their headquarters.

Table 2 - Survey Question #4 – How long has your business been at the Sonoma County Airport Area?

Length of Time at Current Location	Response
Less than 2 years	3.1%
2 to 5 years	12.5%
6 to 10 years	23.4%
11 to 20 years	37.5%
More than 20 years	23.4%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

Table 3 - Survey Question #5 – Is this your headquarters location?

Headquarters Location	Response
Yes	76.6%
No	23.4%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

The survey results showed a strongly positive business outlook. Nearly 90% of respondents indicated they held a "Very Strong" or "Moderately Strong" outlook. 11% expressed a "Neutral" outlook and none indicated a weak outlook. The expected employment change over the next two years is roughly in line with business outlook: approximately 70% of respondents expect to increase employment at the EIA location, with 28% indicating an increase of more than 10%, and 41% indicating an increase of up to 10%. The remaining respondents indicated that they expect no employment change in the next two years. No respondents expected to reduce employment.

Table 4 - Survey Question #8 – What is your business outlook at this location?

Business Outlook	Response
Very strong	53.1%
Moderately strong	35.9%
Neutral	10.9%
Moderately weak	0.0%
Very weak	0.0%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

Table 5 - Survey Question #9 – Over the next two years, do you expect changes in employment at this location?

Expected Change in Employment	Response
Increase employment by more than 10%	28.1%
Increase employment by up to 10%	40.6%
No employment change	31.3%
Reduce employment by up to 10%	0.0%
Reduce employment by more than 10%	0.0%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

67% of survey respondents expected to change their land or facilities. Approximately 30% anticipated a need for facility expansion,—22% at their current site while 8% plan to relocate to a larger site and facility. Only 1.6% anticipate reducing their facility size and another 1.6% are considering moving their business out of the EIA. No businesses planned to cease operations.

Table 6 - Survey Question #10 – Over the next five years, are your land and facilities needs likely to change?

Change in Facility Needs	Response
Will need to expand and relocate to a larger site and facility	7.8%
Will expand facility at current site	21.9%
No change expected	67.2%
Will need to reduce facility size	1.6%
May move out of the Sonoma County Airport area	1.6%
May cease operation	0%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

3.2.2. OPPORTUNITIES AND CONSTRAINTS

39% of survey respondents noted the arrival of the SMART will have a positive impact on business in general. Roughly 30% of respondents indicated they "Agree" and 9% "Strongly Agree" that the arrival of SMART will be helpful to their business. Approximately half of respondents were neutral in regards to SMART and with 9% finding it will not be helpful to their business.

Table 7 - Survey Question #11 – Would you agree or disagree with the following statement? The arrival of the Sonoma Marin Area Rail Transit (SMART) Station with train operation will be helpful to my business.

Degree of Agreement	Response
Strongly agree	9.4%
Agree	29.7%
Neither agree nor disagree	51.6%
Disagree	4.7%
Strongly disagree	4.7%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

A significant number of respondents expressed concern about traffic congestion—particularly on Airport Boulevard and Aviation Boulevard—and the lack of pedestrian amenities. Suggestions included widening Airport Boulevard, adding traffic signals, extending sidewalks and crosswalks for pedestrian access and safety, and providing shuttle service to the SMART station.

3.2.3. ***ADDITIONAL FACILITIES AND SERVICES DESIRED***

The vast majority of survey respondents would like to see more stores and services in the EIA. Almost 77% responded that they "Strongly Agree" or "Agree" that additional stores and services are needed. 19% responded that they "Neither Agree nor Disagree" and less than 5% do not agree that additional services are needed.

Of respondents that wanted additional stores and services, the most desired addition was full-service restaurants, requested by 79% of respondents, and grocery stores or convenience markets, requested by 67% of respondents. 42% of respondents would like to see bars or drinking establishments. Cafes and fast food restaurants were desired by almost 30% of respondents.

Table 8 - Survey Question #12 – Would you agree or disagree with the following statement? Additional stores and services are needed in the Sonoma County Airport Business Park Area.

Degree of Agreement	Response
Strongly agree	34.4%
Agree	42.2%
Neither agree nor disagree	18.8%
Disagree	3.1%
Strongly disagree	1.6%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey

Table 9 - Survey Question #13 – If additional stores or services are needed, what types are most desired?

Store or Service desired	Response
Coffee shop	29.2%
Fast food restaurant	27.1%
Full-service restaurant	79.2%
Grocery store or convenience market	66.7%
Bar or drinking place	41.7%

Source: Airport Specific Plan/SMART Station Area Plan Local Business Survey
Respondents were instructed to select all responses that apply, therefore percentages do not add up to 100%

Survey respondents also expressed a need for the following facilities and services:

- Hotel
- Parks and open space
- Healthier food options
- Upscale restaurant for business clientele
- Conveniences such as banks, barbershop, beauty salon, copy shop, florist, pharmacy, dry cleaners

CHAPTER 4 | DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESIDENTS

- DEMOGRAPHIC PROFILE
- SOCIO-ECONOMIC PROFILE OF RESIDENTS

4. DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESIDENTS

The following chapter provides an overview of the demographic and socio-economic profile of residents living in the SPA and residents living in the wider area surrounding the SPA (referred to herein as SPA+). The wider SPA+ area was analyzed to provide a better understanding of demographic trends both within the SPA and adjacent areas. The SPA+ captures SPA residents as well as residents in neighborhoods within Census Block Groups surrounding the SPA. Census Block Groups are the smallest geographic areas for which detailed Census demographic and socio-economic data is available. A more detailed summary of findings is available in Appendix A.

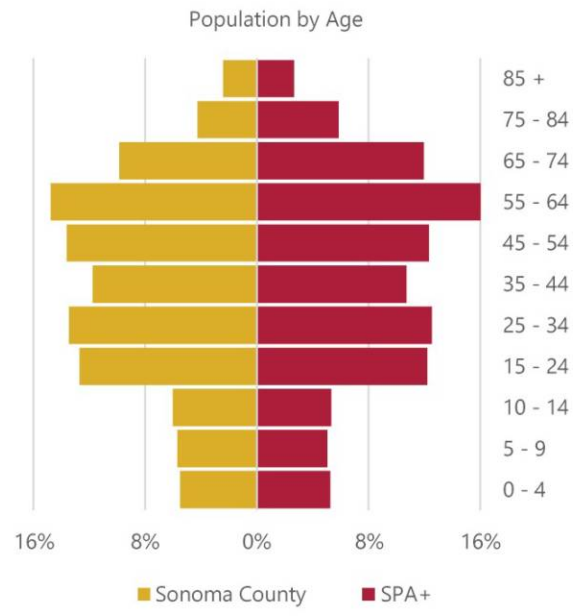
4.1. DEMOGRAPHIC PROFILE

According to 2015 Census estimates, the SPA had 634 residents—almost all residing in two developments between the rail line and Highway 101—and the SPA+ had 2,470 residents in 2015. Between the 2000 and 2010 decennial Census tabulations, the SPA+ population grew slightly but the population of both the SPA and SPA+ has been static in recent years (Table 10). In the SPA+ the median age is 39.4—roughly on par with the Sonoma County median of 40.7.

Census estimates for 2015 show that homeownership declined in the SPA and SPA+ between 2000 and 2015. The percent of owner-occupied housing fell from 55% to 31% in the SPA and from 71% to 57% in the SPA+ during this period. This pattern is consistent with broader trends throughout the Bay area.

Table 10 - Population, Household, Tenure, and Age Profile of the SPA and SPA+

	2000	2010	2015
SPA			
Population	435	653	634
Households	185	294	287
Avg. HH* Size	2.29	2.21	2.20
Owner Occupied	55.0%	33.2%	31.0%
Renter Occupied	43.4%	61.6%	61.6%
Vacant	1.6%	5.2%	7.4%
SPA+			
Population	2,322	2,472	2,473
Households	951	1,050	1,057
Avg. HH Size	2.33	2.30	2.28
Owner Occupied	71.2%	58.0%	56.6%
Renter Occupied	25.3%	35.8%	36.7%
Vacant	3.5%	6.2%	6.9%



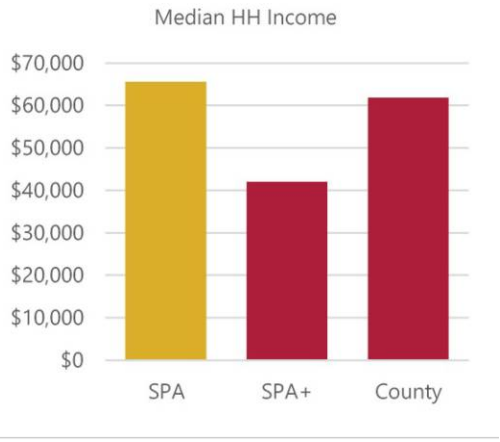
HH: Households
Source: Esri Business Analyst, 2016 (based on Census data reported at the Census Block Group level)

4.2. SOCIO-ECONOMIC PROFILE OF RESIDENTS

In 2015, the median household income within the SPA was $65,600, while the SPA+ median was $42,000. Given the small population living solely within the SPA, its significantly higher median income level may be a result of a few high-income families. That said, the SPA+ median income is 32% below the county median income level, indicating that the wider area contains a larger proportion of lower-income families than is the case countywide (Table 11).

Table 11 - Household Income in the SPA, SPA+, and Sonoma County, 2015

Household Income	SPA	SPA+	Sonoma County
< $24,999	23.7%	28.5%	18.3%
$25,000 - $34,999	10.5%	17.3%	9.2%
$35,000 - $49,999	6.6%	7.9%	12.4%
$50,000 - $74,999	13.2%	12.8%	17.8%
$75,000 - $99,999	22.3%	15.2%	13.4%
$100,000 - $149,999	16.7%	10.0%	15.6%
$150,000 - $199,999	4.2%	4.1%	6.9%
$200,000+	2.8%	4.2%	6.4%
Median HH Income	**$65,602**	**$41,991**	**$61,807**



Source: Esri Business Analyst, 2016

4.2.1. OCCUPATIONS

Roughly 1 in 5 SPA employees held a blue collar job in 2015, and a similar proportion worked in service occupations. More than half of SPA workers held white collar jobs that involved managerial, business, financial, professional services, sales, or administrative duties. Worker in the SPA+ and throughout Sonoma County show a similar distribution of laborers by occupation (Table 12). To get to work, most SPA residents and SPA+ residents drove alone. Unlike the County where 1 in 10 workers carpooled to work, about 1 in every 20 workers in the SPA or SPA+ carpooled. As shown in Table 13, the median travel time to work for SPA and SPA+ employees was about 14 minutes in 2013, well short of the median of 20.5 minutes for Sonoma County.

Table 12 - Population 16yrs+ by Occupation in the SPA, SPA+, and Sonoma County, 2015

Occupation	SPA	SPA+	Sonoma County
White Collar	56.8%	60.9%	59.4%
Services	21.3%	17.8%	20.5%
Blue Collar	22.2%	21.4%	20.1%

Source: Esri Business Analyst, 2016

** Services includes labor related to customer interaction, entertainment, sales or other service-oriented work. Whereas "White Collar" refers to professional, managerial, and administrative labor; and "Blue Collar" refers to manual labor*

Table 13 - Population 16yrs+ by Means of Transportation to Work: SPA, SPA+, and Sonoma County, 2013

Mode of Travel on Commute	SPA	SPA+	Sonoma County
Drove alone	86.5%	86.6%	76.0%
Carpooled	5.5%	5.3%	10.3%
Public transportation (excluding taxicab)	0.0%	0.0%	1.8%
Bike or Walk	2.2%	2.2%	4.1%
Worked at home	5.5%	5.6%	6.8%
Median Travel Time to Work (minutes)	**14.2**	**14.2**	**20.5**

Source: U.S. Census Bureau, American Community Survey

CHAPTER 5 | LAND USE & URBAN DESIGN CONTEXT

- RELEVANT PLANS, STANDARDS, GUIDELINES, AND RESOURCES
- EXISTING LAND USE AND URBAN DESIGN CONTEXT

5. LAND USE CONTEXT

This EIA Profile outlines the existing regulatory setting for the SPA, as well as the existing development pattern and associated standards. The existing Sonoma County Airport Industrial Area Specific Plan currently governs development within the SPA, including standards related to land use, open space/agricultural areas, circulation, public facilities, and financing and implementation. The Specific Plan requires sidewalk and landscaping improvements for new development to enhance the public realm. However, given the time elapsed since adoption of the Specific Plan, urban design practice has evolved to such an extent that the existing streetscape vision appears outdated. Urban design goals, standards, and procedures are outlined in policies for the preservation and enhancement of scenic resources in the County's General Plan 2020, and the Zoning Ordinance requires that all commercial, industrial, and multi-family residential development undergo design review. As the Specific Plan is developed, any new recommendations or policies related to streetscapes, landscaping, or other design improvements will be consistent with policies outlined in the General Plan. Other relevant plans, standards, and guidelines are outlined in the following sections.

5.1. RELEVANT PLANS, STANDARDS, GUIDELINES, AND RESOURCES

5.1.1. ***SONOMA COUNTY AIRPORT INDUSTRIAL AREA SPECIFIC PLAN (1984)***

The Sonoma County Airport Industrial Area Specific Plan[1] was initially adopted in 1984 and most recently amended in 2009. This Specific Plan includes the following goals and standards:

- Goals related to economic, land use, circulation, capital improvements, financing, and visual and natural resource preservation;
- Standards for varying land uses including industrial park, heavy industrial, commercial, residential, open space/agricultural, and public facility areas;
- Classifications, improvements, policies, and construction sequencing in relation to roadways within the SPA;
- Master Plans for sewer, water, storm drainage, and fire services; and
- Financing and Implementation strategies related to development review, capital improvements, and expansion of County Service Area #31 (subject to increased tax assessments associated with the sewer system).

The Airport SMART Station Specific Plan process aims to update this existing policy document to reflect changes in existing land use and current planning, climate adaptation, health policy goals, and address changes in traffic patterns in relation to the Charles M. Schulz - Sonoma County Airport and the SMART station.

1. http://www.sonoma-county.org/prmd/docs/divpages/airport_industrial_specific_plan.pdf

5.1.2. ***SONOMA COUNTY GENERAL PLAN 2020***

The Sonoma County General Plan 2020[2] is the fundamental blueprint document guiding development within the County, and provides direction for physical development over the long term. Relevant General Plan goals related to the SPA are identified below. A more detailed discussion of pertinent goals, programs, and policies can be found in Appendix C.

Goal LU-3	Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.
Goal LU-4	Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner.
Goal LU-5	Identify important open space areas between and around the county's cities and communities. Maintain them in a largely open or natural character with low intensities of development.
Goal LU-9	Protect lands currently in agricultural production and lands with soils and other characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.
Policy LU-12g	Design discretionary projects in any commercial or industrial categories in harmony with the natural and scenic qualities of the local area. Give natural landscapes precedence over man made features.
Goal AT-1	Assure that land use types and densities in areas adjacent to public use airports are compatible with airport activity so existing and future capabilities of the airports can be preserved.
Goal AT-2	Provide appropriate conditions which will permit the safe passage of aircraft operating to and from airports in the County.

5.1.3. ***SONOMA COUNTY BICYCLE AND PEDESTRIAN PLAN***

The Sonoma County Bicycle and Pedestrian Plan (Bikeways Plan)[3] establishes goals, objectives, and policies related to the bicycle and pedestrian transportation network within unincorporated areas of Sonoma County, such as the SPA. The plan identifies bicycle lanes as part of the new Airport Boulevard/Highway 101 interchange, the Mark West Creek trail, and Class II bicycle lanes along Skylane Boulevard as high priority projects. The primary goal of this plan is to "establish a

2. http://www.sonoma-county.org/PRMD/gp2020/index.htm

3. http://www.sonoma-county.org/prmd/docs/misc/bikeplandraft.pdf

viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health." The Bikeways Plan also outlined various goals and policies to carry out this goal, such as Policy 1.01 which calls for the use of this plan as the detailed planning document for existing and proposed bikeways and pedestrian facilities.

5.1.4. COMPREHENSIVE AIRPORT LAND USE PLAN FOR SONOMA COUNTY (CALUP)

Originally adopted by the Airport Land Use Commission (ALUC) in 2001, the Comprehensive Airport Land Use Plan (CALUP) for Sonoma County[4] contains criteria to evaluate the compatibility between aircraft operations and future development proposals near airports. More importantly, the CALUP establishes geographic limits ("referral boundaries") which land use proposals within are subject to review. The SPA falls entirely within ALUC's primary referral area and therefore development within the SPA is reviewed by ALUC for compatibility with airport uses such as concerns related to noise, airspace, and safety. Additionally, the new Sonoma County SMART Station Specific Plan document will be subject to review by ALUC for consistency with CALUP regulations.

The ALUC recently amended the CALUP in March of 2016 to reflect the 2030 Airport Master Plan for the airport and carry out Mitigation 3.9.1 of the associated EIR. The 2016 amendments to the CALUP were limited to the following sections to reflect the current airport Master Plan and airport layout: 1) Chapter 5 (Charles M. Schulz – Sonoma County Airport and Environs), 2) Chapter 8 (Comprehensive Airport Land Use Plan), and 3) Appendix D (Dimensions of Airport Safety Zones). These amendments included modifications to the land use compatibility criteria applied around the Charles M. Schulz - Sonoma County Airport. An updated Master Plan for the Airport was adopted in 2012; development and expansion of the airport under this plan will be tracked closely to identify potential impacts on this planning effort.

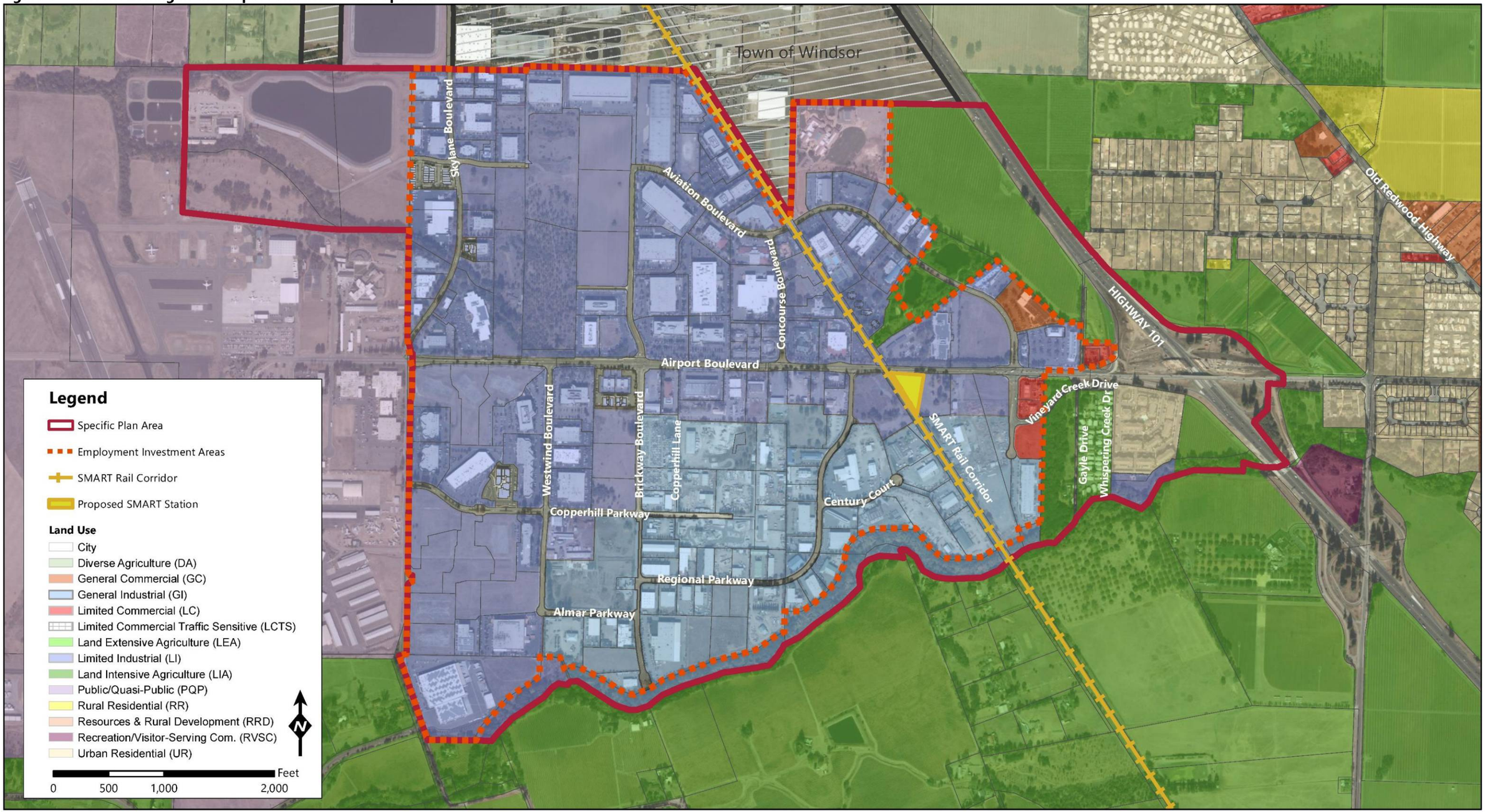
5.2. EXISTING LAND USE CONTEXT

5.2.1. GENERAL PLAN LAND USES

A detailed analysis of existing land use within the SPA will be prepared as part of the land use alternatives analysis task. Predominant land use designations within the SPA include General Industrial (GI) and Limited Industrial (LI), which are identified by the General Plan as lands needed to provide jobs and services for County residents and businesses (Figure 8). More specifically, the GI land use provides sites for industrial activities and employment that require urban services and primarily serve the urban population, and the LI designation calls for such sites to meet service and employment needs where the range or scale of industrial uses is limited by factors such as incompatible adjacent land uses and/or adverse environmental impacts.

4. http://www.sonoma-county.org/prmd/docs/airport/

Figure 8 – Current Zoning in the Airport SMART Station Specific Plan Area



Sonoma County Airport Smart Station Specific Plan | Land Use

Source: County of Sonoma and ESRI GIS data, map prepared by M-Group

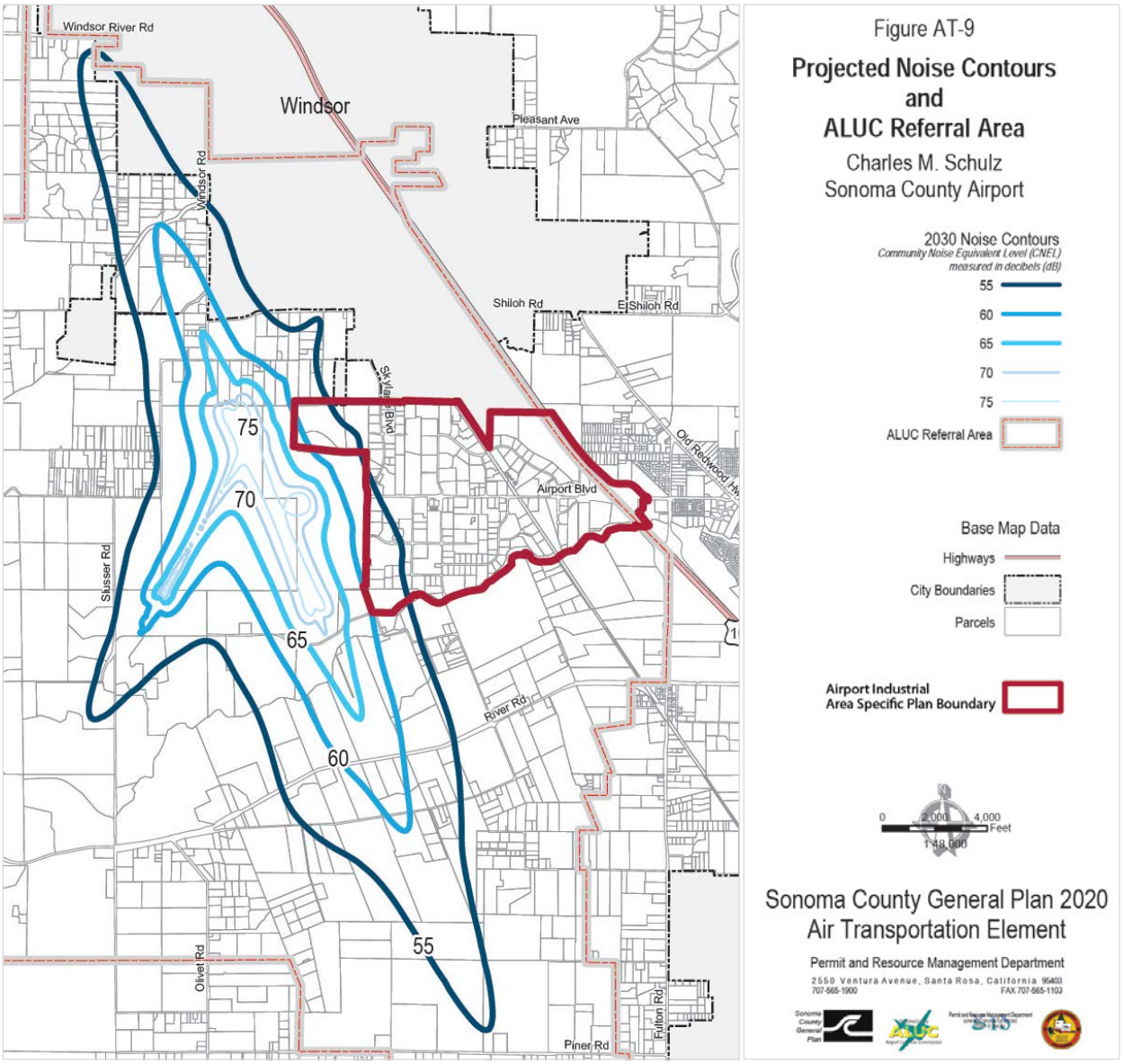
As illustrated in Figure 8 above, other land use designations within the SPA include General Commercial (GC), Limited Commercial (LC), Land Intensive Agriculture (LIA), Urban Residential (UR), and Public/Quasi-Public (PQP). According to the existing Specific Plan, a permanent open space corridor is designated along Mark West Creek to provide an adequate buffer zone between industrial uses and the riparian habitat, with an average setback requirement of 100 feet.

The General Plan provides policies, permitted uses, permitted development intensities and criteria, and designation criteria for each land use designation. Permitted uses and development criteria are carried forward through to the provisions of the County's Zoning Ordinance. The designation criteria for each land use outline necessary requirements for general plan amendments resulting in the assignment of a particular land use for each parcel

Airport Noise Contours and Referral Area

The General Plan includes an Air Transportation Element, which establishes policies to guide future development and growth of aviation activity and airport facilities within the County. More specifically, this element provides the framework for a community's compatibility with airports as well as how to adequately address noise exposure to surrounding areas. As shown in Figure 9 below, the General Plan designates noise contours depicting varying levels of noise exposure based on adopted Airport Master Plan projections.

Figure 9 - Airport Projected Noise Contours and ALUC Referral Area



Source: County of Sonoma General Plan 2020: Figure AT-9, Specific Plan Boundary/Annotation added by M-Group

The 55 decibels (dB) Community Noise Equivalent Level (CNEL) noise contour, shown in Figure 9 as the dark blue boundary, falls within the western portion of the SPA. In addition, the 60 dB CNEL contour (bright blue color) touches the most northwest corner of the SPA. These contours relate to the Airport Noise/Land Use Compatibility Standards of the CALUP, as shown in Table 14 below. Essentially, these standards indicate that residential and (most) public uses are only conditionally allowed within these portions of the SPA.

Table 14 - Airport Noise/Land Use Compatibility Standards

Land Use Category	<55 CNEL	55-60 CNEL	60-65 CNEL	65-70 CNEL	>70 CNEL
Residential					
Rural (less than 1 d.u./acre)	A	C(1)	U(6)	U	U
Urban – low density (1-4 d.u./acre)	A	C(1)	C(2)	U	U
Urban – medium to high density (more than 4 d.u./acre)	A	C(1)	C(2)	U	U
Transient lodging, except hotels and motels	A	C(1)	C(2)	U	U
Mobile home parks	A	C(1)	C(2)	U	U
Public					
Schools, libraries, hospitals, nursing homes	A	C(3)	U	U	U
Churches, auditoriums, concert halls	A	C(3)	C(4)	U	U
Transportation, parking, cemeteries	A	A	A	A	C(3)
Commercial and Industrial					
Hotels and motels	A	A	C(3)	C(4)	U
Offices, retail trade	A	A	C(3)	C(4)	U
Service commercial, wholesale trade, warehousing, light industrial	A	A	A	C(3)	C(4)
General manufacturing, utilities, extractive industry	A	A	A	A	A
Agricultural and Recreational					
Cropland	A	A	A	A	A
Livestock breeding, zoos	A	A	A	A	U
Parks and playgrounds	A	A	A	A	C(3)
Golf courses, riding stables, water recreation	A	A	A	A	C(3)
Outdoor spectator sports	A	A	A	C(5)	U
Amphitheaters	A	U	U	U	U

A = acceptable land use, C = land use is conditionally acceptable, U = unacceptable land use
Source: Sonoma County Comprehensive Airport Land Use Plan, Chapter 8: Table 8A

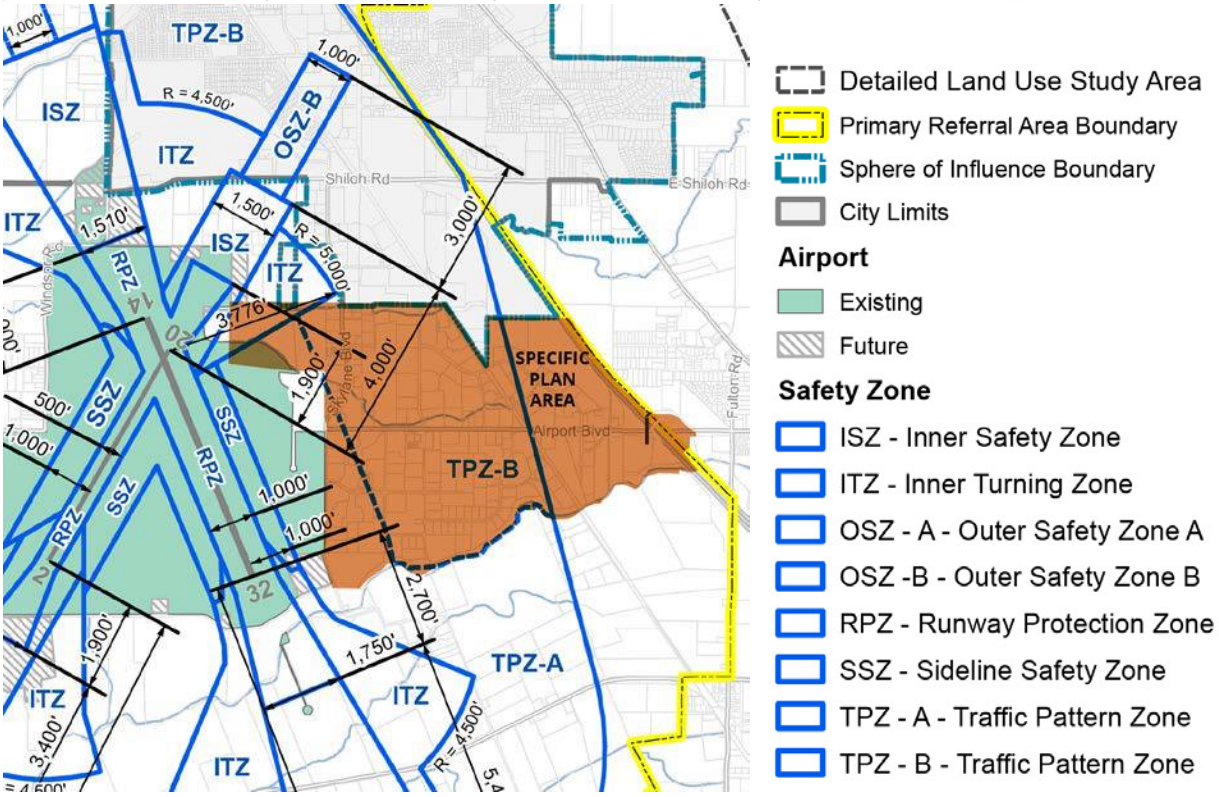
These standards dictate the types of uses (e.g. residential, public, commercial and industrial, agricultural and recreational) that are allowed, either by-right or conditionally, within each noise contour. For example, residential uses are allowed within areas subject to exterior noise levels at or below 55 dB CNEL, and areas between 55 and 65 dB CNEL are considered "conditionally" acceptable when residences are adequately designed to protect interior spaces from high noise levels.

The referral area boundary defines the boundaries in which development projects must be routed to the ALUC for compatibility review with the CALUP. ALUC reviews projects within the referral area to ensure that airport noise, logistics, and operations will not have a significant impact on such development, and that the development itself is compatible with airport uses (e.g. building heights consistent with Federal Aviation Regulations).

In addition, Exhibit C4 of the CALUP (Airport Safety Zones) indicates that the majority of the SPA is within a Traffic Pattern Zone (TPZ), which also dictates specific land use compatibility standards, such as maximum population density, maximum residential density in units per acre, and minimum amount of useable open space. Table 15 below highlights the two primary TPZ designations affecting the Specific Plan Area. The complete TPZ Safety Zone table and associated map of TPZ zones is available in Appendix E. For further information and restrictions, reference Table 8C of the Sonoma County Comprehensive Airport Land Use Plan, and associated footnotes.

Table 15 - TPZ Safety Zone Land Use Compatibility Standards

Max Population Density	Max Residential Units/Acre	Min Amount of Useable Open Space	Land Use
TPZ-A: Uses in structures: 150 persons per acre Uses not in structures: 200 persons per acre Maximum persons in a single acre: 800 **TPZ-B:** Uses in structures or outdoors: 300 persons per acre Maximum persons in a single acre: 1,200	**TPZ-A:** 5 dwelling units per acre **TPZ-B:** No Limit	15% of gross area	**Normally Allow:** Residential uses where noise and overflight impacts are low **Limit:** large day care centers, hospitals and nursing homes **Avoid:** Discourage schools auditoriums, amphitheaters stadiums and similar uses with very high intensities. Discourage uses involving, as the primary activity, manufacture, storage, or distribution of explosives or flammable materials and bulk quantities of highly hazardous materials. **Prohibit:** No prohibitions



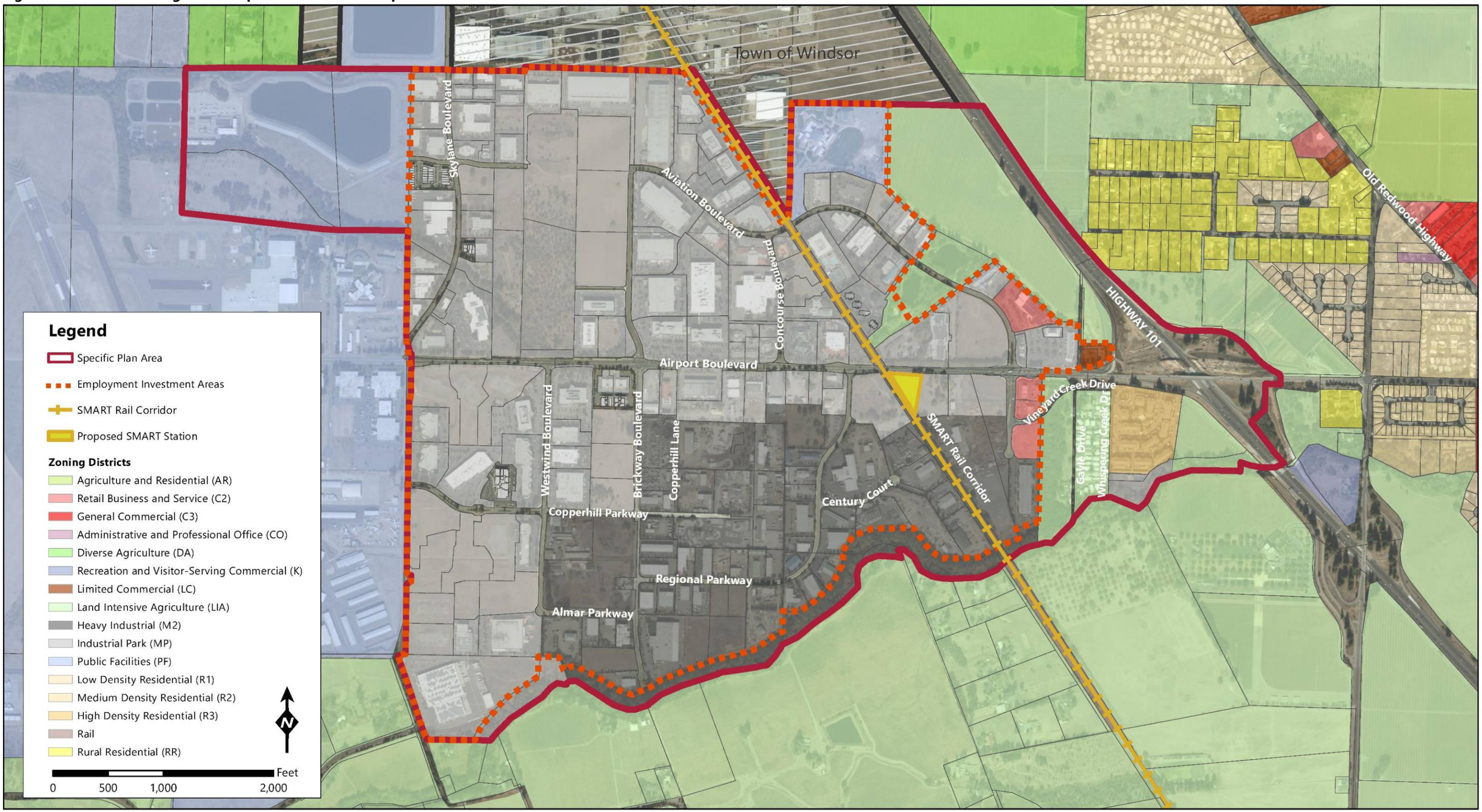
Source: Sonoma County Comprehensive Airport Land Use Plan, Chapter 8: Excerpt from Table 8C

5.2.2. ***ZONING ORDINANCE***

Zoning Designations

The SPA consists of land with a broad distribution of zoning district designations. As shown in Figure 10 below, the most prevalent zoning designations within the area are Heavy Industrial (M2) and Industrial Park (MP), consistent with the existing industrial character of the SPA and as outlined in the current Airport Industrial Area Specific Plan.

Figure 10 – Current Zoning in the Airport SMART Station Specific Plan Area



Sonoma County Airport Smart Station Specific Plan | Zoning

Source: County of Sonoma and ESRI GIS data, map prepared by M-Group

In addition to these industrial areas within the core of the SPA, other zoning designations include Public Facilities (PF) at the northern edges of the SPA, Land Intensive Agriculture (LIA) along the eastern boundary, pockets of Retail Business and Service (C2) and Limited Commercial (LC), and an area near Highway 101 zoned High Density Residential (R3).

Permitted Uses

The zoning districts within the SPA provide for a wide variety of uses, all of which are detailed in the County's Zoning Ordinance (Sonoma County Municipal Code, Chapter 26). Generally speaking, industrial zones (M2 and MP) permit uses such as manufacturing, cannabis cultivation, food processing, fabrication, assembling, warehousing, wholesale distribution, machine shops, professional offices, and research and development facilities.

Commercial zones (C2 and LC) focus on uses related to retail, repair and service, restaurants, medical clinics, day care facilities, and other commercially-minded uses.

The PF zone permits facilities owned and operated by public agencies for uses including production, storage, telecommunication facilities, small collection facilities, and other non-residential uses.

The LIA zone allows uses related to the raising, feeding, maintaining, and breeding of animals, as well as the harvesting and growing of agriculture.

Lastly, the R3 zoning district permits dwelling units of various residential densities (determined by the associated B combining district), along with other uses such as home occupations, daycare facilities, and the harvesting of small scale crops and beekeeping.

In addition to those permitted uses identified in the Zoning Ordinance, other allowable uses may be permitted pursuant to the exiting Sonoma County Airport Industrial Area Specific Plan.

Development Standards

A condensed summary of development standards for the zoning districts within the SPA are provided below in Table 16. Note that additional information is provided in the County's Zoning Ordinance, and many of the standards below include additional requirements or clarifications depending on a variety of factors. It should be noted that many of these land use and the maximum height may be reduced due to compatibility with the Comprehensive Airport Land Use Plan as previous mentioned.

Table 16 - Development Standards for Zones within Specific Plan Area

Zone	Max Building Height	Max Lot Coverage	Yard Requirements
M2	65 ft.	50%	M2 district requirements match LC district
MP	65 ft.	50%	**Front Yard** = 40 ft. (average); 25 ft. minimum bldg setback
			Side Yard = 10 ft. minimum
			Rear Yard = 10 ft. min.
PF	**Main bldg:** 35 ft.	40%	**Front Yard** = 20 ft. min.
	Accessory bldgs: 15 ft. (additional height may be permitted with a permit)		**Side Yard** = 5 ft. min.
			Rear Yard = 20 ft. min.
LIA	**Agricultural bldgs:** 50 ft.	**Parcels ≤2 acres:** 20%	**Front /Street Side Yard** = 30 ft.
		Parcels 2 to 5 acres: 18,000 sf or 15%, whichever is great	**Side Yard** = 10 ft. min.
	Other bldgs.: 35 ft.	**Parcels 5 to 20 acres:** 30 sf or 10%, whichever is greater	**Rear Yard** = 20 ft. min.
		Parcels ≥20 acres: 85,000 sf or 5%, whichever is greater	
C2	35 ft.	50%	**Front Yard** = 0
			Side Yard = 0
			Rear Yard = 0
LC	35 ft.	50%	**Front Yard** = 0
			Side Yard = 0
			Rear Yard = 0
R3	35 ft. or 2-stories, whichever is less	60%	**Front Yard** = 15 ft. min.
			Side Yard = 5 ft. min.
			Rear Yard = 10 ft. min.
			Garage Setback = 20 ft. min.

Note: Data derived from Sonoma County Zoning Ordinance. Refer to Ordinance for full details.

Parking standards are applied by use, as outlined in Article 86 (Parking Regulations) of the County's Zoning Ordinance. Generally speaking, industrial and office uses are required to provide parking based on the gross building floor area, school uses must provide parking based on the number of employees and students/children, and residential uses provide parking based on the number of dwelling units.

CHAPTER 6 | CIRCULATION

- SUMMARY OF KEY ISSUES AND OPPORTUNITIES
- PEDESTRIAN AND BICYCLE CIRCULATION AND ACCESSIBILITY
- TRANSIT ACCESSIBILITY
- AUTO ACCESS AND CIRCULATION
- PARKING AVAILABILITY AND TDM

6. CIRCULATION

This Circulation section, prepared by Nelson\Nygaard, provides an overview of existing and planned multimodal transportation facilities and services in the Sonoma County Airport SMART Station Specific Plan Area (SPA) as illustrated in Figure 11. This information will serve as a basis for planning the multimodal projects, policies and programs necessary to achieve the County's larger goals for the area. The focus of this section is on access (including parking), connectivity and circulation within the SPA, and on multimodal connections to the Airport Boulevard SMART Station. This chapter includes an overview of existing conditions and opportunities for improvements to the circulation network. These opportunities will be based on land use and circulation alternatives prepared for the SPA, as part of this planning effort.

The Sonoma County General Plan Circulation and Transit Element require transportation planning to be consistent with provisions the California Complete Streets Act. Complete Streets requires that transportation infrastructure be designed to accommodate all road users and all modes of transportation on a co-equal basis. To meet this goal, it is necessary to elevate the commitment to providing walking and bicycling facilities. Continuous sidewalks, walkways, trails, and bikeways are necessary to provide safety and convenience to allow people to choose non-motorized transportation modes. Especially important is developing more sidewalks and increasing the number of pedestrian street crossings. Substituting a ten minute walk for a five minute drive is feasible if bicycle and pedestrian facilities are continuous and link people from their neighborhoods to destinations such as schools, stores, jobs, public institutions, and parks.

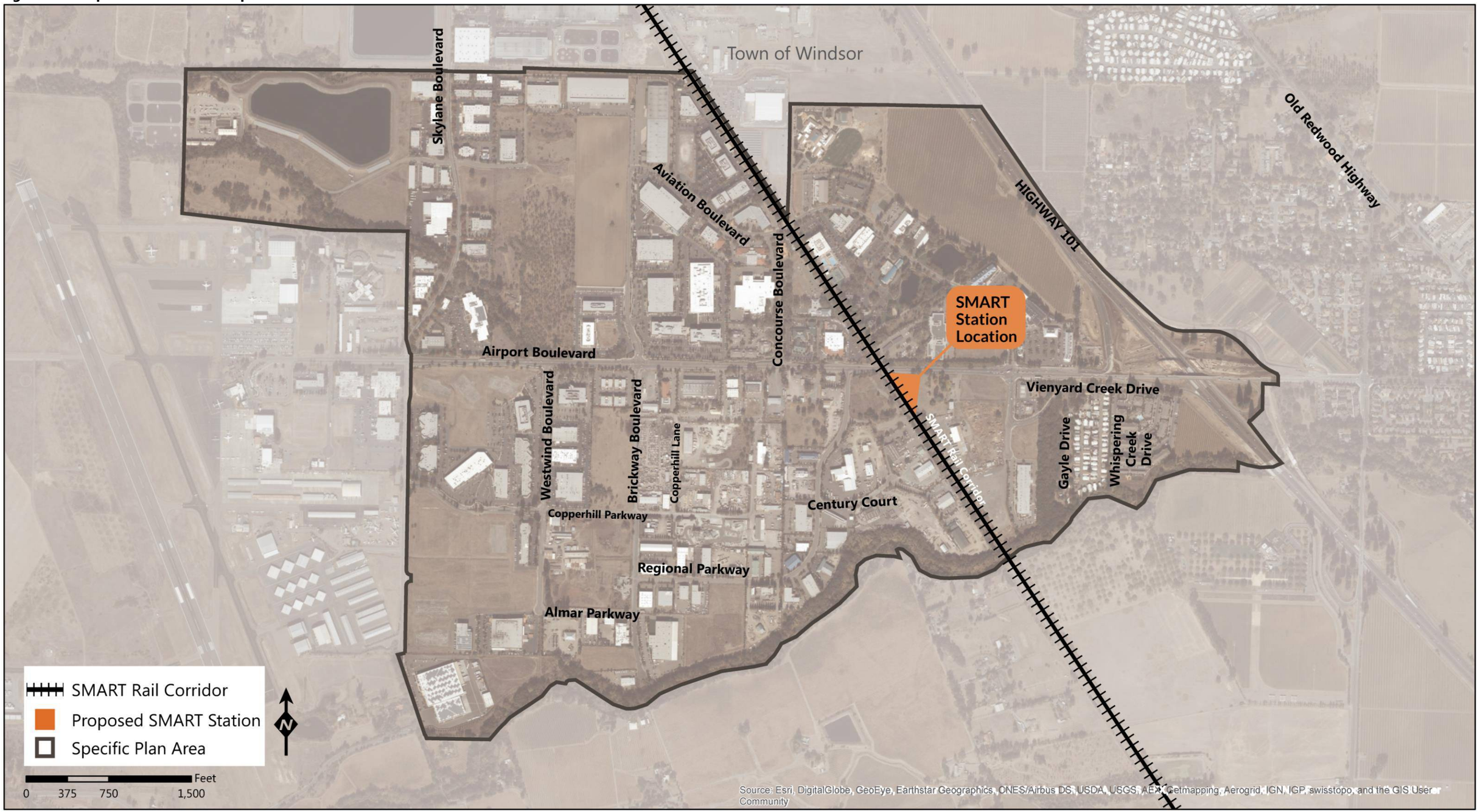
The Sonoma County Airport SMART Station Specific Plan Area Plan enacts Complete Streets concepts through a series of recommendations that will elevate the commitment to providing safe, convenient facilities for pedestrians, people with disabilities, cyclists and others who choose non-motorized transportation modes. The SPA will also emphasize integration between bus and rail transit as well as connectivity between transit and other transportation modes.

The primary transportation focus of the Airport SMART Station Specific Plan (the Plan) will be connections within the SPA and adjacent neighborhoods, including the Town of Windsor. Other important connections include those between existing and planned development areas, such as the Charles M. Schulz - Sonoma County Airport, the Veterans Affairs hospital, and schools in the area—and connections to the Airport Boulevard SMART Station, west of U.S. 101 and in the eastern portion of the SPA. Seamless connections will be necessary to provide access to local and regional transit facilities at the SMART station. A key goal will be to "knit together" the development opportunity sites and existing buildings and communities in a way that improves mobility and circulation for all, while integrating the SPA into the fabric of the larger county.

The contents of this section are based exclusively on an assessment of connectivity barriers during site visits and a review of existing and available plans, studies and data pertinent to the area. This includes the Sonoma County General Plan 2020, the Sonoma County Transportation Authority's (SCTA) Comprehensive Transportation Plan, the Sonoma County Bicycle and Pedestrian Plan, the

SMART Station Plan, the existing Sonoma County Airport Industrial Area Specific Plan and Environmental Impact Report, the 2011 Charles M. Schulz Sonoma County Airport Master Plan Update Implementation Project and Final Environmental Impact Report, and the 2014 Brickway Expansion Transportation Impact Study. Opportunities to improve, enhance and create new multimodal access and circulation, including roadway and transportation facility design concepts, and related policies and programs are also included.

Figure 11 - Airport SMART Station Specific Plan Area



Sonoma County Airport SMART Station Specific Plan | Specific Plan Area

Source: ESRI, Nelson\Nygaard, 2016

6.1. SUMMARY OF KEY ISSUES AND OPPORTUNITIES

The SPA is largely industrial and commercial with large office campuses and County government offices. The SPA is characterized as an employment center that is primarily accessibly by car only. Sonoma County Transit (a division of the Department of Transportation and Public Works (DTPW)) operates one bus line through the area, with service between the Town of Windsor and City of Santa Rosa. The Sonoma-Marin Area Rail Transit (SMART) commuter rail is expected to begin service in mid-2017 and will provide rail service that connects the SPA to Marin County and other cities within Sonoma County. Sonoma County Transit is will also operate a local circulator bus to provide connection to the SMART station and Sonoma County Airport.

This section outlines the current issues for transportation users in the SPA and addresses key issues, challenges and future opportunities, particularly to enhance the arrival of SMART service and circulation within the SPA.

6.1.1. ***KEY ISSUES***

The existing roadway network has circuitous roads in the SPA, which create indirect routes around large industrial parcels. There is a general lack of multimodal facilities (e.g., pedestrian, bicycle and transit facilities) throughout the SPA. This creates an environment that prioritizes vehicle trips. Through a multimodal transportation perspective, this creates connectivity (i.e. accessibility) and circulation challenges to and within the SPA for all road users (e.g., pedestrians, bicyclists, transit riders, and drivers). Figure 12 summarizes the key issues and challenges by mode; these are discussed in more detail throughout this report.

Figure 12 - Key Issues and Challenges

Mode		Key issues	Challenges
Pedestrian		Gaps in the network	– Discontinuous sidewalks – Lack of sidewalks on both sides of streets – Inadequate sidewalk widths – Non-ADA compliance
		Lack of human scale	– The lack of buildings at property lines creates a vulnerable walking experience and decreases security for walking trips along streets – Limited variation in land uses
		Indirect routes Safety at intersections and vehicle access points	– Undesirable, long paths for pedestrians to reach key destinations – Road design optimized for efficient movement of motor vehicles with little regard safety of non-motorized road users. Long pedestrian crossings – Lack of safe, convenient crossings. – Long signal cycles to prioritize vehicle volumes creates long wait times for pedestrian crossing intersections
Vehicle		Congestion	– Few access points to the area concentrates heavy traffic congestion in and out of area – High vehicle dependency for commute and short, midday trips – Limited connectivity between local roads – Heavy mix of freight and general auto traffic
Transit		Service	– Limited bus frequency and service – Poor connectivity to transit hubs, residential areas, and commercial districts
		Access	– Lack of bus shelters and passenger amenities – Transit service far from intersection corners or key service locations
Bicycle		Gaps in the network	– Lack of wayfinding to navigate bicycle network – Limited north-south and east-west connections
		Unsafe road conditions	– Bike facilities located on roads with frequent freight truck activity – High-speed differential between vehicle traffic and bicycles – Inadequate bicycle lanes and pathways with large gaps. – Road design optimized for efficient movement of motor vehicles with little regard safety of non-motorized road users. – Inadequate sight lines at intersections and driveways.
Parking		Segregated lots and privatized by land uses	– Numerous surface parking lots within campus areas – Lack of shared parking resources between campuses and company buildings – Abundance in parking supply and underutilization of parking areas that could be activated by other uses

6.1.2. ***KEY OPPORTUNITIES***

With planned SMART rail service, the SPA may become more accessible for employee, resident and visitor trips. Redeveloping the area to activate and intensify land uses within the existing and future street network to create a denser and continuous network of complete streets will support non-driving connections to the planned Sonoma Airport SMART Station and other destinations in the SPA.

Charles M. Schulz - Sonoma County Airport and commercial uses will be important components for creating a vibrant area. In addition, a critical opportunity will be to knit together individual redevelopment sites and existing buildings in a way that prevents each development site from being an isolated island. Improving mobility and creating seamless connectivity for the entire SPA will better integrate the SPA into the fabric of the county and the region. Figure 13 highlights key components and benefits of complete streets and Figure 14 outlines opportunities for each mode.

Figure 13 - Complete Streets Benefits

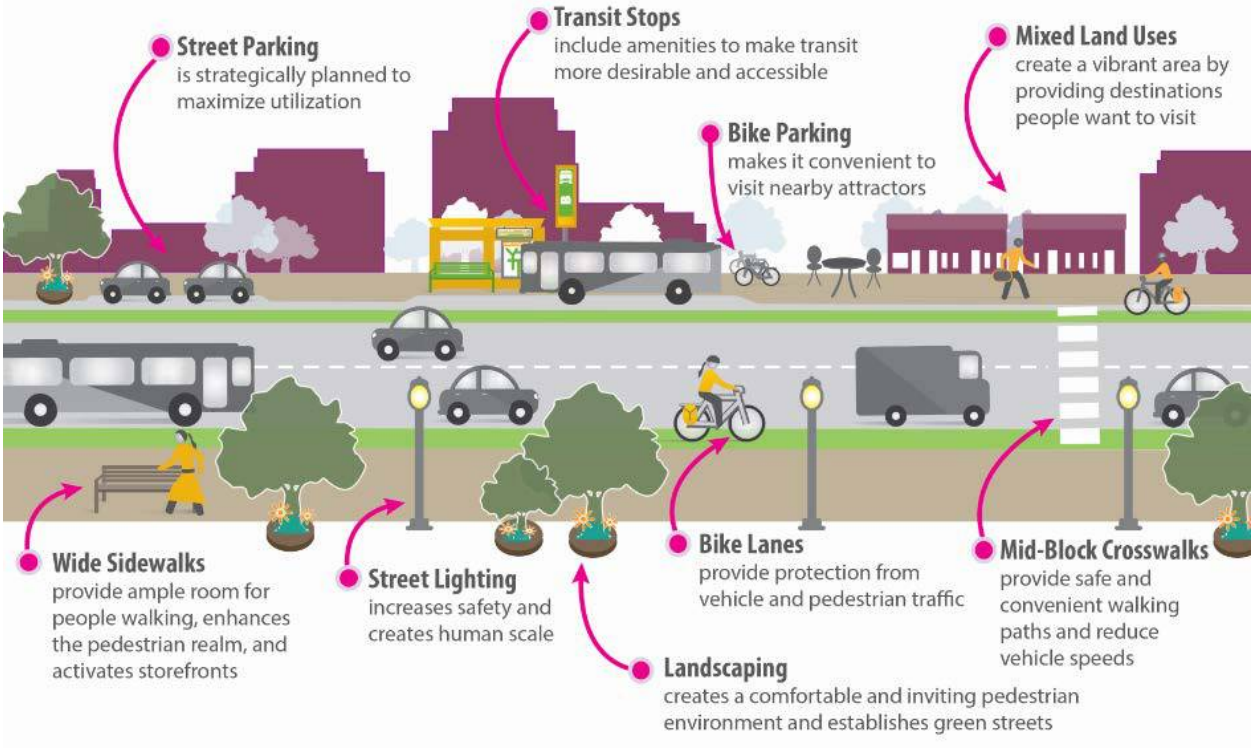


Figure 14 - Opportunities by Mode

Mode	Opportunities	Details
Pedestrian 	Direct connections	– Shortest, safest and most direct routes for convenient walking trips –
	Comfortable and secure walking environment	– Pedestrian treatments at intersections and vehicle access points – Increased activity on the street to promote active surveillance – Meet ADA requirements – Human-scale features to create a secure and inviting environment – Establish alternative routes to separate vehicles from areas with high pedestrian activity
	Land uses to support mid-day trips	– Diverse land uses to serve daily lifestyle needs – Variation in built environment to create visual interest and improve aesthetics – Reduce congestion by decreasing vehicle dependency for short trips
Vehicle 	Traffic management	– Increase the number of access point to the area – Improve signal coordination to enhance traffic flow – Establish alternative routes to separate vehicles from areas with high pedestrian activity
Transit 	More connections between key destinations	– Increase service to allow convenient connections to SMART station – Improve access to regional transit options
	Increased ridership	– Improve rider amenities and service improvements to encourage the use of transit over private vehicles
Bicycle 	Comfortable and convenient bicycle infrastructure	– Upgrade & establish Class II bike lanes to increase protection for cyclists – Apply safety features at conflict points (e.g., intersections and driveways) – Further separate bicyclists from large vehicles and high travel speeds
	Convenient access to key destinations and community attractors	– Expand the bicycle network to provide connections to key services – Provide bike parking at activity point entrances – Provide safe connections between communities and the SMART station
Parking 	Develop shared parking agreements and encourage Transportation Demand Management (TDM) strategies	– Encourage sharing of parking lots to reduce any inactive areas; make efficient use of the available supply – Maximize current parking supply and reduce need to dedicate more space exclusively for parking – Utilize parking areas for other "active" land development opportunities – Reconfigure and relocate parking areas to rear of property to allow buildings and storefronts to abut sidewalks and activate street space while also making parking convenient for employees and visitors – Enable "park once" behaviors that allow visitors and employees to park once and make multiple trips on foot by concentrating parking within walking distance to many attractions/destinations – Designating priority parking spaces for carshare and carpool vehicles – Modify Code requirements and reduce parking minimums – Encourage employers to implement TDM program based on size

6.2. PEDESTRIAN AND BICYCLE CIRCULATION AND ACCESSIBILITY

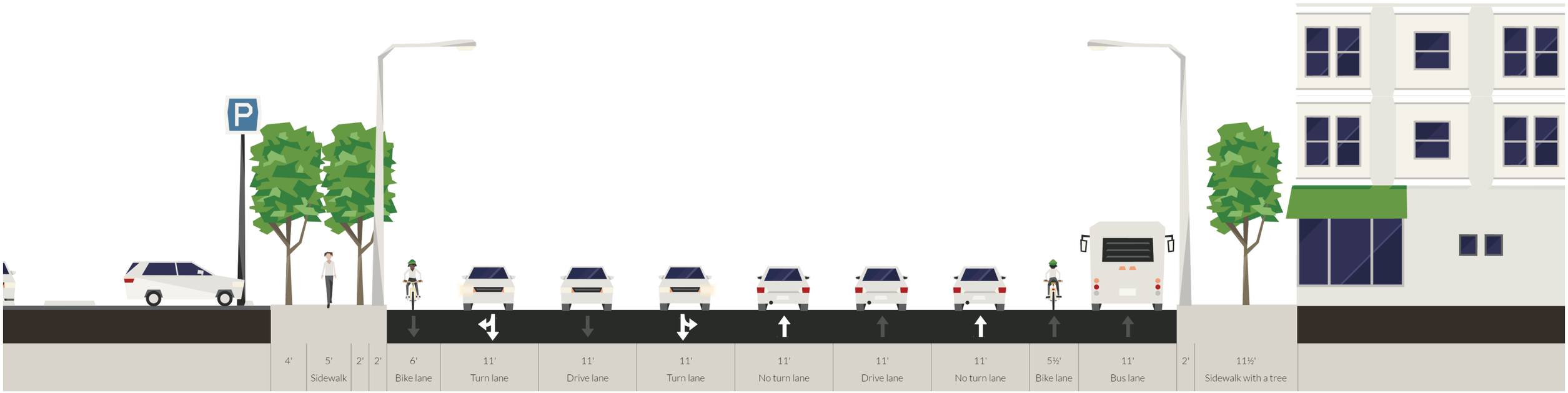
The SPA is largely characterized by its strong motorized connections to the Charles M. Schulz - Sonoma County Airport and U.S. 101. There are substantial barriers to transit service and safe areas for walking and biking. This section provides an overview of existing conditions of current and planned improvements to access, connectivity, and accessibility for non-motorized travel and highlights existing barriers to connectivity and circulation both within the SPA and to the adjacent environs in the County. An inventory of bicycle facilities and level of non-motorized activity are included.

6.2.1. ***EXISTING PEDESTRIAN, BICYCLE, AND ACCESSIBLE TRANSPORT FACILITIES***

This section illustrates the extent of pedestrian, bicycle and accessible transportation facilities in the SPA. Compared to other areas and neighborhoods in the County of Sonoma, the level of non-motorized accessibility and connectivity within the SPA is limited by the current circulation network, and layout and distance between land uses.

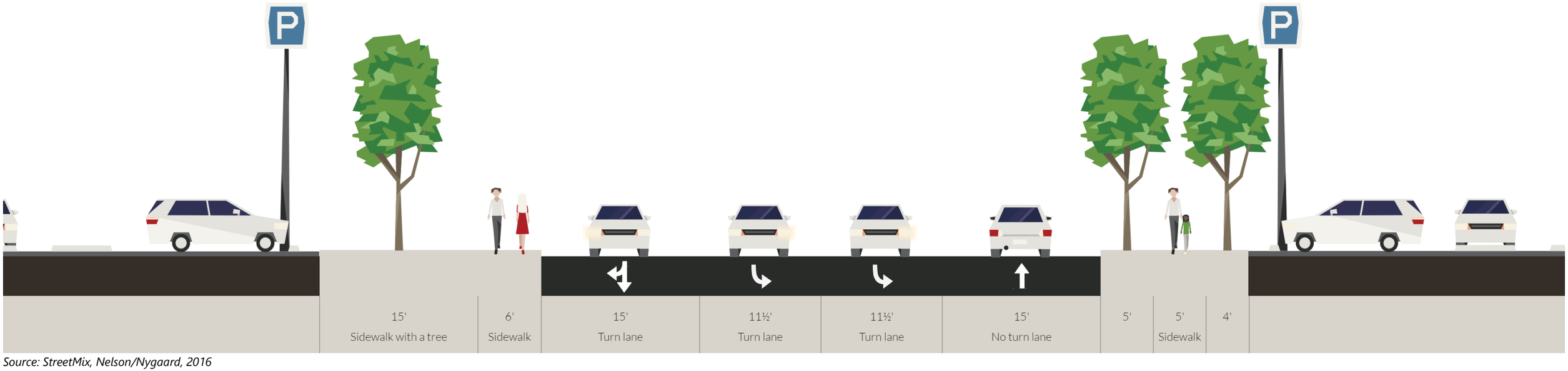
Streets in the SPA generally have wide traffic lanes and center turning lanes. Many streets lack sidewalks on both sides of the street and where sidewalks are present, widths range between three and five feet. Figure 15 and Figure 16 illustrate current cross-sections of Airport Boulevard and Brickway Boulevard

Figure 15 - Cross Section of East Leg of Airport Boulevard and Brickway Boulevard Intersection



Note: The 11-foot-wide eastbound bus lane is a 50-foot-long turnout for loading activities and does not continue along Airport Blvd. Source: StreetMix, Nelson/Nygaard, 2016

Figure 16 - Cross Section of North Leg of Brickway Boulevard and Airport Boulevard Intersection



Source: StreetMix, Nelson/Nygaard, 2016

Street Connectivity

Airport Boulevard is the main arterial in the SPA and connects the Charles M. Schulz - Sonoma County Airport, the SMART station, U.S. 101, and neighborhoods to the east of the highway. Aviation Boulevard is the main access road north of Airport Boulevard and circumvents the northern portion of the SPA. Although most streets in the southern portion of the SPA connect to Airport Boulevard and Laughlin Road, streets such as Regional Parkway, Copperhill Parkway do not provide a through-connection, are dead end or discontinue at north-south streets. For example, Regional Parkway does not connect with Copperhill Parkway or Westwind Boulevard. As a result, there is limited connectivity and access for all modes to travel within and beyond the SPA.

Pedestrian Infrastructure

In addition to limited connectivity because of the existing street configuration, many streets do not have sidewalks on both sides of the street. The large parcels and parking lots throughout the SPA limit the opportunity for pedestrians to travel in direct paths, making walking paths long and indirect. Crosswalks are present at three, signal-controlled intersections along Airport Boulevard. The intersections with crosswalks are at the U.S. 101 on-/off-ramps, Airport Boulevard at Aviation Boulevard and Airport Boulevard at Brickway Boulevard. These intersections are very wide with crossing distances ranging from approximately 80 to 115 feet. There are also many driveways and curb cuts on Aviation and Brickway Boulevards for vehicle access into parking lots, which presents potential for pedestrian-vehicle conflicts.

Despite the presence of meandering sidewalks and walking infrastructure, pedestrians choose to walk on the most direct paths. The SPA has sidewalk segments on Airport and Brickway Boulevards that are newly paved and meander through lush landscaping. These segments are inviting and promote walking trips, however, they are inconsistent and have poor connectivity to the greater network. As a result, people choose to walk in the street or through parking lots, increasing vulnerability to vehicle traffic.

Figure 17 - Discontinuous sidewalk

Source: Nelson\Nygaard, 2016

Sidewalk widths in the area are approximately five feet wide, which does not allow for space to walk alongside or pass someone walking in the opposite direction. There are two off-street pedestrian paths in the SPA, which provide a more direct access for people who want to walk in green, open space. These paths are north of Airport Boulevard, near the Sonoma County Department of Education and Sonoma County Water Agency Building. The path near the Sonoma County Department of Education building is in the western portion of the SPA and connects Skylane Boulevard to Airport Boulevard. The path is currently not ADA-accessible and lacks amenities to promote active surveillance and increase pedestrian security.

Crosswalks in the SPA are primarily present at signalized intersections, though pedestrians are required to activate the walk signal at these intersections. This, and long signal cycles make the wait time at intersections considerable for those walking. There is also a lack of mid-block crossings where pedestrian paths or land uses encourage walking. Key examples of this are along Airport Boulevard and Aviation Boulevard, where intersections are spaced far apart with many building and parking lot access points along the blocks. With high vehicle speeds and poor pedestrian visibility, people walking typically need to cross at corners, which makes the walking route longer and less desirable.

Wide Curb Radii

Corners in the SPA have wide curb radii to accommodate freight (truck) travel and vehicles turning at high speeds. This design at intersections and driveways creates a longer crossing distance for people walking and increases opportunities for conflicts between modes. Wide curb radii also position pedestrians further back from the line of sight of drivers at intersections, reducing visibility of pedestrian activity.

Bicycle lanes/routes

The SPA currently has discontinuous Class II bicycle facilities on Airport and Skylane Boulevards. These facilities are defined as striped bicycle lanes that delineate the bicycle lane from the auto traffic lane. These lanes are generally three to four feet wide, not including the gutter. On Airport Boulevard, a shoulder exists along segments that do not have a bike lane and may cause confusion to bicyclists and motorists. The lane designation for the bike space is also fading is some areas, making it difficult to see where the bike space ends and space for vehicle traffic begins. The bicycle lanes on Skylane Boulevard are clearly marked but do not begin until Aviation Boulevard, which is near the northern border of the SPA.

Figure 18 - Bicycle space, Skylane Blvd

Source: Nelson\Nygaard, 2016

The existing design of these streets leaves very little space for bicyclists, despite the dedicated lanes. The posted speed limits exceed 25 miles per hour, and there is no separation between vehicle and bicycle traffic, increasing the risk for crashes. Additionally, both of these streets are designated streets for large trucks and freight activity. Large vehicles increase hazards for bicyclists by taking up more space on a shared roadway, reducing the available space for bicyclists.

6.2.2. PLANNED PEDESTRIAN, BICYCLE AND ACCESSIBLE TRANSPORT FACILITIES

The SPA has planned bike improvements. Figure 19 shows the planned bicycle improvements, which fill in the gaps of the existing network and establish two Class I facilities (multi-use pedestrian and bicycle paths). One multi-use path will run along the SMART rail right-of-way and the other multi-use path will run along a portion of the Mark West Creek, east of U.S. 101.

The Sonoma County Airport Industrial Area Specific Plan established standards for a comprehensive network of sidewalks and trails. As stated in the Plan, 5- to 10-foot-wide concrete pathways are to be provided along the inside loop of internal streets (e.g., collector, connector, and minor streets). These pathways are to be incorporated into required landscape plans and in concert with other landscape improvements by property owners. These planned pedestrian improvements are required as a condition of development.

6.2.3. BARRIERS TO NON-MOTORIZED CONNECTIVITY AND ACCESSIBLE TRAVEL

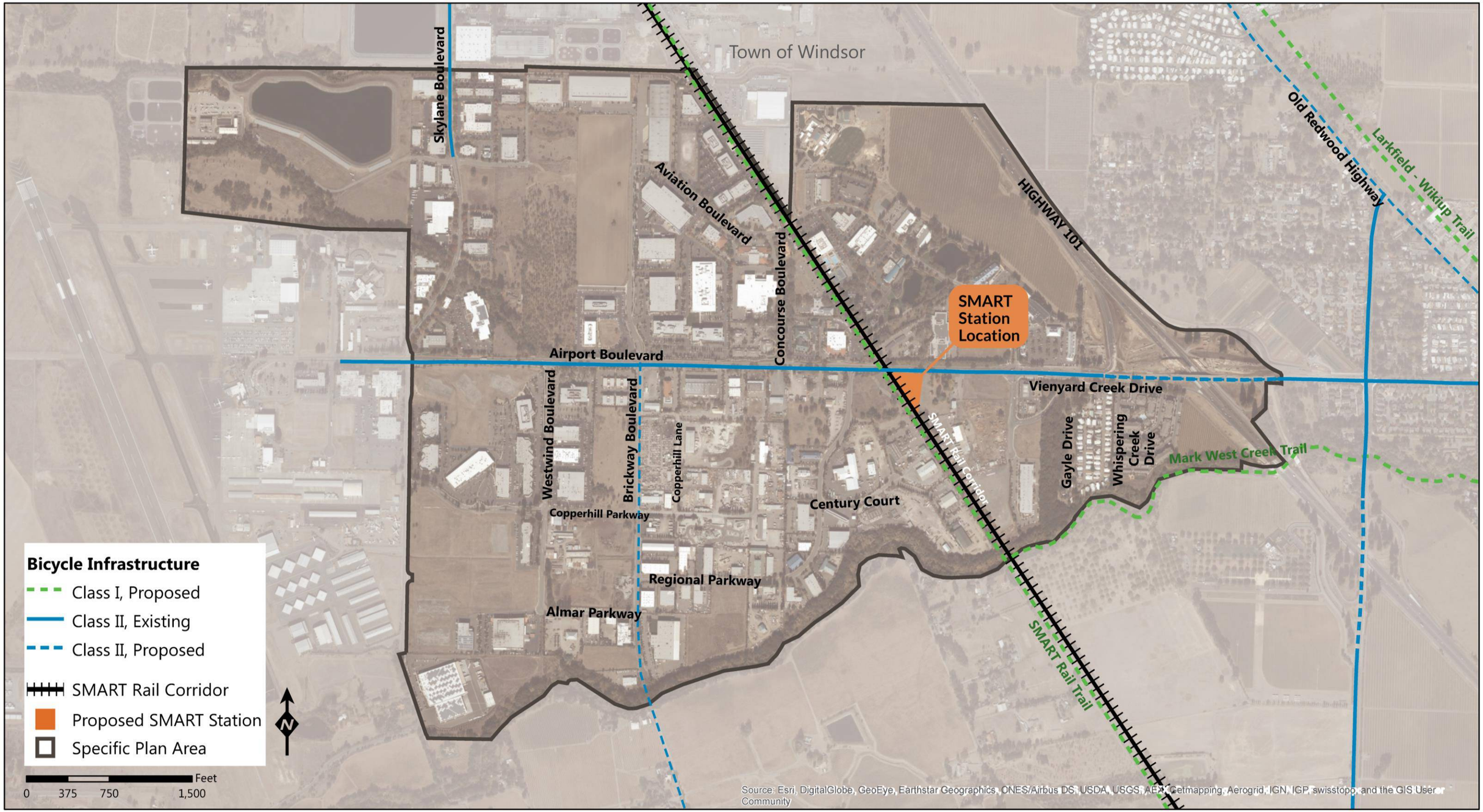
There are many factors that create barriers to active and accessible travel behaviors. To facilitate this activity, there needs to be places where people want to go and convenient options to get there. Currently, the road network and surrounding land uses create a significant barrier. Roads in the area are circuitous, with limited nodes, and often do not connect to one another, creating long and indirect routes for those walking or bicycling. Large industrial parcels dictate where roads and bicycle and walking routes are situated. The parking lots and large setbacks of buildings on these parcels do not create an inviting environment because of a lack of visual interest and human scale.

Road elements also create barriers to walking, biking, and ADA travel. An accessible network provides separate space that is convenient with direct connections for walking or biking trips. Many of the roads in the SPA do not have sidewalks on both sides of the street. The sidewalk space also presents barriers, with overgrown landscaping and general incompleteness of the pedestrian space. Where travelers need to cross streets within the SPA, sidewalks often time lack ADA-accessible curb ramps, with the exception of Airport Boulevard. Similarly, bus shelters and signage along Airport Boulevard are often positioned in a way that obstruct the pedestrian right of way, limiting ADA access and lines of sight.

Bicycle lanes within the SPA lack connectivity and have significant gaps, obligating cyclists to share the road with motor vehicles, including heavy trucks, on high volume, high speed roadways. The two bicycle lanes in the SPA are along Airport and Skylane Boulevards, which are designed and commonly used for freight trucks (e.g., wide traffic lanes and shoulders, and curb radii to handle freight trucks) and have heavy levels of vehicle traffic.

There is an at-grade rail crossing along Airport Boulevard and Aviation Boulevard. The current design of these crossings does not accommodate for comfortable or easy pedestrian or bicycle activity, and there is no crossing control and uneven surfaces. These conditions present safety concerns and potential hazards for bicycle or walking trips that cross the train tracks.

Figure 19 - Existing and Proposed Bicycle Infrastructure



Sonoma County Airport SMART Station Specific Plan | Bicycle Infrastructure and Trails

Source: ESRI, Sonoma County, Nelson\Nygaard, 2016

6.2.4. IMPROVING NON-MOTORIZED CONNECTIVITY AND ACCESSIBLE TRAVEL

Transforming the street network and public realm can create opportunities to encourage non-motorized travel and improve accessibility. This transformation supports and complements the built environment. Improving non-motorized connections and access essentially "activates" the street. Pedestrian travel (e.g., foot traffic) is paramount to attracting local businesses, including retail, restaurants and related uses. Providing opportunities to walk and bike with ease from one destination to another promotes healthy lifestyles.

The SPA is comprised of several private businesses with large campuses. Employees have been observed walking throughout the area at all hours of the day, and most predominantly during the "lunch hour". The terrain throughout the SPA is relatively flat which supports walking and biking for all people with various capabilities. In addition, the weather in Sonoma County is moderate and supports active transportation. This justifies enhancements to walking and bicycle infrastructure to create a true multimodal and active network.

Gaps in the sidewalk network currently exist along the south side of Airport Boulevard (the west side of Concourse Boulevard), along Aviation Boulevard, and many of the streets south of Airport Boulevard including Regional Parkway, and Copperhill Parkway, respectively. The lack of continuous sidewalks along parallel roads limits the walkability and these gaps need to be filled in to provide one continuous network and available routes. Sidewalk widths could also be evaluated and widened, where appropriate, to adhere to the ADA regulations of providing a minimum of 5 feet in total width. In some areas, wider sidewalks may be ideal to accommodate foot traffic volumes. Careful consideration of street lighting and sidewalk bulb-outs will enhance pedestrian safety by increasing visibility during all times of the day, shortening the walking distance across streets, and increasing pedestrian presence and crossing points.

Intersection and mid-block crosswalks, coupled with modified and/or reduced auto lanes, will create a more comfortable and secure pedestrian environment and will increase north-south and east-west connectivity. Optimizing pedestrian connections to current and proposed off-street trails (Class I facilities) will:

- Provide more recreational options for patrons in the SPA;
- Provide regional connections to nearby neighborhoods; and
- Allow pedestrians and bicycles to travel to/from the SPA without being near, or adjacent to any busy streets.

The potential for an area-wide greenway presents an opportunity to create additional Class II and Class III bicycle facilities (shared bicycle and vehicle routes, commonly marked with signage and sharrow road markings) to connect the entire area and create a continuous bicycle network within and around the SPA. A sharrow is shown in Figure 20.

A comprehensive, safe and convenient bicycle network will also re-prioritize how streets in the SPA function enhancing space for bicycles. Additionally, a comprehensive bicycle network, in combination with proper signage and reduce vehicle speeds, will improve safety for bicyclists in the SPA, making it likely that more people will choose to ride a bicycle.

Figure 20 - Green sharrow

Source: Nelson\Nygaard, 2016

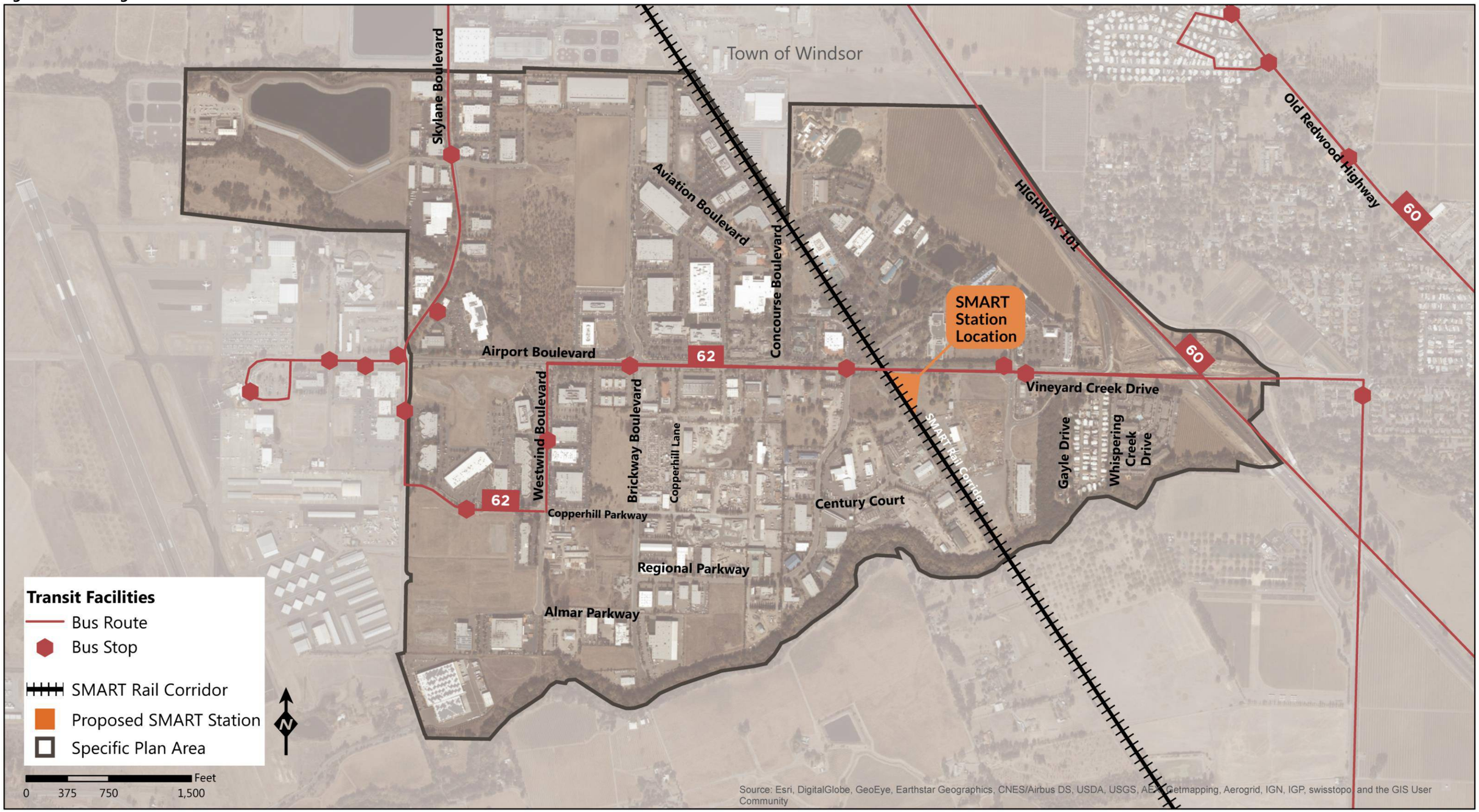
Additional pedestrian infrastructure and safety treatments will be needed at the at-grade rail crossings along Airport Boulevard and Aviation Boulevard to enhance pedestrian use in the area. Such enhancements will include specialized pedestrian signals, high-visibility signage, and pedestrian-level drop-down gates to prohibit pedestrians from crossing while trains are passing. Modifications to the current traffic signal timing, phasing and optimization will be required to account for new and improved pedestrian crossing phases.

6.3. TRANSIT ACCESSIBILITY

Sonoma County Transit is the only service provider in the SPA. Bus route 62 provides north-south service and is the only bus that currently stops within the SPA. This route provides weekday and weekend service between the Town of Windsor and City of Santa Rosa, with approximately 60-minute headways during weekdays and 120-minute headways during weekends.[5] Within the SPA, there are bus stops along Airport, Westwind, and Skylane Boulevards. Bus route 60 traverses along U.S. 101 and continues north and south of the SPA. Figure 21 shows the existing transit service within the SPA.

[5] Headways are defined as amount of time (in minutes) between bus arrivals at a given stop. For example, a 60-minute headway signifies that a bus arrives at the bus stop and another bus will arrive at the same stop in 60 minutes.

Figure 21 - Existing Transit Service



Sonoma County Airport SMART Station Specific Plan | Transit Network

Source: ESRI, Sonoma County Transit, Nelson\Nygaard, 2016

6.3.1. ***PLANNED TRANSIT PROJECTS***

The SMART Airport Station is planned to begin operation in mid-2017. This service will provide commuter rail service between Sonoma and Marin Counties. The first phase of the project will include service from the Sonoma County Airport Station to Downtown San Rafael. Phase two of the SMART project will provide service north to Cloverdale and south to Larkspur, where passengers will be able to reach San Francisco via ferry or bus.

The 2014 Sonoma-Marin Area Rail Transit District (SMART) Strategic Plan outlines the planned operations for the new commuter rail service. When full service begins, SMART's operating plan includes 15 northbound and 15 southbound trains every weekday during the morning and evening commute hours with estimated 30-minute headways; only one midday train in each direction is planned. Weekend service would be limited to up to four (4) trains in each direction; however, there is potential for increased weekend service but service expansion is under discussion. Trains are planned to travel approximately 30 minutes apart, and the 43-mile trip from downtown San Rafael Station to the Sonoma County Airport Boulevard Station would take about 67 minutes in either direction.

Estimated ridership projections have not been finalized and are subject to change. However, according to the most recent ridership forecasts, the Airport Boulevard Station would experience about 177 daily boardings (90 in the morning and 87 in the evening periods) during the initial operations and at full buildout of the entire SMART corridor (all phases are completed), the station would experience 648 boardings (127 in the morning and 401 in the evening periods), respectively.[6]

To support SMART rail service and provide more convenient connections and access to the rail service for employees and residents in the SPA, Sonoma County Transit is planning a shuttle to facilitate first-and last-mile connections. This service is planned to serve as a circulator between the SMART station and Charles M. Schulz - Sonoma County Airport and the frequency of service, routing plan, and timetable will align with all SMART trains.

6.3.2. ***BARRIERS TO TRANSIT ACCESSIBILITY***

The current transportation service within the SPA does not provide frequent service or connect the SPA to nearby communities, attractors, or transit hubs. There is little opportunity for convenient regional connections, which present barriers for commuters or visitors to the area to depend on transit service as a primary travel mode.

[6] Sonoma-Marin Area Rail Transit, *Airport Boulevard Rail Station CEQA Addendum*, December 2013; Table B-2. Projected Daily Boardings at Proposed Airport Boulevard Station.

The existing location of transit stops, and the design of these stops does not encourage ridership. Many of the existing stops along the 62 bus route are placed far from building entrances and do not have clear pedestrian connections from where people are trying to go or come from. This makes traveling between transit stops and final destinations difficult and uncomfortable. Many of the stops only have a pole with a sign noting bus service. With the current service, riders may have to wait for a long period of time, and without a place to sit, or shelter from the elements the wait time may be uncomfortable.

Figure 22 - Airport Boulevard bus stop

Source: Nelson\Nygaard, 2016

The current design of the SMART station has been finalized. The current design plans include a 15-foot-wide side-running station platform (east of the tracks) for passenger boarding and alighting. An 8-foot-wide pedestrian pathway would connect the platform to the newly constructed 6-foot-wide sidewalk along the south side of Airport Boulevard, which would then connect to the existing sidewalk. A surface parking lot would be located east of the platform; access to the parking lot is not identified in the plans. Aside from the planned pedestrian pathway that connects to the existing sidewalk along the south side of Airport Boulevard, the current plans do not include clearly-delineated pedestrian access points or areas for pedestrians to comfortably access the station on foot (walking to/from the station from nearby businesses or from a transit connection), and no pedestrian safety features, signage, flashing lights, short gate arms or related pedestrian safety devices.

6.3.3. ***OPPORTUNITIES TO IMPROVE TRANSIT ACCESSIBILITY***

Making transit both accessible and convenient will reduce the existing barriers for potential riders. Acting on opportunities to strengthen the transit service involves complementing land uses so that transit provides service to areas where people want to go. This requires positioning stops near pedestrian entrances to key destinations and community attractors, and providing service between the SPA and nearby communities and services. A strong opportunity in the SPA is establishing connections that prioritize non-motorized transit modes, transit, passenger drop off, and parking for private vehicles, respectively, to the SMART station. Pairing this with a vibrant station area will encourage travelers to rely on SMART as a primary mode of travel.

Accessible transit requires consideration of how people reach the loading area, whether it be bus doors or a station platform. Improving access is largely done through design, with the main objective of designing for human activity by prioritizing non-motorized movements. Achieving this includes establishing direct connections, convenient transfers, clear lines of sight, and providing appropriate information at decision making points.

The potential increase in transit ridership correlates with an increase in pedestrian activity. To provide a convenient walking experience and seamless transfers for transit riders walking to/from

the SMART station and nearby bus stops (currently located at/near the at-grade rail crossing), targeted treatments will need to be considered to ensure that the paths of travel are clear and obstructions and conflict points are addressed.

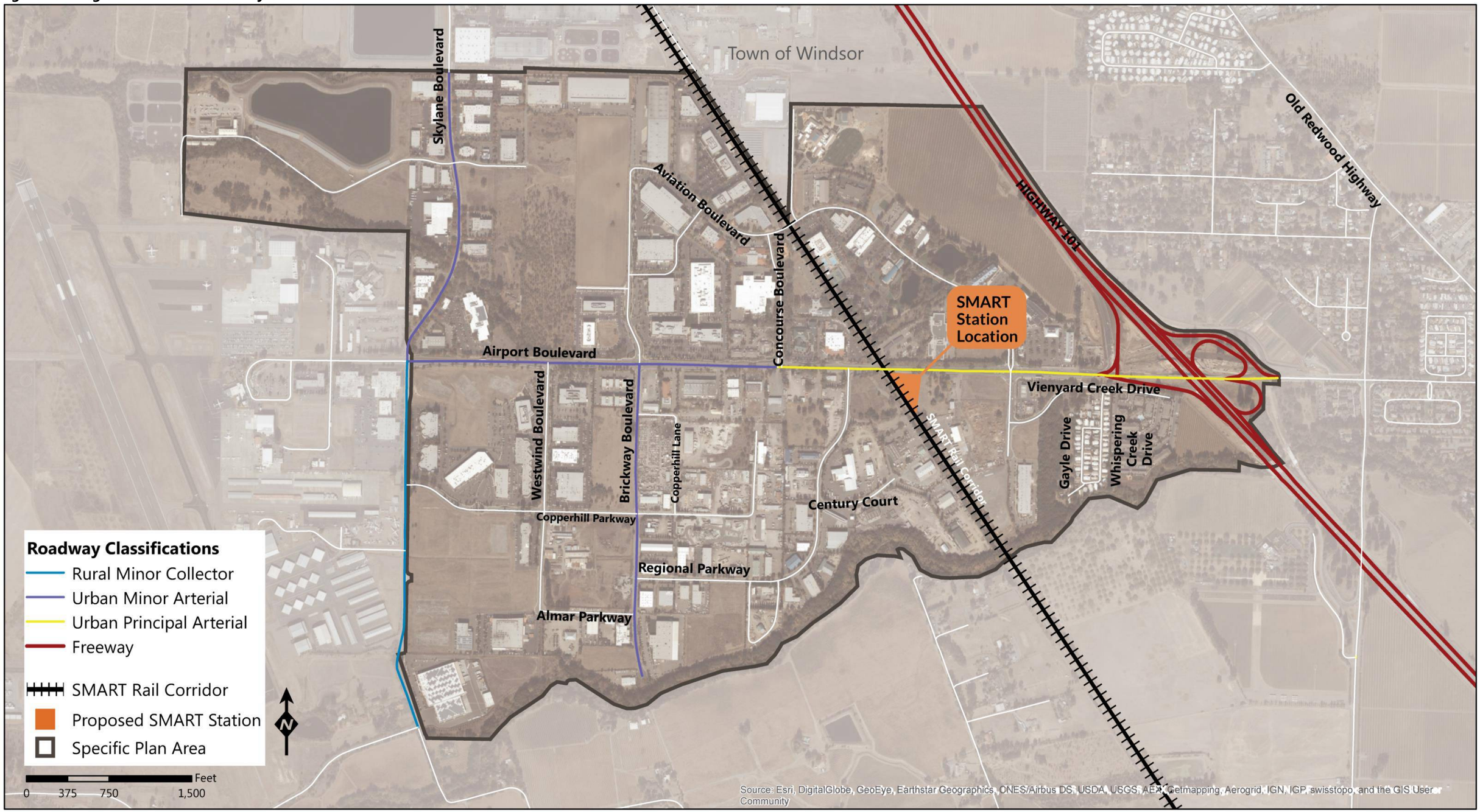
6.4. AUTO ACCESS AND CIRCULATION

The existing network of streets and roadways in the SPA comprises a series of Circuitous, connector roadways with varying capacities that tie into Airport Boulevard, which is the focal point of most auto activity. Regional and Local roadways within and surrounding the SPA are shown in Figure 23 and described below; note that roadway classifications are based on the Sonoma County *General Plan*.

- **U.S. 101 Highway** is a six-lane north-south freeway that is located in the eastern boundary of the SPA. Regional access to and from the freeway is provided via the Airport Boulevard Interchange, which provides both on- and off-ramps. According to the most recent data provided by the California Department of Transportation (Caltrans), the freeway segment adjacent to the SPA experiences an annual average daily traffic of 83,000 vehicles and an annual average of 7,500 peak-hour vehicles.
- **Airport Boulevard** is an east-west roadway that is classified as an "Urban Principal Arterial" roadway between the U.S. 101 interchange and Aviation Boulevard and includes four traffic lanes (two lanes in each direction). There is a two-way left-turn lane west of U.S. 101, and the road includes intermittent left- and right-turn lanes at signalized intersection locations. The roadway then becomes an "Urban Minor Arterial" roadway from Aviation Boulevard to Skylane Boulevard. The roadway along this stretch reduces down to two traffic lanes (one in each direction). There are discontinuous bicycle lanes and no on-street parking along the roadway.
- **Brickway Boulevard** is a north-south roadway that is classified as an "Urban Minor Arterial" roadway from Airport Boulevard to its southern terminus at Mark West Creek; the roadway becomes Laughlin Road south of the creek. The roadway includes two traffic lanes (one lane in each direction) and there are no bicycle lanes along the roadway.
- **Skylane Boulevard-Laughlin Road** is a north-south roadway that is classified as an "Urban Minor Arterial" roadway from Airport Boulevard to Shiloh Road to the north; this segment of the road is "Skylane Boulevard". The roadway is "Laughlin Road" south of Airport Boulevard and is classified as a "Rural Major Collector." The roadway includes two traffic lanes in each direction and no on-street parking is permitted. Skylane Boulevard is a proposed Class II Bike Lane in the County Bicycle and Pedestrian Plan.

Other streets within the SPA, including Aviation Boulevard, Concourse Boulevard, Regional Parkway, Westwind Boulevard, Copperhill Parkway, Century Court and Vineyard Creek Drive are generally two-lane streets that are not classified in the General Plan and are simply "local streets" that connect to other collector and arterial roadways, as described above. These roadways do not include bicycle routes nor are there any striped, on-street parking spaces; however, observations have noted sporadic curbside, on-street parking along these streets.

Figure 23 - Regional and Local Roadway Classification Network



Sonoma County Airport SMART Station Specific Plan | Road Classifications

Source: ESRI, Sonoma County General Plan, Nelson\Nygaard, 2016

6.4.1. ***AUTO ACTIVITY AND TRAFFIC CONDITIONS***

The SPA is home to several private businesses and other civic institutions and currently serves as a major employment destination. Auto activity is predicated upon typical weekday commute patterns, as the area experiences greater inbound vehicle activity in the morning commute period (generally between 7:00 a.m. and 9:00 a.m.), and a considerable amount of outbound vehicle activity in the afternoon commute period (generally between 4:00 p.m. and 6:00 p.m.) Due to the lack of other commercial amenities, such as retail and restaurants in the area, observations have noted high amounts of vehicle traffic during the weekday midday period, or "lunch hour", with many vehicles headed in the eastbound direction to access U.S. 101 in order access restaurants and other commercial uses located north and south of the SPA (e.g., in Santa Rosa or Windsor).

Traffic conditions

Existing vehicle traffic conditions were evaluated along selected study intersections within the SPA and U.S. 101 freeway mainline segments adjacent to the SPA. Intersection level of service (LOS) was calculated for all intersection control types using methods documented in the Transportation Research Board (TRB) *Highway Capacity Manual* (HCM 2010).

Traffic operations have been quantified through the determination of LOS, which is a qualitative measure of traffic operating conditions, whereby a letter grade (LOS "A" – LOS "F") is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. Analysis methodologies, standards, and traffic impact thresholds established by the County of Sonoma[7] and Caltrans[8] was applied to the traffic analysis. The overall purpose of this is to characterize current vehicle traffic conditions within the SPA at study intersections and along the U.S. 101 freeway. Figure 24 presents the intersections and freeway mainline segments that were evaluated:

[7] County of Sonoma, *Guidelines for Traffic Impact Studies*, May 2016.

[8] California Department of Transportation, *Guide for the Preparation of Traffic Impact Studies*, December 2002.

Figure 24 - Study intersections and freeway mainline segments

#	Study intersections
1	U.S. 101 Northbound Off-Ramp / Airport Boulevard
2	U.S. 101 Southbound Off-Ramp / Airport Boulevard
3	Airport Boulevard / Aviation Boulevard
4	Airport Boulevard / Regional Parkway
5	Airport Boulevard / Concourse Boulevard
6	Airport Boulevard / Brickway Boulevard
7	Airport Boulevard / Laughlin Road / Skylane Boulevard
8	Aviation Boulevard / Skylane Boulevard
9	Aviation Boulevard / Brickway Boulevard
10	Aviation Boulevard / Concourse Boulevard
#	**U.S. 101 Freeway mainline segments**
1	Between Old Redwood Highway & Shiloh Road
2	Between Shiloh Road & Airport Boulevard
3	Between Airport Boulevard & River Road

Intersection Traffic Conditions

All intersection vehicle turning movement counts were collected during the morning peak period (7:00 AM to 9:00 AM) and afternoon peak period (4:00 PM to 6:00 PM) on Tuesday, April 19, 2016. It is noted that schools in the area were in session and no known special events were occurring in the area at the time of the traffic counts. No precipitation or otherwise inclement weather was recorded on the collection dates.

Intersection LOS is based on the observed "peak hour", which is typically defined as the one continuous hour of peak traffic flow counted within the two-hour period in the morning and afternoon during the weekday. Existing lane configurations and signal timings (as appropriate) along with existing vehicle turning movement counts were included in the traffic analysis. The Synchro 9 (Trafficware) software suite was used to implement the HCM 2000/2010 intersection LOS analysis methodologies.

Per the County of Sonoma *Guidelines for Traffic Impact Studies*, the current LOS threshold is LOS D and any county intersection that operates at LOS E or F is considered "unacceptable".

Figure 25 - Existing Weekday AM and PM Peak Hour – LOS Conditions

Intersection	Control[1]	Peak Hour	Delay (sec)[2]	LOS
1. U.S. 101 Northbound Off-Ramp / Airport Boulevard	Signal	AM	32.5	C
		PM	13.0	B
2. U.S. 101 Southbound Off-Ramp / Airport Boulevard	Signal	AM	14.8	B
		PM	13.1	B
3. Airport Boulevard / Aviation Boulevard	Signal	AM	24.6	C
		PM	35.5	D
4. Airport Boulevard / Regional Parkway	SSSC	AM	11.4 (NB)	B
		PM	25.5 (NB)	D
5. Airport Boulevard / Concourse Boulevard	SSSC	AM	26.6 (SB)	D
		PM	24.6 (SB)	C
6. Airport Boulevard / Brickway Boulevard	Signal	AM	16.8	B
		PM	21.8	C
7. Airport Boulevard / Laughlin Road / Skylane Boulevard	TWSC	AM	**>50.0 (SB)**	**F**
		PM	**>50.0 (SB)**	**F**
8. Aviation Boulevard / Skylane Boulevard	TWSC	AM	13.9 (WB)	B
		PM	14.5 (WB)	B
9. Aviation Boulevard / Brickway Boulevard	SSSC	AM	6.7 (NB)	A
		PM	7.0 (NB)	A
10. Aviation Boulevard / Concourse Boulevard	SSSC	AM	8.9 (NB)	A
		PM	12.1 (NB)	B

Notes:
1. Signal = Signalized intersection; TWSC = Two-Way STOP-Controlled intersection; SSSC = Side-Street STOP-Controlled intersection.
2. Intersection average vehicle delay for TWSC and SSSC intersections is only for the STOP-controlled movement (e.g., NB = Northbound, WB = Westbound). The highest vehicle delay per STOP-controlled movement is presented in the table.
***BOLD** indicates intersection operates at unacceptable LOS conditions (e.g., LOS E or F).*
Source: Nelson\Nygaard, 2016.

During the weekday AM and PM peak hours, the majority of study intersections operate at acceptable LOS conditions (i.e., LOS D or better) with the exception of Airport Boulevard/Laughlin Road/Skylane Boulevard. At this intersection there are considerable vehicle delays and queues along the southbound approach, primarily for southbound left-turning movements from Skylane Boulevard to eastbound Airport Boulevard.

Due to the amount of east-west traffic along Airport Boulevard during the peak hours, there is a reduced amount of allowable gap time for these southbound left-turning vehicles to proceed and clear the intersection, therefore causing substantial delays and degrading intersection operations.

Freeway mainline segment traffic conditions

Freeway mainline segment volume data was obtained by the Department of Transportation (Caltrans) District 4. Freeway segment operating conditions were evaluated using the HCM 2010 methodology. This methodology computes LOS for basic freeway segments using vehicle density as the measure of effectiveness, or degree of congestion. Density is measured in vehicles per mile per travel lane. Specific parameters (geometric data, volume and base free-flow speed) flow rate

and speed are determined. Using flow rate and speed, density of the freeway segment is computed and a LOS score is determined. Freeway LOS range from LOS A, which represents free-flow operations and vehicles are almost completely unimpeded in their ability to maneuver the traffic stream, to LOS F, which represents breakdown in vehicular flow, with extensive queuing and significant congestion. Per the Caltrans' *Guide for the Preparation of Traffic Impact Studies* (2002), freeway mainline segments' target LOS threshold is at the transition from LOS C to LOS D and a freeway mainline segment operating at LOS E or LOS F is considered "unacceptable".

As shown in Figure 26, below, all of the U.S. 101 mainline segments operate at acceptable LOS conditions (at LOS C or better).

Figure 26 - Existing Weekday U.S. 101 Freeway Mainline Segment – LOS Conditions

Segment	Direction	Average Daily Traffic (ADT)	Density[1]	LOS
River Road – Airport Boulevard	Northbound	47,720	11.3	B
	Southbound	46,700	9.6	A
Airport Boulevard – Shiloh Road	Northbound	38,250	9.2	A
	Southbound	41,350	8.8	A
Shiloh Road – Old Redwood Highway	Northbound	42,200	10.3	A
	Southbound	37,900	7.9	A

Notes: 1) Density calculated by passenger car per mile per lane.
Source: Caltrans; Nelson\Nygaard, 2016.

Vehicle Miles Traveled (VMT) Analysis

Many factors affect travel behavior. These factors include density, diversity of land uses, and design of the transportation network, access to regional destinations, and distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development at great distance from other land uses, located in areas with poor access to non-private vehicular modes of travel, generate more automobile travel compared to development located in urban areas, where a higher density, mix of land uses, and travel options other than private vehicles are available.

Senate Bill 743 requires that the existing transportation review standards, focused on automobile delay (vehicle LOS, as previously described), be replaced with a more meaningful metric upon adopted statewide revisions to the California Environmental Quality Act (CEQA) Guidelines. The State is proposing that the replacement metric should be vehicle miles traveled (VMT). VMT per capita is calculated as the total annual miles of vehicle travel divided by the total population in a specific geographical area (e.g., state, urbanized area, etc.)

The new CEQA Guidelines would assess a project's impacts to VMT by measuring the amount and distance that a project might cause people to drive, including the number of passenger within a vehicle. In general, VMT levels are relatively lower in communities that have more transportation choices than driving, such as cities and areas with an established public transit network and an

environment that is more walkable, bike-friendly, and more compact with respect to land use patterns.

VMT calculations and results were provided by the Metropolitan Transportation Commission (MTC) and ABAG Travel Model One (version 0.4), a web-based program, which includes simulated VMT per capita by workplace location and place of residence.[9] VMT per capita is presented by Traffic Analysis Zone (TAZ), which are defined geographic boundaries that include specific census block information and provide socioeconomic data. Figure 27 provides the existing VMT for the San Francisco Bay Area (regional), County of Sonoma (local) and project site (TAZ 1368), using data provided by the MTC/ABAG regional travel model.

As shown, the regional average daily person VMT per capita is 14.9 and 12.6 (minus below 15%)[10]; the county average is 18.2 and 22.5 (minus 15%) and for the project site (TAZ 1368), the average VMT per capita is 18.4, which is higher than the county and regional, respectively. Similarly, for employment (worker), the average daily VMT per capita at the project site is 24.4, respectively, and higher than the average daily VMT per capita for the county and region. These findings indicate that the SPA currently generates more total annual miles of travel per person and per worker than the regional and county average and that there is a high car-dependence for those traveling to and from the SPA.

Figure 27 - Existing VMT per Capita and per Worker

Land Use	Bay Area		County of Sonoma		Plan Area (TAZ 1368)
	Regional Average	Regional Average minus 15%	County Average	County Average minus 15%	
VMT per Capita	14.9	12.6	18.2	15.4	18.4
VMT per Worker	23.2	19.7	22.5	19.1	24.4

Source: MTC/ABAG Travel One Model, 2016

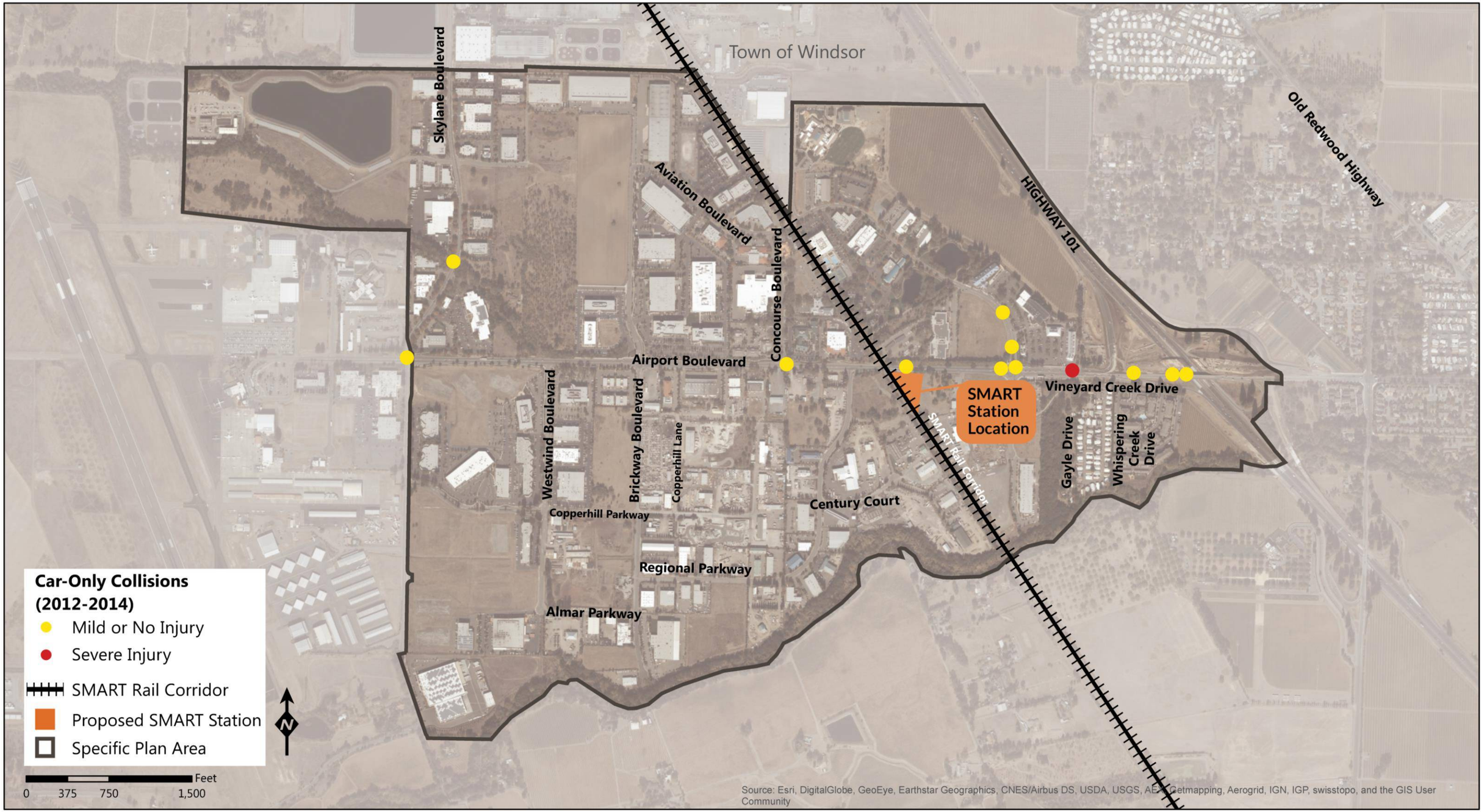
*6.4.2. **COLLISIONS***

The Statewide Integrated Traffic Records System (SWITRS) provides data for all collisions reported to the California Highway Patrol within California. SWITRS data was reviewed for 2012 to 2014 to identify where collisions occur within the SPA. Within this period, there were no reported pedestrian or bicycle collisions. Vehicle-to-vehicle collisions are shown in Figure 28 and primarily occur along Airport Boulevard between the rail tracks and U.S. 101 interchange. The majority of collisions resulted in mild or no injuries, with the exception of one collision that had a severe injury.

[9] MTC/ABAG Travel Model One available online at: http://dataportal.mtc.opendata.arcgis.com/datasets?q=Transportation&page=2&sort_by=relevance; accessed June, 2016.

[10] The California Department of Transportation (Caltrans) has developed a statewide VMT reduction target per the *Strategic Management Plan* that specifically calls for a 15 percent reduction in per capita VMT, compared to 2010 levels, by 2020.

Figure 28 - Car-only Collisions between 2012 and 2014



Sonoma County Airport SMART Station Specific Plan | Collisions

Source: ESRI, Nelson\Nygaard, 2016

6.4.3. ***TRUCK ROUTES***

U.S. 101 serves as the main access route for all freight (truck) activity in and out of the SPA. The freeway provides a direct connection to Airport Boulevard, which carries the highest amount of truck traffic in the area. From Airport Boulevard, trucks are then dispersed onto other collector streets to reach their destination. The current land uses in the SPA comprise a fair amount of manufacturing, industrial and commercial uses, and the Charles M. Schulz - Sonoma County Airport west of the SPA also generates a considerable amount of freight activity on a daily basis. Trucks can also access the SPA from the north via U.S. 101 interchange at Shiloh Road in the Town of Windsor, and travel along Shiloh Road and head southbound on Skylane Boulevard.

6.4.4. ***PLANNED IMPROVEMENTS TO STREETS AND ROADWAYS***

The Brickway Boulevard Extension Project was identified as a future project in the existing Specific Plan and General Plan. The project would include extending the existing Brickway Boulevard south to a new bridge over Mark West Creek, then over Fulton Creek, to connect with the existing Laughlin Road. The proposed roadway extension would consist of two, 12-foot-wide lanes with 6-foot shoulder lanes. A traffic signal would be installed at the intersection of Laughlin Road and River Road to manage vehicle traffic flows.

The project would also include temporary barriers or gates to close the existing bridge to vehicle traffic on Laughlin Road. Fire trucks and other emergency equipment, agricultural vehicles/equipment and bicyclists and pedestrians would also be allowed access to the bridge and to cross the bridge. In addition, pedestrian and bicycle traffic will continue to use the bridge. Vehicle turn-arounds will be constructed at either end of the bridge. The overall purpose of the project is to improve traffic and circulation in the area, and to eliminate the one lane bridge on Laughlin Road. It is noted that this project remains unfunded and is not currently scheduled for implementation.

6.4.5. ***BARRIERS TO AUTO ACCESS AND CIRCULATION***

U.S. 101 is the primary means of vehicle access to and from the SPA. Vehicle traffic is mostly loaded onto Airport Boulevard, which allows for direct vehicle access to several other area collectors and local streets. Vehicles traveling along U.S. 101 can also access the SPA via Shiloh Road (then to Skylane Boulevard) or River Road (then to Laughlin Road). According to recent vehicle traffic counts along Airport Boulevard, Skylane Boulevard and Laughlin Road (as previously described), during the weekday peak commute periods, approximately 73% of vehicle traffic in the SPA is along Airport Boulevard (to/from U.S. 101); about 15% of traffic is distributed along Skylane Boulevard and the remaining 12% is distributed along Laughlin Road, respectively.

Because the majority of traffic is focused along Airport Boulevard, this creates a "one-way in, one-way out" vehicle travel pattern, and therefore congestion levels are heightened during the morning and afternoon commute periods, and vehicle queues form along Airport Boulevard, generally between Skylane Boulevard and the U.S. 101 interchange. When Airport Boulevard is

stop-and-go traffic conditions, drivers deviate onto other collector streets (e.g., Aviation Boulevard) to reduce their travel time along Airport Boulevard and try to avoid long waiting times. When too many vehicles load onto these streets, vehicle queues extend an entire block and form long lines of idling and travel times are not reduced.

*6.4.6. **OPPORTUNITIES TO IMPROVE AUTO ACCESS AND CIRCULATION***

The circulation network in the SPA functions adequately with the exception of typical peak commute periods in the morning and afternoon, and around lunch time, when the roadways experience heavy, stop-and-go traffic. Because the proposed land-use program associated with the Specific Plan may generate more vehicle traffic than exists today, key opportunities to improve auto access and circulation need to focus on managing current vehicle demand, while accommodating for potential future growth.

Airport Boulevard serves as the main connection to all land uses within the SPA and experiences the highest level of vehicle traffic in the area. Installing additional traffic signals and optimizing signal cycles along Airport Boulevard will better manage traffic flows and reduce vehicle queues. Signalization also allows for better control of turning movements through appropriate signal timing coordination. For example, during the afternoon peak commute period, these signals can essentially "talk" to each other and be programmed to provide adequate green time for eastbound through moving traffic and allow for queues to dissipate.

The roadway network within the SPA comprises linear streets as well as circuitous streets and discontinuous roads. Depending on the types of land uses planned for the SPA, the street network can be transformed to enhance access (for all users and modes) and allow for vehicles to be better distributed within area. A grid-like road network would provide a variety of access options, disperse traffic and reduce wait times along intersection approaches, especially during peak commute hours.

Reprioritizing the roadway functional classification system in the SPA can better separate specific vehicle types from other users and modes. For example, Airport Boulevard is the main truck route for all surface freight activity. Large turning radii to accommodate freight trucks can have an adverse effect on other road users, particularly pedestrians and bicyclists. Consideration could be given to re-routing freight activity off of Airport Boulevard and away from areas of higher non-auto and transit activity (e.g., SMART Station), which could reduce congestion and improve comfort and accessibility for people walking and riding bicycles along Airport Boulevard. As indicated in the Sonoma County General Plan, roadways within the County shall be designed to accommodate local circulation and promote the safety of pedestrians and bicyclists, and to discourage truck traffic and through traffic, particularly during peak periods (Policy CT-4i). Of course, re-routing freight vehicles in the area will need to be assessed to identify the most suitable streets for these activities so that the potential for conflicts with non-auto road users and freight activity are avoided.

In addition to some physical improvements to the roadway network, implementation of specific Transportation Demand Management (TDM) programs will provide employees and visitors with more transportation choices than the private auto. Such efforts will effectively result in a mode shift away from private auto use and ultimately reduce vehicle traffic levels within the area and improve overall circulation. Current and potential TDM and parking management strategies are discussed in the next section.

6.5. PARKING AVAILABILITY AND TDM

A number of Transportation Demand Management (TDM) practices and goals are already identified in various countywide plans. These plans represent a consistent set of TDM goals and outline key priorities that could be considered when developing the Specific Plan. These plans, which are summarized in Figure 29 emphasize creating safe bicycle and pedestrian routes, reducing auto congestion, improving connections between travel modes, and coordinating between land use and transportation networks.

Figure 29 - TDM goals and practices by plan

Document	Jurisdiction and plan details	Goal summary
2009 Comprehensive Transportation Plan	▪ SCTA's Countywide transportation plan ▪ Updated Every 4 years to update past efforts and prioritize transportation needs ▪ Allows Sonoma County to be eligible for regional, state and federal funding	▪ Maintain the existing system ▪ Relieve congestion ▪ Reduce emissions ▪ Safety improvements to pedestrian and bicycle facilities ▪ Coordinate transportation network and surrounding land use improvements ▪ Promote ridesharing, TDM and corresponding pricing policy ▪ Encourage transit technology to improve traffic flow
Moving Forward 2040*	▪ SCTA's Comprehensive Transportation Plan update	▪ In addition to the goals defined in the 2009 Comprehensive Transportation Plan (above), this report adds the goal of improving economic vitality through reduced travel costs and travel times
2010 Sonoma County Bicycle and Pedestrian Plan	▪ Prepared by Sonoma County Transportation Authority ▪ Contents of plan were approved by all 10 Sonoma County jurisdictions	▪ Develop and maintain a comprehensive countywide bicycle and pedestrian system ▪ Provide bicycle and pedestrian access to activity centers, commercial districts, schools, transit centers, and recreation ▪ Establish convenient multimodal connections ▪ Provide adequate support facilities (e.g., bicycle parking) ▪ Promote bicycle and pedestrian activities as a mode split via public outreach ▪ Establish safe and secure bicycle and pedestrian networks, including safe routes to school ▪ Coordinate land use and bicycle and pedestrian facility planning
Sonoma County General Plan 2020	▪ Revision to the 1989 General Plan ▪ Adopted by Sonoma County Board of Supervisors in 2010	▪ Establish a comprehensive transit network with SMART (rail) serving as a primary north-south route ▪ Improve connectivity between transit, bicycle and pedestrian networks, urban spaces, community attractors, schools, employment centers, and the greater roadway network ▪ Improve goods and services movement to relieve congestion and reduce greenhouse gas emissions ▪ Coordination between public transit, regional rail, and bicycle and pedestrian networks ▪ Improve public transit amenities to improve safety and convenience
A Portrait of Sonoma County, 2014	▪ Human development report commissioned by County of Sonoma Department of Public Health	▪ Identifies gaps in opportunities pertaining to access to education and jobs ▪ Promotes health, access to knowledge, and equitable living standards

* Moving Forward 2040 is still in progress

6.5.1. ***PARKING AREAS***

The SPA is predominantly occupied by range of small to large employee campuses comprised of single and multi-story buildings and adjoining surface parking lots that serve employees and visitors (e.g., Dry Creek Rancheria and Sonoma County Veterans Service Office along Westwind Boulevard).

The majority of these parking lots are privately-owned and operated and are generally unregulated (e.g., no metering, time restrictions, or "reserved" spaces). In addition, most of the parking lots in the SPA are exclusive and only serve the adjacent building and are not shared by other businesses or their employees/visitors. However, there are a few exceptions of sites with shared parking, albeit informally.

The commercial strip mall that is located in the eastern portion of the SPA includes a large surface parking that is shared by multiple users, including employees and customers. This parking lot allows patrons to park their vehicle and walk to multiple retail and restaurant locations.

The large office buildings in the northeast quadrant of Brickway Boulevard and Airport Boulevard include an inter-connected web of surface parking lots. Because these parking spaces are generally unrestricted, employees from any office building can utilize any available parking space and therefore, these spaces are inherently "shared", but it reasonable to assume employees tend to park as close as possible to their office rather than park in a distant lot.

On-street parking is prohibited along major streets, such as Airport Boulevard and Aviation Boulevard. Other local streets, including Westwind Boulevard and Copperhill Parkway permit on-street parking. There is no signage along most area roadways to indicate whether on-street parking is permitted or prohibited. Due to the large presence of off-street parking lots, the amount of drivers parking on street is minimal.

Parking standards

Article 86 of the Sonoma County Municipal Code includes current off-street parking standards for land-use developments and these standards include the minimum parking spaces required based on number of units (residential), gross square feet or floor area (commercial), or acreage or other unique metrics (e.g., golf courses, bowling alley, etc.) The Code requirements are generally flexible and depend on each particular use. For example, the off-street parking requirement for restaurant use is 1 parking space for every 60 square feet of dining area; for general business offices the requirement is 1 parking space per 250 square feet of floor area; and for residential uses, the standard is generally one parking space per unit.

The Code specifies that for mixed-use developments, the minimum parking requirements can be reduced if the property owner or business can demonstrate:

- Participation in a Transportation Demand Management (TDM) program (see discussion further below;
- Provision of transit stops/turnouts in cooperation with Sonoma County Transit; and
- Provision of amenities for bicyclists, bus rider, carpoolers and pedestrians.

Parking requirements may be reduced up to 20% if the parking area is designed sustainability and includes amenities to encourage alternative modes of transportation to reduce Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions and provides Low-Impact Development (LID) treatments.

Any reduction and/or modification to current parking standards are subject to review and approval by the Planning Director or applicable decision-making body.

*6.5.2. **TRANSPORTATION DEMAND MANAGEMENT***

Transportation Demand Management (TDM) programs support mode shift away from driving alone, and to increase access and mobility for communities of concern and priority development areas. Providing greater access to a variety of transportation alternatives helps these communities and the general population by opening up economic opportunities, including easier access to commercial areas, public transit, employers, schools and community services.

TDM strategies are based on the premise that current travel options and culture favor driving alone. The SPA is fairly secluded from nearby communities and employees and visitors to the area have access to a large supply of predominantly unregulated parking, all of which is provided in large swaths of surface parking lots or on street. However, people who can't or don't drive often pay high costs to get to work – either in terms of time-consuming transit trips, high transit fares, or long or uncomfortable bike or walk trips. TDM strategies work together to increase travel options and level this playing field by making transit, walking, biking, carpooling, vanpooling, and other alternative modes safer and more convenient. This range of travel options plays an important role in encouraging mode shift, and a cohesive system that allows travelers to rely on alternative travel options.

*6.5.3. **BARRIERS TO PARKING AND TDM***

The SPA is currently spread out and provides few safe and convenient travel options for those who do not drive. The design elements and abundance of free, unregulated parking coupled with substantially limited transit service and constrained bicycle and pedestrian facilities within the SPA do not compliment TDM efforts, but further reinforce the need to drive and depend on a private vehicle for access.

The start of SMART rail service will create a higher demand for TDM measures. Riders of SMART will need options to travel between the SMART Station and their final destination. To accommodate this need, changes to the walking, bicycle, and transit infrastructure will be needed. In addition, Code standards are aimed at requiring parking for exclusive uses and thus result in

large areas of land dedicated to surface parking and an asphalt landscape which is not attractive from the viewpoint of those traversing along Airport Boulevard or other area streets.

6.5.4. ***OPPORTUNITIES TO IMPROVE PARKING AND TDM***

Efforts to create a more vibrant area will provide many opportunities to offer TDM programs for current and future businesses and residents. TDM measures are complementary and build on another as they are implemented. Therefore, as more convenient options become available to travel to and within the SPA vehicle parking demand will decrease and dependencies on non-private vehicles will increase. This will further strengthen opportunities to improve the area and implement additional TDM needs by making land that was once used for parking available for other uses.

TDM program opportunities include forming a Transportation Management Associate (TMA) with all the local business to collaborate and contribute to improving transportation options within the area. Some opportunities for the SPA include providing a flexible bike share program, supplying a fleet of bicycles for employees, designating parking spaces for car sharing, subsidizing transit passes for employees and residents, and encouraging the use of shared, on-demand rideshare services and Transportation Network Companies (TNCs), such as Lyft and Uber, and establishing specific pick-up/drop-off locations for TNCs, vanpools and carpools.

CHAPTER 7 | INFRASTRUCTURE

- EXISTING WATER MAINS
- EXISTING SANITARY SEWER MAINS
- EXISTING STORM DRAINS

7. INFRASTRUCTURE

The following chapter overviews the water, sanitary sewer, and storm drain infrastructure in the project area. The analysis was prepared by infrastructure consultants BKF Engineers.

7.1. Existing Water Mains

The Windsor Water District owns and operates the water distribution network in the SPA. Most of this network is located beneath public streets or beneath future planned streets, but water lines cross through private property in other locations. In some situations, the public water mains fall within public easements when crossing private property, but there are areas where easements may not have been secured, such as through the Charles M. Schulz - Sonoma County Airport property. The mapped water infrastructure prepared by BKF (Figure 30) represent the large diameter water mains providing service to the project area; the map does not reflect individual service connections or private fire mains.

7.2. Existing Sanitary Sewer Mains

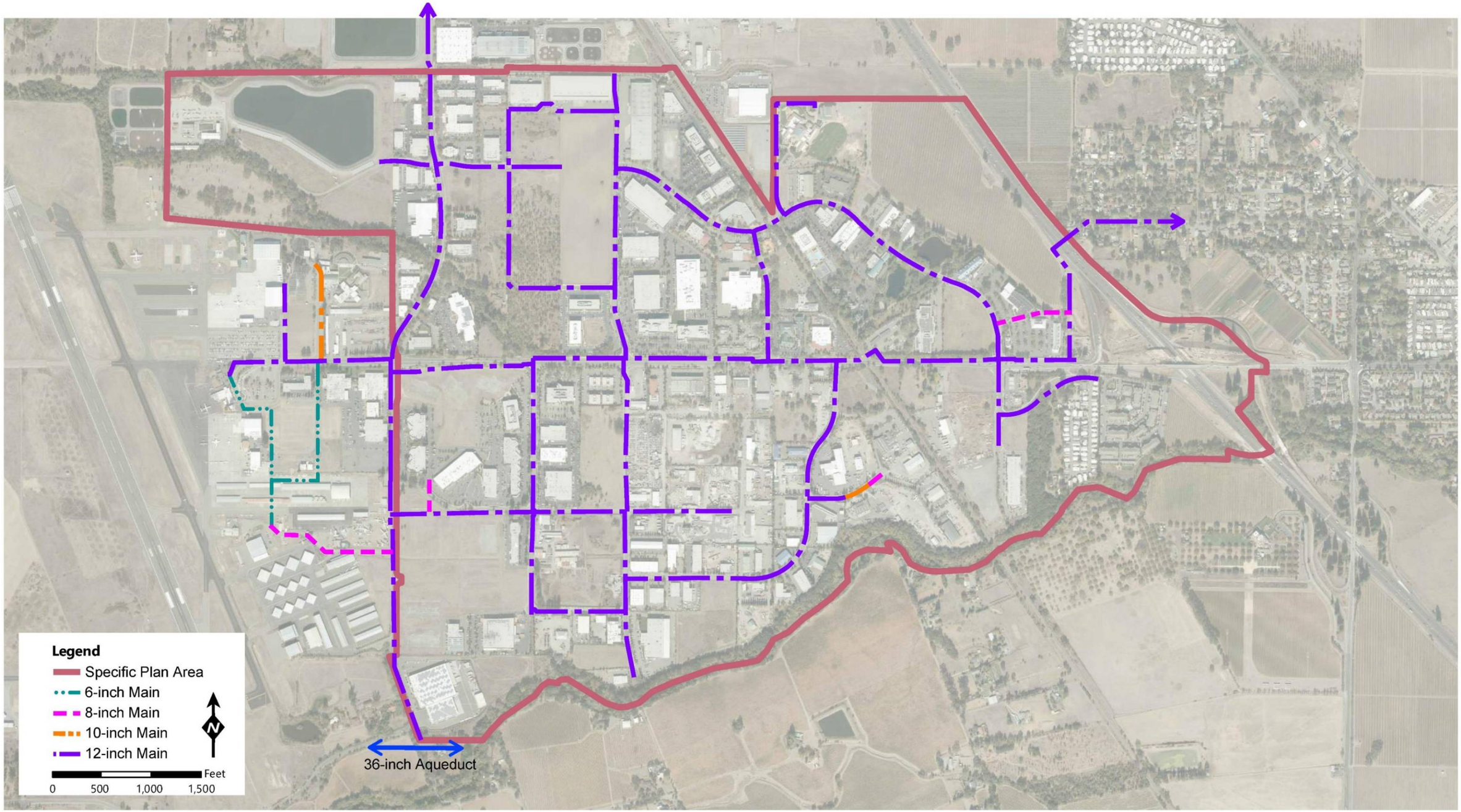
The Sonoma County Water Agency (SCWA) owns and operates the sanitary sewer in the project area as part of the Airport/Larkfield/Wikiup Sanitation Zone. The sanitary sewer collects and routes effluent from businesses and residents east of the SPA to the SCWA treatment plant west of Skylane Blvd. Most of this network is located beneath public streets or beneath future planned streets, but sewer lines also cross through private property. The sewer infrastructure shown in Figure 31 includes regional mainline sewers and trunk lines.

7.3. Existing Storm Drains

The Sonoma County Water Agency (SCWA) is responsible for maintaining the flood control channels and large storm drain facilities in the SPA. The Sonoma County Department of Public Works is responsible for maintaining smaller closed conduit systems, most of which are located beneath public streets. Therefore, drainage information was obtained from the SCWA and Sonoma County Permit and Resource Management Department (PRMD). Storm drain infrastructure shown in Figure 32 was obtained from the Sonoma County Airport Industrial Specific Plan (amended in 2009).

The storm drainage system collects water from public streets and private development throughout the SPA and conveys water to one of three creeks: Airport Creek, located at the north end of the SPA has two storm water outfalls; Redwood Creek, flowing through the center of the SPA has four storm water outfalls; and Mark West Creek, in the southern portion of the SPA has five outfall locations.

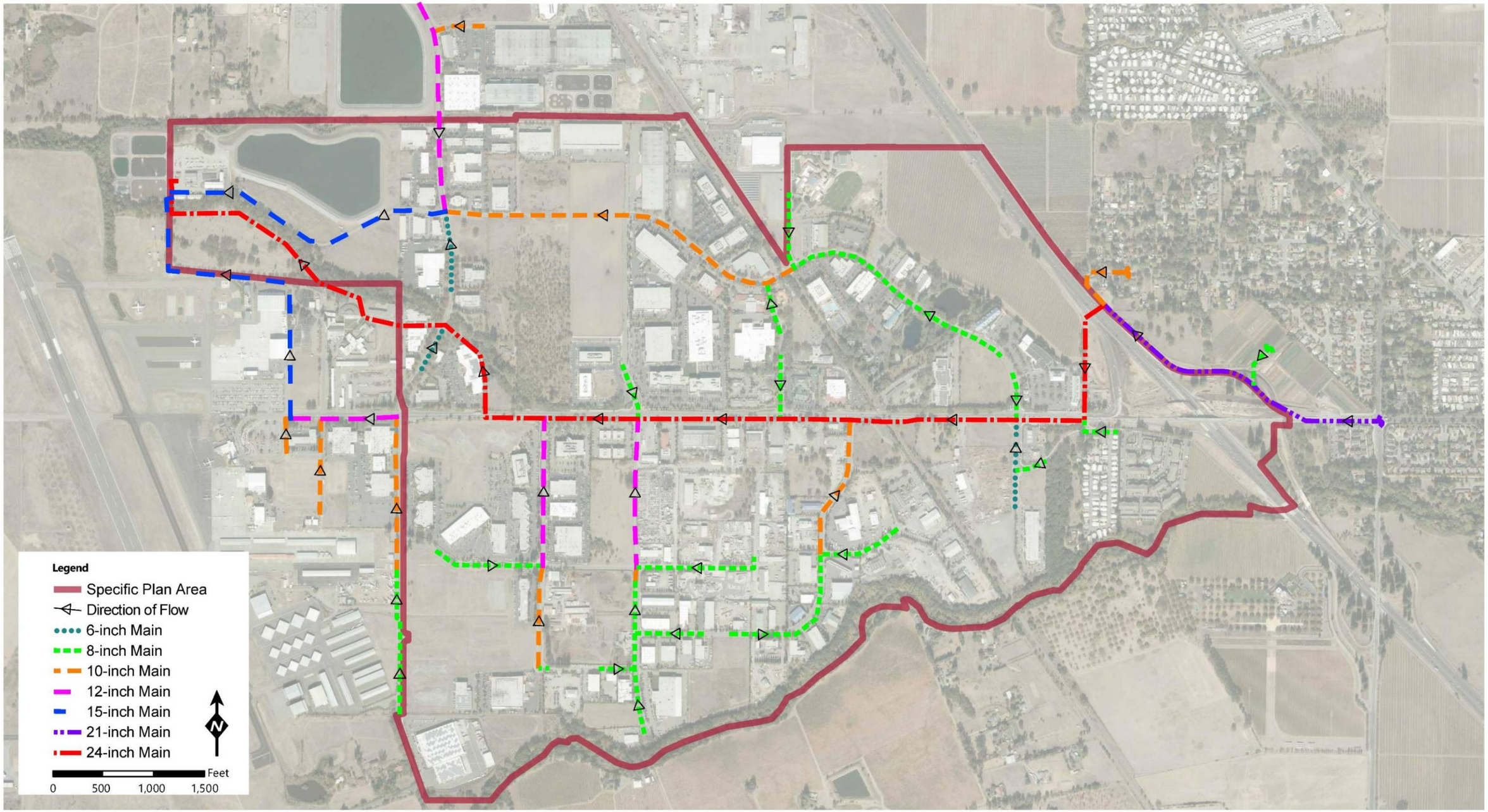
Figure 30 - Existing Large Diameter Water Mains in the Specific Plan Area



Sonoma County Airport Smart Station Specific Plan | Water Mains

Source: ESRI, Sonoma County General Plan, BKF, 2016

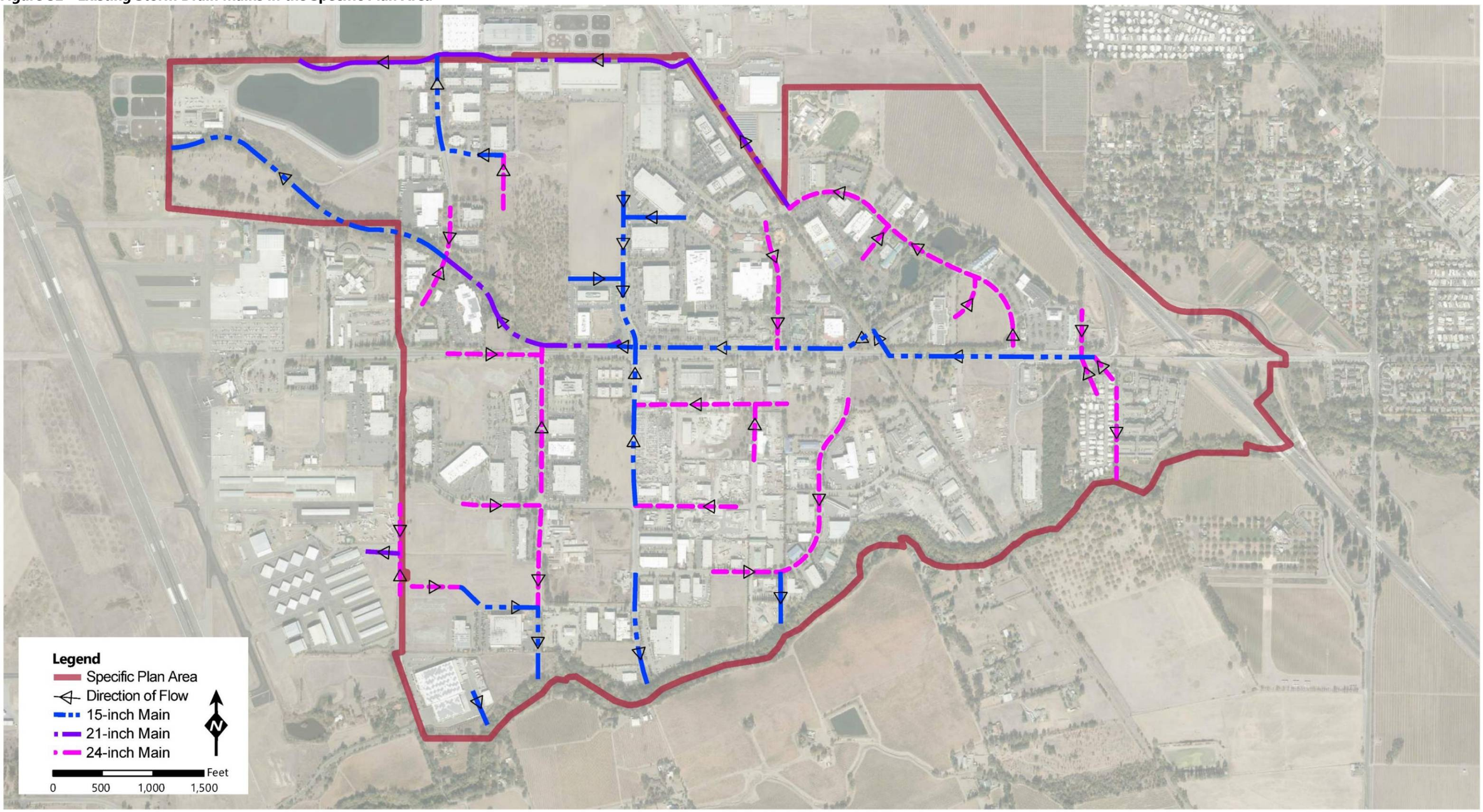
Figure 31 - Existing Regional Mainline Sewers and Trunk Lines in the Specific Plan Area



Sonoma County Airport Smart Station Specific Plan | Sewer Infrastructure

Source: ESRI, Sonoma County General Plan, BKF, 2016

Figure 32 - Existing Storm Drain Mains in the Specific Plan Area



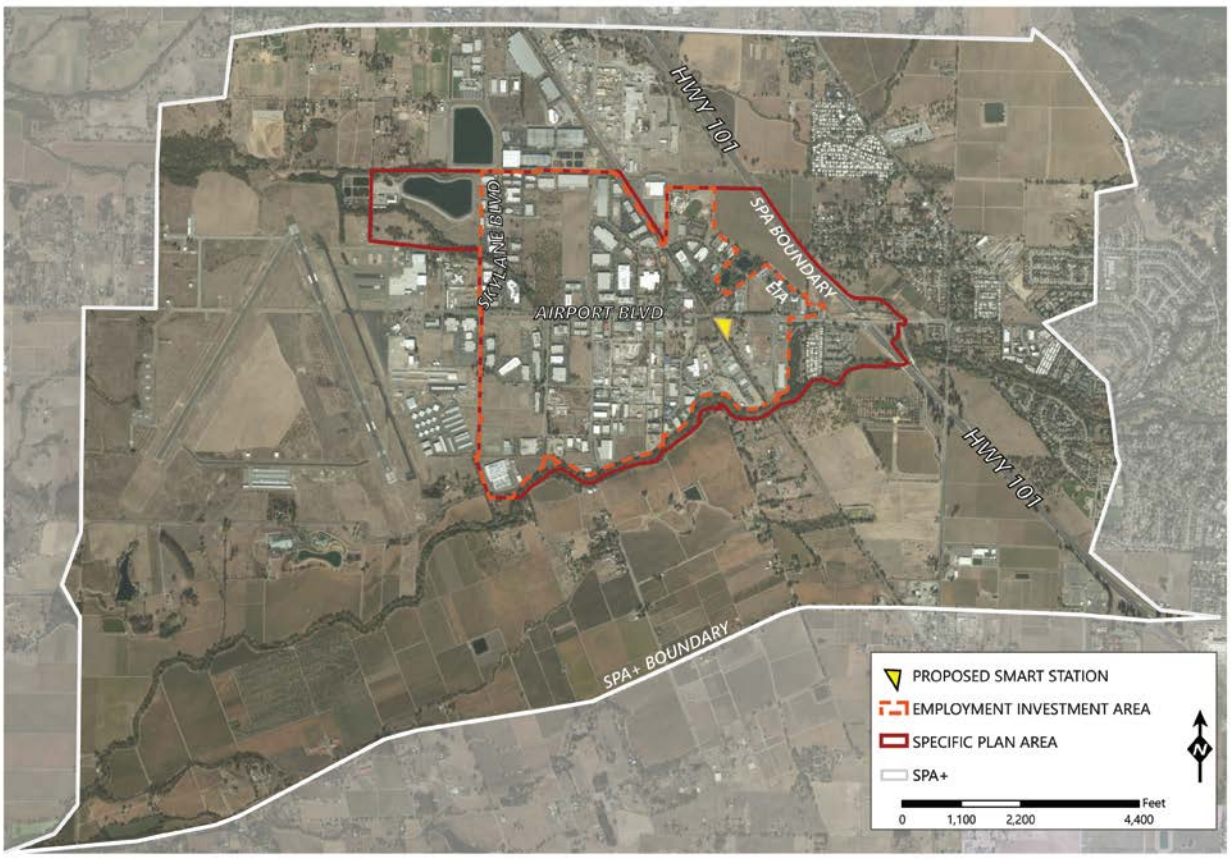
Sonoma County Airport Smart Station Specific Plan | Storm Drain Mains

Source: ESRI, Sonoma County General Plan, BKF, 2016

APPENDIX A. DETAILED DEMOGRAPHIC & SOCIO-ECONOMIC CHARACTERISTICS

DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESIDENTS

The following chapter provides a profile of residents living in the SPA and residents living in the wider area surrounding the SPA (referred to herein as SPA+). The wider area was analyzed because the SPA is home to a small number of residents. The wider area is defined as neighborhoods that are within Census Block Groups surrounding and overlapping the SPA. The Census Block Group is the smallest geographic area for which detailed Census demographic and socio-economic data is available. The Airport SMART Station Specific Plan Area in terms of their demographic and socio-economic characteristics.



Sonoma County Airport SMART Station Specific Plan | SPA+ Area

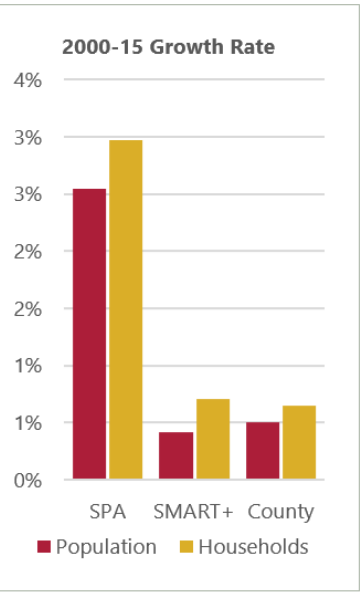
1.1. DEMOGRAPHIC PROFILE

1.1.1. POPULATION AND HOUSING

In 2015, the SPA had 634 residents—almost entirely contained within the area between the rail line and Highway 101—while the SPA+ had 2,470 residents. The SPA+ population grew between 2000 and 2010, but Census estimates show a leveling off of the population between 2010 and 2015.

Population and Household Growth in the SPA, SPA+, and Sonoma County

	2000	2010	2015	Growth 2000-15	Ann. Rate 2000-15
SPA					
Population	435	653	634	199	2.5%
Households	185	294	287	102	3.0%
Avg. HH* Size	2.29	2.21	2.20		
SPA+					
Population	2,322	2,472	2,473	151	0.4%
Households	951	1,050	1,057	106	0.7%
Avg. HH Size	2.33	2.30	2.28		
Sonoma County					
Population	458,614	483,878	494,431	35,817	0.5%
Households	172,403	185,825	190,034	17,631	0.7%
Avg. HH Size	2.60	2.55	2.55		



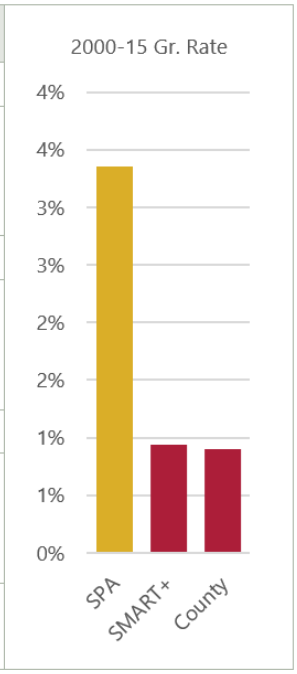
HH: Households

Source: Esri Business Analyst, 2016 (data sourced from Census, American Survey, 2015 estimates)

The number of households living in the SPA and SPA+ in 2015 totaled 287 and 1,057, respectively. From 2000 to 2015, the share of owner occupied housing decreased throughout Sonoma County, but this shift was more pronounced in the SPA and SPA+. Owner occupied housing units dropped from 55% to 31% between 2000 and 2015 in the SPA; they fell from 71% to 57% in the SPA+. Vacancy rates in the SPA and SPA+ are lower than countywide figures.

Housing Units in the SPA, SPA+, and Sonoma County

	2000	2010	2015	Growth 2000-15	Ann. Rate 2000-15
SPA	189	310	310	121	3.4%
Owner Occupied	55.0%	33.2%	31.0%		
Renter Occupied	43.4%	61.6%	61.6%		
Vacant	1.6%	5.2%	7.4%		
SPA+	986	1,119	1,135	149	0.9%
Owner Occupied	71.2%	58.0%	56.6%		
Renter Occupied	25.3%	35.8%	36.7%		
Vacant	3.5%	6.2%	6.9%		
Sonoma County	183,153	204,572	209,439	26,286	0.9%
Owner Occupied	60.3%	54.9%	53.2%		
Renter Occupied	33.8%	36.0%	37.6%		
Vacant	5.9%	9.2%	9.3%		
% County Units in SPA	0.1%	0.2%	0.1%	0.5%	
% County Units in SPA+	0.5%	0.5%	0.5%	0.6%	

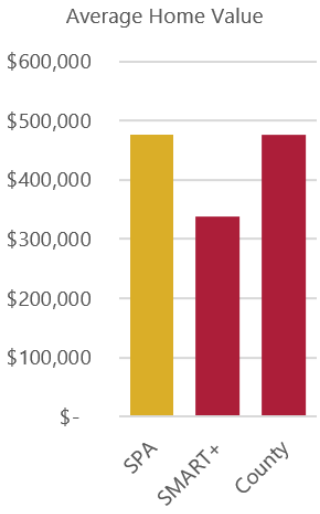


Source: Esri Business Analyst, 2016

The average home value of owner occupied units in the SPA was $476,600 in 2015, slightly higher than the Sonoma County average. The average home value in SPA+ was 30% lower than the SPA and county averages.

Housing Units by Value in the SPA, SPA+, and Sonoma County, 2015

Home Value	SPA	SPA+	Sonoma County
<$50,000	1.0%	15.6%	1.9%
$50,000 - $99,999	3.1%	9.5%	4.1%
$100,000 - $149,999	3.1%	6.7%	4.8%
$150,000 - $199,999	0.0%	2.3%	4.7%
$200,000 - $249,999	1.0%	8.3%	6.1%
$250,000 - $299,999	3.1%	4.0%	6.7%
$300,000 - $399,999	21.9%	11.1%	18.8%
$400,000 - $499,999	31.3%	22.6%	18.2%
$500,000 - $749,999	30.2%	15.4%	20.9%
$750,000 - $999,999	1.0%	1.9%	6.8%
$1,000,000 +	3.1%	2.5%	7.0%
Average Home Val.	**$476,579**	**$337,949**	**$475,695**

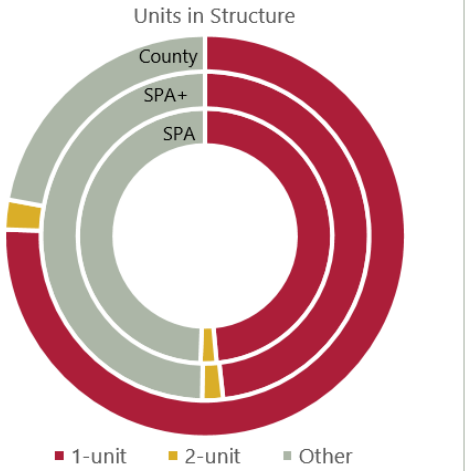


Source: Esri Business Analyst, 2016

According to 2015 Census estimates, the SPA and SPA+ appear to have a greater percentage of higher density multi-unit structures compared to the county as a whole. Given the size of the disparity, these results may be skewed by a small number of large developments in the SPA and SPA+ areas, such as the Vineyard Creek apartment complex. Looking at housing age, Census estimates show that a housing units in the SPA and SPA+ are of younger vintage than in the County: over 30% of housing units in both areas were built since 2000 versus 11% countywide.

Housing Units by Units in Structure in the SPA, SPA+, and Sonoma County, 2013

Units in Structure	SPA	SPA+	Sonoma County
1, detached	39.1%	38.9%	68.3%
1, attached	9.3%	9.1%	7.2%
2	2.0%	2.0%	2.4%
3 or 4	8.7%	8.8%	4.1%
5 to 9	7.2%	7.3%	3.3%
10 to 19	10.7%	10.5%	3.3%
20 to 49	3.8%	3.8%	2.2%
50 or more	10.7%	10.8%	3.8%
Mobile home	6.1%	6.1%	5.2%
Boat, RV, van, etc.	2.0%	2.0%	0.2%



Source: U.S. Census Bureau, American Community Survey

Table 1 - Housing Units by Year Structure Built in the SPA, SPA+, and Sonoma County, 2013

Year Structure Built	SPA	SPA+	Sonoma County
Built 2010 or later	0.0%	0.0%	0.2%
Built 2000 to 2009	30.7%	30.7%	10.9%
Built 1990 to 1999	12.8%	12.6%	13.1%
Built 1980 to 1989	29.9%	30.1%	18.8%
Built 1970 to 1979	15.9%	16.1%	21.8%
Built 1960 to 1969	0.0%	0.0%	11.5%
Built 1950 to 1959	7.5%	7.3%	9.1%
Built 1940 to 1949	0.0%	0.0%	5.6%
Built 1939 or earlier	3.2%	2.9%	9.1%
Median Year Structure Built	**1988**	**1988**	**1977**

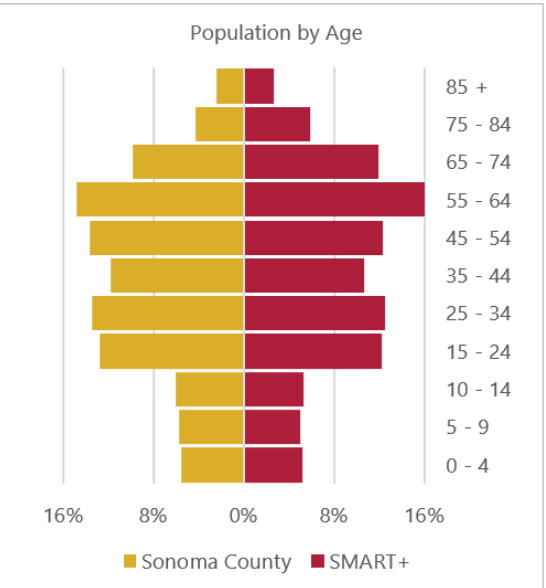
Source: U.S. Census Bureau, American Community Survey

1.1.2. AGE, ETHNICITY, AND RACE

Residents living in the SPA appear to be younger than the population within the SPA+ and Sonoma County. The median age in the SPA was estimated to be 32 in 2015, over 7 years younger than the median for the SPA+ and almost 9 years younger than the county median.

Population by Age in the SPA, SPA+, and Sonoma County, 2015

Age	SPA	SPA+	Sonoma County
0 - 4	7.7%	5.3%	5.5%
5 - 9	6.9%	5.1%	5.7%
10 - 14	6.6%	5.3%	6.0%
15 - 24	17.8%	12.2%	12.7%
25 - 34	15.1%	12.5%	13.4%
35 - 44	12.7%	10.7%	11.8%
45 - 54	12.4%	12.3%	13.6%
55 - 64	12.4%	16.0%	14.8%
65 - 74	5.8%	12.0%	9.8%
75 - 84	1.7%	5.9%	4.2%
85 +	0.8%	2.7%	2.4%
Median Age	**32.0**	**39.4**	**40.7**



Source: Esri Business Analyst, 2016

The race and ethnicity of residents in the SPA and SPA+ are similar to that of the County: the populations are over 75% white; just under 30% of the population is of Hispanic origin.

Population by Race/Ethnicity in the SPA, SPA+, and Sonoma County, 2015

Age	SPA	SPA+	Sonoma County
Race			
White Alone	75.5%	74.3%	75.3%
Black Alone	1.4%	1.2%	1.7%
American Indian Alone	2.6%	2.5%	1.3%
Asian Alone	4.7%	3.5%	4.0%
Pacific Islander Alone	0.3%	0.3%	0.3%
Some Other Race Alone	10.9%	12.9%	12.6%
Two or More Races	4.6%	5.3%	4.8%
Hispanic Ethnicity	27.7%	28.6%	26.7%

Source: Esri Business Analyst, 2016

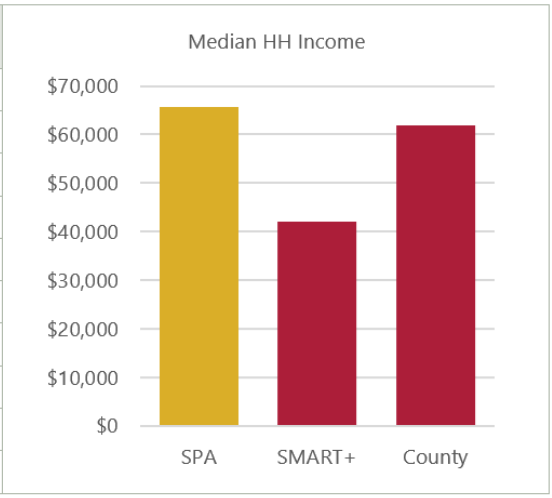
1.2. SOCIO-ECONOMIC PROFILE OF RESIDENTS

1.2.1. INCOME

In 2015, the median household income within the SPA was $65,600, about 6% higher than the median for Sonoma County. In the SPA+, however, median income was $42,000 in 2015, 32% below the county level.

Household Income in the SPA, SPA+, and Sonoma County, 2015

Household Income	SPA	SPA+	Sonoma County
<$15,000	6.6%	13.1%	9.6%
$15,000 - $24,999	17.1%	15.4%	8.7%
$25,000 - $34,999	10.5%	17.3%	9.2%
$35,000 - $49,999	6.6%	7.9%	12.4%
$50,000 - $74,999	13.2%	12.8%	17.8%
$75,000 - $99,999	22.3%	15.2%	13.4%
$100,000 - $149,999	16.7%	10.0%	15.6%
$150,000 - $199,999	4.2%	4.1%	6.9%
$200,000+	2.8%	4.2%	6.4%
Median HH Income	**$65,602**	**$41,991**	**$61,807**



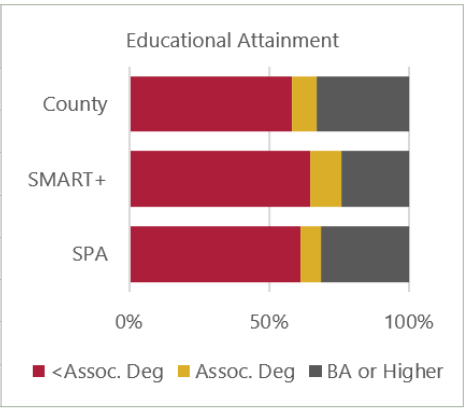
Source: Esri Business Analyst, 2016

1.2.2. EDUCATIONAL ATTAINMENT

There is no notable difference in the level of educational attainment among the populations living in the SPA, SPA+ or Sonoma County as a whole. However, the education attainment of those living within the SPA+ is lowest among these three.

Population 25yrs+ by Educational Attainment in the SPA, SPA+, and Sonoma County, 2015

Educational Attainment	SPA	SPA+	Sonoma County
Less than 9th Grade	1.6%	6.3%	6.7%
9th - 12th Grade, No Diploma	5.4%	7.7%	6.0%
High School Graduate	18.9%	14.7%	17.5%
GED/Alternative Credential	3.1%	4.4%	2.5%
Some College, No Degree	32.3%	31.5%	25.3%
Associate Degree	7.5%	11.3%	9.1%
Bachelor's Degree	**17.8%**	**16.5%**	**21.0%**
Graduate/Professional Degree	**13.4%**	**7.6%**	**11.9%**



Source: Esri Business Analyst, 2016

*1.2.3. **OCCUPATIONS***

Employment by occupation statistics of SPA employees show a slightly smaller percentage holding white collar jobs and slightly greater percentage in service and blue collar jobs compared to the SPA+ and Sonoma County.

Population 16yrs+ by Occupation in the SPA, SPA+, and Sonoma County, 2015

Occupation	SPA	SPA+	Sonoma County
White Collar*	**56.8%**	**60.9%**	**59.4%**
Management/Business/Financial	15.7%	12.5%	14.8%
Professional	14.5%	16.3%	19.9%
Sales	12.7%	22.6%	12.1%
Administrative Support	13.9%	9.5%	12.6%
Services*	**21.3%**	**17.8%**	**20.5%**
Blue Collar*	**22.2%**	**21.4%**	**20.1%**
Farming/Forestry/Fishing	2.2%	1.0%	2.0%
Construction/Extraction	3.1%	3.9%	5.7%
Installation/Maintenance/Repair	6.8%	5.8%	3.1%
Production	2.8%	3.3%	4.9%
Transportation/Material Moving	7.4%	7.4%	4.6%

Source: Esri Business Analyst, 2016

** Services includes labor related to customer interaction, entertainment, sales or other service-oriented work. Whereas "White Collar" refers to professional, managerial, and administrative labor; and "Blue Collar" refers to manual labor*

*1.2.4. **COMMUTING PROFILE***

The dominant means of transportation to work for countywide employees is driving alone. In the SPA and SPA+, more than 86% of employees drove alone and about 5% carpooled in 2013. In comparison, 76% of employees drove alone and 10% carpooled. As shown in the table below, the median travel time to work for SPA and SPA+ employees was about 14 minutes in 2013, well short of the median of 20.5 minutes for Sonoma County.

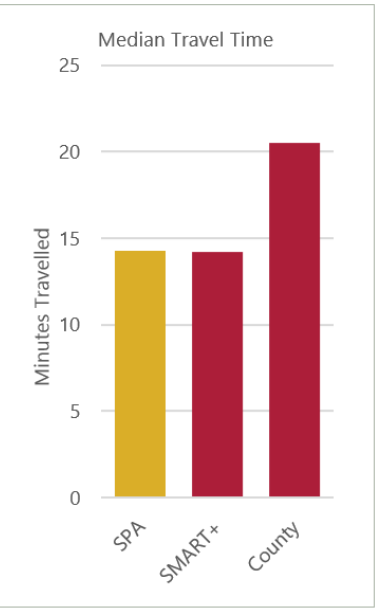
Population 16yrs+ by Means of Transportation to Work: SPA, SPA+, and Sonoma County, 2013

Mode of Travel on Commute	SPA	SPA+	Sonoma County
Drove alone	86.5%	86.6%	76.0%
Carpooled	5.5%	5.3%	10.3%
Public transportation (excluding taxicab)	0.0%	0.0%	1.8%
Bus or trolley bus	0.0%	0.0%	1.8%
Streetcar or trolley car	0.0%	0.0%	0.0%
Subway or elevated	0.0%	0.0%	0.0%
Railroad	0.0%	0.0%	0.0%
Ferryboat	0.0%	0.0%	0.0%
Taxicab	0.0%	0.0%	0.0%
Motorcycle	0.0%	0.0%	0.3%
Bicycle	0.0%	0.0%	1.1%
Walked	2.2%	2.2%	3.0%
Other means	0.0%	0.0%	0.7%
Worked at home	5.5%	5.6%	6.8%

Source: U.S. Census Bureau, American Community Survey

Population 16yrs+ by Travel Time to Work: SPA, SPA+, and Sonoma County, 2013

Travel Time to Work*	SPA	SPA+	Sonoma County
Less than 5 minutes	4.4%	4.4%	3.3%
5 to 9 minutes	17.3%	17.4%	11.9%
10 to 14 minutes	32.7%	32.7%	17.2%
15 to 19 minutes	19.3%	19.5%	16.1%
20 to 24 minutes	5.3%	5.0%	14.1%
25 to 29 minutes	0.0%	0.0%	5.0%
30 to 34 minutes	4.7%	4.4%	11.1%
35 to 39 minutes	0.0%	0.0%	2.2%
40 to 44 minutes	1.2%	1.2%	2.7%
45 to 59 minutes	7.9%	7.7%	6.2%
60 to 89 minutes	2.3%	2.4%	6.4%
90 or more minutes	5.3%	5.3%	3.7%
Median Travel Time to Work (minutes)	**14.2**	**14.2**	**20.5**



Source: U.S. Census Bureau, American Community Survey
** Does not include those who "worked at home"*

APPENDIX B. AREA PROFILE SURVEY

Sonoma County Airport and SMART Station - Area Profile Survey

* 1. Name of Business:

* 2. Type of Business:

* 3. Please classify your business in accordance to the standard North American Industry Classification System (NAICS).

- Agriculture or Forestry
- Mining or Oil and Gas Extraction
- Utilities
- Manufacturing
- Wholesale Trade
- Retail Trade
- Transportation and Warehousing
- Information
- Finance and Insurance
- Real Estate and Rental and Leasing
- Professional, Scientific and Technical Services
- Management of Companies and Enterprises
- Administrative and Support and Waste Management and Remediation Services
- Educational Services
- Health Care and Social Assistance
- Arts, Entertainment and Recreation
- Accommodation
- Food Services and Drinking Places
- Other Services (except Public Administration)
- Public Administration

* 4. How long has your business been at the current location - the Sonoma County Airport Area?

- ◯ Less than 2 years
- ◯ 2 to 5 years
- ◯ 6 to 10 years
- ◯ 11 to 20 years
- ◯ More than 20 years

* 5. Is this your headquarters location?

- ◯ Yes
- ◯ No

* 6. How many full and part-time employees does your business have at this location?

Full-time	
Part-time	

* 7. Please classify your business at this location by the number of employees.

- ◯ **Micro** or under 10 employees
- ◯ **Small** or 11 to 25 employees
- ◯ **Medium** or 26 to 50 employees
- ◯ **Large** or 51 to 100 employees
- ◯ **Very Large** or over 100 employees

* 8. What is your business outlook at this location?

- ◯ Very strong
- ◯ Moderately strong
- ◯ Neutral
- ◯ Moderately weak
- ◯ Very weak

* 9. Over the next two years, do you expect changes in employment at this location?

- ◯ Increase employment by more than 10%
- ◯ Increase employment by up to 10%
- ◯ No employment change
- ◯ Reduce employment by up to 10%
- ◯ Reduce employment by more than 10%

* 10. Over the next five years, are your land and facilities needs likely to change?

- ◯ Will need to expand and relocate to a larger site and facility
- ◯ Will expand facility at current site
- ◯ No change expected
- ◯ Will need to reduce facility size
- ◯ May move out of the Sonoma County Airport area
- ◯ May cease operation

* 11. Would you agree or disagree with the following statement?
The arrival of the Sonoma Marin Area Rail Transit (SMART) Station with train operation will be helpful to my business.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

* 12. Would you agree or disagree with the following statement?
Additional stores and services are needed in the Sonoma County Airport Business Park Area.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

13. If additional stores or services are needed, what types of services are most desired? (please select all that apply)

- [ ] Coffee shop
- [ ] Fast food restaurant
- [ ] Full-service restaurant
- [ ] Grocery store or convenience market
- [ ] Bar or drinking place

Other (please specify)

14. Please provide any comments you have concerning the needs of this Sonoma County Airport Business Park Area.

APPENDIX C. RELEVANT GENERAL PLAN GOALS, PROGRAMS, AND POLICIES

Goal LU-3	**Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.**
Policy LU-1a	This plan has relied extensively upon policies and designations set forth in previous Specific Plans and Area Plans. The County shall continue to use the following selected Specific Plans and Area Plans to implement this plan. A Specific or Area Plan may establish more detailed policies affecting proposed development, but may not include policies that are in conflict with the General Plan. In any case where there appears to be a conflict between the General Plan and any Specific or Area Plan, the more restrictive policy or standard shall apply. (1) Airport/Industrial Specific Plan (2) South Santa Rosa Area Plan (3) Bennett Valley Area Plan (4) Sonoma Mountain Area Plan (5) West Petaluma Area Plan (6) Petaluma Dairy Belt Area Plan (7) Penngrove Area Plan (8) Franz Valley Area Plan
Policy LU-3b	In designated Urban Service Areas, maintain a residential holding capacity that is as close as possible to projected growth. Consider denial of Land Use Map amendments that add residential density if residential holding capacity exceeds projected growth, recognizing that future development may not use 100% of the capacity of all parcels.*
Goal LU-4	**Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner.**
Objective LU-4.1	Assure that development occurs only where physical public services and infrastructure, including school and park facilities, public safety, access and response times, water and wastewater management systems, drainage, and roads are planned to be available in time to serve the projected development.
Objective LU-4.3	Maintain acceptable levels of service on roadway segments and intersections as provided in Objectives CT-4.1, CT-4.2, and CT-4.3 of the Circulation and Transit Element.
Objective LU-4.4	Correlate new development with roadway improvements necessary to maintain the countywide levels of service set forth in Objective LU-4.3.
Goal LU-5	**Identify important open space areas between and around the county's cities and communities. Maintain them in a largely open or natural character with low intensities of development.**
Objective LU-5.1	Retain low intensities of use in Community Separators between and around cities and communities as designated in the Open Space and Resource Conservation Element.
Policy LU-5a	The County shall neither approve extension of urban services into any Community Separator nor approve connection of any lot in a Community Separator to existing urban services except as allowed by the policies of the Public Facilities and Services Element.
Policy LU-5b	Avoid commercial and industrial land uses in Community Separators except as may be authorized by Policy OSRC-1c. Allow the full range of uses allowed in the agricultural and resource categories.*
Policy LU-5c	Consider amendments for outdoor recreational or other uses with a low intensity of structures only in those Community Separators along the 101 Corridor and only where the amendment conforms to the provisions of voter approved ordinances (ballot measures) protecting Community Separators.

Policy LU-5d	Decisions regarding the extent of land area or the use of property designated as Community Separator shall conform to any applicable voter approved ordinances (ballot measures).
Policy LU-5e	Avoid amendments to increase residential density in Community Separators, since these densities were established based upon the policies set forth in other elements of this plan as well as the open space, separation, and visual considerations identified in this section. The integrity of Community Separators cannot be maintained at densities in excess of one unit per ten acres. However, under no circumstances shall this policy be used to justify an increase in density from that designated on the Land Use Map.*
Policy LU-6h	Utilize the Affordable Housing (AH) Combining District to designate available sites in Urban Service Areas for affordable housing to meet the needs of low and very low income households.
Policy LU-6i	Provide expanded opportunities for a mix of residential and commercial or industrial use in Urban Service Areas.*
Goal LU-9	**Protect lands currently in agricultural production and lands with soils and other characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.***
Objective LU-9.1	Avoid conversion of lands currently used for agricultural production to non-agricultural use.
Objective LU-9.2	Retain large parcels in agricultural production areas and avoid new parcels less than 20 acres in the "Land Intensive Agriculture" category.
Objective LU-9.3	Agricultural lands not currently used for farming but which have soils or other characteristics that make them suitable for farming shall not be developed in a way that would preclude future agricultural use.
Objective LU-9.4	Discourage uses in agricultural areas
Policy LU-9b	Apply a base zoning district of agriculture for any land area designated on the Land Use Map for agriculture. Other overlay zoning districts may be applied where allowed by the agricultural land use category.
Policy LU-9c	Use rezonings, easements and other methods to insure that development on agricultural lands does not exceed the permitted density except where allowed by the policies of the Agricultural Resources Element.
Policy CT-7m	Utilize the County traffic model to identify operational improvements necessary to reduce congestion in the Airport Industrial area. Update traffic mitigation fees, or establish an assessment district or similar mechanism to fund the planned capacity and operational improvements.
Policy CT-7n	Work with SMART to provide funding for development of a passenger rail station at the Airport Industrial Area.*
Goal AT-1	**Assure that land use types and densities in areas adjacent to public use airports are compatible with airport activity so existing and future capabilities of the airports can be preserved.**
Objective AT-1.1	Land use plans, regulations and other actions adhere, to the extent reasonable or practicable, to the land use compatibility criteria of the Sonoma County Airport Land Use Commission, unless it is determined that an override is appropriate.
Objective AT-1.2	The ALUC's airport noise land use compatibility policies and criteria should be the principal determinant of the compatibility and acceptability of proposed land use projects with respect to the activities, noise, and other impacts of a nearby airport, but

	that any special circumstances also be taken into account in making such determinations.
Objective AT-1.3	The maximum noise exposure that shall be considered acceptable is the 55 dB CNEL, and conditionally acceptable between the 55 and 65 dB CNEL for development of new residential uses in areas surrounding a public-use airport as shown in Figures AT-4 through AT-9.*
Policy AT-1a	Proposed development within a noise environment in excess of 55 dBA CNEL, shall comply with the Sonoma County Comprehensive Airport Land Use Plan. For all public use airports, the CALUP forecast of future noise exposures shown in Figures AT-4 through AT-9 shall be used for this purpose.*
Policy AT-1b	No object, tree, or structure shall be permitted to be erected or maintained which, because of height or other factors, would result in an increase in the minimum ceiling or visibility criteria for an existing or proposed instrument approach procedure.
Policy AT-1c	An object, tree or structure which would penetrate a horizontal or conical surface as defined by the ALUC, and would be 35 feet or less in height above the ground (i.e. is within the height limits prescribed for most Sonoma County zoning districts) shall be considered conditionally acceptable even if it exceeds the prescribed height limit. Appropriate marking and lighting may be conditions for acceptability.
Policy AT-1d	Prepare or revise any applicable Specific Plans in a manner which will conform to the ALUC's CALUP, except where the Board of Supervisors determines that special circumstances justify overruling the Commission and finds that the proposed action is consistent with the purposes expressed in Section 21670 of the Public Utilities Code (State Aeronautics Act).
Policy AT-1e	Refer proposed projects which include requests for General or Specific Plan amendment, changes to the Development Code, and changes to local building regulations to the ALUC for determination of consistency with the CALUP prior to review by the appropriate County decision making body.
Policy AT-1f	Use the Airport Property Map contained in the Sonoma County Airport Master Plan and Airport Layout Plan and any future amendments thereof, for identification of parcels planned for acquisition to protect approach zones at the Charles M. Schulz - Sonoma County Airport. Figure AT-10 shows parcels to be acquired for Airport approach protection. The appropriate method of protection shall be consistent with the level of protection needed based upon the impact of future operations and regulations associated with the Airport's annual service volume of 230,000 operations as reported in the Airport Master Plan.
Policy AT-1g	When allowed by law, avigation easements may be required on publicly owned airports as a condition of approval of discretionary planning permits for parcels within an ALUC referral area. Avigation easements may not be required for privately owned public use airports.
Policy AT-1j	Consider the adoption of an "Airport Protection Combining District" for incorporation into the Development Code and applying to lands within the CALUP Referral Area Boundaries as shown on Figures AT-4, AT-5, AT-6, AT-7, AT-8, and AT-9. The purpose of this district is to provide an additional means to inform property owners of and apply the requirements of the ALUC's CALUP to land uses surrounding the public use airports in Sonoma County.
Goal AT-2	**Provide appropriate conditions which will permit the safe passage of aircraft operating to and from airports in the County.**

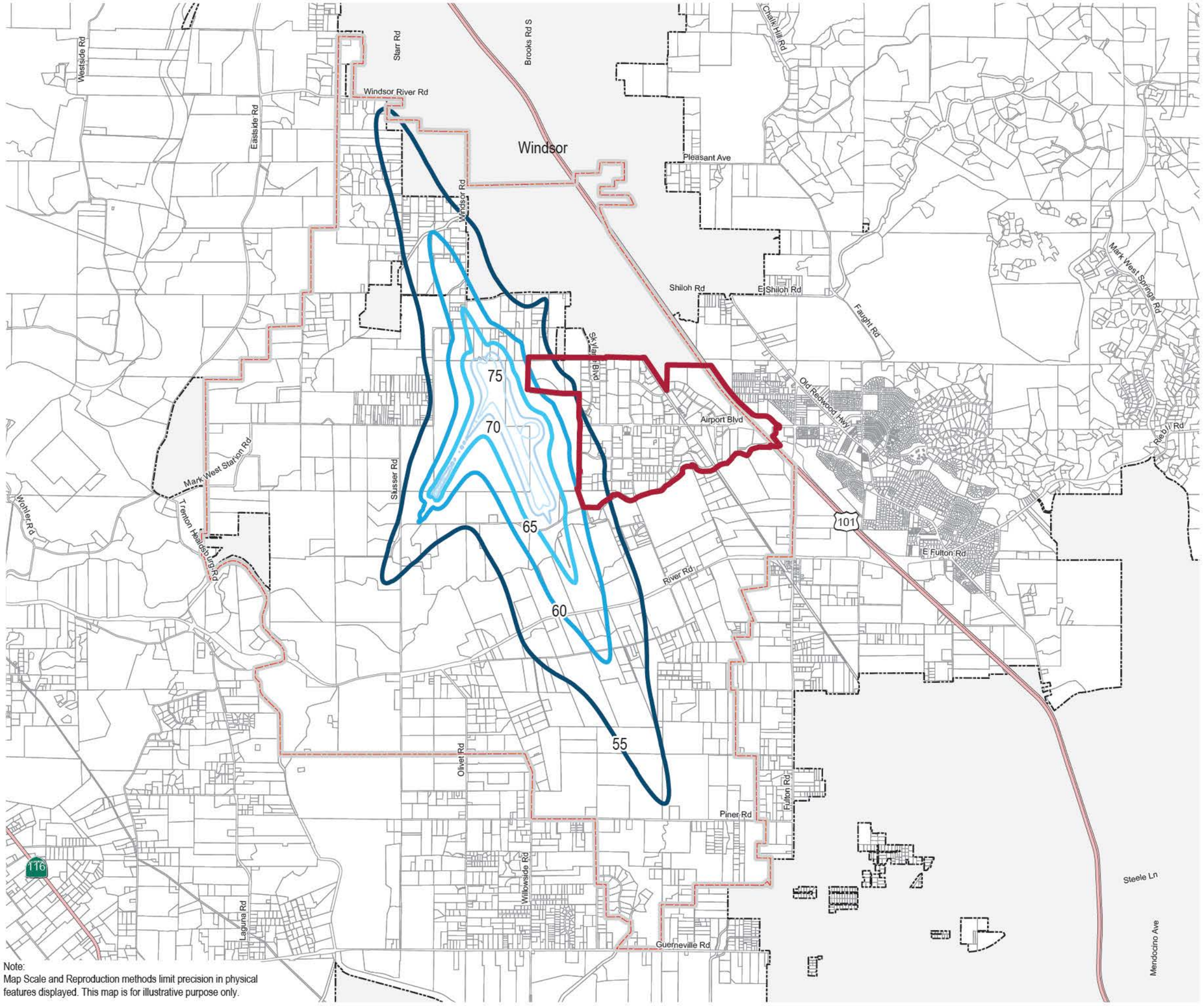
Objective AT-2.1	The height and type of structures adjacent to airports should be restricted or marked so they will not constitute hazards to air navigation as per FAR Part 77 and FAA Order FAA Order 8260.3B – United States Standard for Terminal Instrument Procedures (TERPS).
Policy AT-2a	Comply with ALUC policies regarding height, location, marking and lighting of structures, unless it is determined that an override by appropriate government body is appropriate.
Policy PF-1c	Give the highest priority for water and sewer improvement planning to those service providers whose capacity for accommodating future growth is most limited. These include the Occidental County Sanitation District, the Geyserville Water Works and Geyserville Sanitation Zone, the Sweetwater Springs Water District, Monte Rio, the Town of Windsor (water supply to the Airport Industrial Area), the California American Water Company (Larkfield Wikiup), the Airport Larkfield Wikiup County Sanitation Zone, the Valley of the Moon Water District, and the Sonoma Valley Sanitation District, or any entities which may succeed these service providers.
Policy NE-1b	Avoid noise sensitive land use development in noise impacted areas unless effective measures are included to reduce noise levels. For noise due to traffic on public roadways, railroads and airports, reduce exterior noise to 60 dB Ldn or less in outdoor activity areas and interior noise levels to 45 dB Ldn or less with windows and doors closed. Where it is not possible to meet this 60 dB Ldn standard using a practical application of the best available noise reduction technology, a maximum level of up to 65 dB Ldn may be allowed but interior noise level shall be maintained so as not to exceed 45 dB Ldn. For uses such as Single Room Occupancy, Work-Live, Mixed Use Projects, and Caretaker Units, exterior noise levels above 65 dB Ldn or the Table NE-2 standards may be considered if the interior standards of 45 dB Ldn can be met. For schools, libraries, offices, and other similar uses, the interior noise standard shall be 45 dB Leq in the worst case hour when the building is in use.*

APPENDIX D. AIRPORT PROJECTED NOISE CONTOURS AND ALUC REFERRAL AREA

Figure AT-9

Projected Noise Contours and ALUC Referral Area

Charles M. Schulz
Sonoma County Airport



2030 Noise Contours
Community Noise Equivalent Level (CNEL) measured in decibels (dB)

- 55
- 60
- 65
- 70
- 75
- ALUC Referral Area

Base Map Data

- Highways
- City Boundaries
- Parcels

Airport Industrial Area Specific Plan Boundary

0 2,000 4,000 Feet
1:48,000

Note:
Map Scale and Reproduction methods limit precision in physical features displayed. This map is for illustrative purpose only.

Sonoma County General Plan 2020
Air Transportation Element

Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, California 95403
707-565-1900 FAX 707-565-1103

Author: PRMD Cartography: S.Mason File Number: S:\GIS-DATA\PRMD_BASE\PRMD Department Projects\Comprhensive Planning\General Plan 2020\GP figure AT-9.mxd \ GP figure AT-9 Original Date: 09/23/2008 Amendment Date: 01/24/2012

APPENDIX E. AIRPORT SAFETY ZONES MAP & EXPLANATORY TABLE

Exhibit C4

Charles M. Schulz - Sonoma County Airport

Safety Zones

- Detailed Land Use Study Area
- Primary Referral Area Boundary
- Sphere of Influence Boundary
- City Limits

Airport

- Existing
- Future

Safety Zone

- ISZ - Inner Safety Zone
- ITZ - Inner Turning Zone
- OSZ - A - Outer Safety Zone A
- OSZ -B - Outer Safety Zone B
- RPZ - Runway Protection Zone
- SSZ - Sideline Safety Zone
- TPZ - A - Traffic Pattern Zone
- TPZ - B - Traffic Pattern Zone

Base Map Layers

- Parcel
- Highway
- Road
- Stream

Note: City limits are collinear with Spheres of Influence unless otherwise indicated.

Map scale and reproduction methods limit the data shown. This map is for illustrative purposes only, and does not reflect all Land Use policies. Refer to the official Land Use maps on file at the Permit and Resource Management Department.

Data Source: Mead & Hunt www.meadhunt.com

0 0.25 0.5 Miles

1 inch = 0.7 miles

Sonoma County ALUC Airport Land Use Commission

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TABLE 8C Land Use Compatibility Standards for Charles M. Schulz – Sonoma County Airport

TABLE 8C Safety Zone Land Use Compatibility Standards for Charles M. Schulz – Sonoma County Airport				
Safety Zone[11]	**Maximum Population Density[1]**	**Maximum Residential Density in Units Per Acre[2]**	**Minimum Amount of Useable Open Space[10]**	**Land Use[3]**
RPZ Runway Protection Zone	0[4]	0[4]	90% of gross area	**Prohibit:** All structures except for aeronautical equipment Assemblages of people All residential land uses[5] Objects exceeding FAR Part 77 height limits Storage of hazardous materials, petroleum or explosives; above-grade power lines or other hazards to flight
ISZ Inner Safety Zone	Uses in structures:[6] 40 persons per acre Uses not in structures: 80 persons per acre Maximum persons in a single acre: 120	1 dwelling unit per 10 acres	30% of gross area	**Normally Allow:** Agriculture; non-group recreational uses; low-hazard materials storage, warehouses; low-intensity light industrial uses; auto, aircraft, marine repair services **Limit:** office buildings to single story; nonresidential uses to activities that attract few people **Avoid:** All residential uses except as infill in developed areas; Multi-story uses; uses with high density or intensity; **Prohibit:** Theaters, meeting halls concert halls, auditoriums, stadiums, arenas, group recreational uses and other public assembly uses; children's schools, daycare centers, hospitals, and nursing homes; office buildings greater than three stories; shopping centers; restaurants; labor-intensive industrial uses; public utility and communication facilities; manufacture, storage, or distribution of explosives or flammable materials[7]

TABLE 8C Safety Zone Land Use Compatibility Standards for Charles M. Schulz – Sonoma County Airport

Safety Zone[11]	Maximum Population Density[1]	Maximum Residential Density in Units Per Acre[2]	Minimum Amount of Useable Open Space[10]	Land Use[3]
ITZ Inner Turning Zone	Uses in structures: 50 persons per acre Uses not in structures: 100 persons per acre Maximum persons in a single acre: 300	1 dwelling unit per 5 acres	20% of gross area	**Normally Allow:** Uses allowed in ISZ; greenhouses, low-hazard materials storage, mini-storage, warehouses; light industrial, vehicle repair services **Limit:** Residential uses to density limit; office and other commercial uses to low intensities **Avoid:** Commercial and other nonresidential uses having higher usage intensities; building with more than 3 floors; hazardous uses (e.g., aboveground bulk fuel storage) **Prohibit:** Theaters, meeting halls concert halls, auditoriums, stadiums, arenas, group recreational uses and other public assembly uses; children's schools, daycare centers, hospitals, and nursing homes; office buildings greater than three stories; shopping centers; restaurants; labor-intensive industrial uses; public utility and communication facilities; manufacture, storage, or distribution of explosives or flammable materials[7]
OSZ [12] Outer Safety Zone	Uses in structures: 100 persons per acre Uses not in structures: 150 persons per acre Maximum persons in a single acre: OSZ-A: 300 OSZ-B: 450	OSZ-A: 1 dwelling unit per 5 acres OSZ-B: 1 dwelling unit per 2.5 acres	20% of gross area	Most low to moderate intensity uses are acceptable. Restrict assemblages of people. Consider potential airspace protection hazards of energy/industrial projects **Normally Allow:** Uses allowed in ITZ, Restaurants, retail, industrial **Limit:** Residential uses to low density **Avoid:** High-intensity retail or office buildings **Prohibit:** Children's schools, day care centers, hospitals, and nursing homes; Stadiums, group recreational uses, uses involving, as the primary activity, manufacture, storage, or distribution of explosives or flammable materials[7].

TABLE 8C Safety Zone Land Use Compatibility Standards for Charles M. Schulz – Sonoma County Airport				
Safety Zone[11]	**Maximum Population Density[1]**	**Maximum Residential Density in Units Per Acre[2]**	**Minimum Amount of Useable Open Space[10]**	**Land Use[3]**
SSZ Sideline Safety Zone	Uses in structures: 60 persons per acre Uses not in structures: 120 persons per acre Maximum persons in a single acre: 300	1 dwelling unit per acre	30% of gross area	**Normally Allow:** Uses allowed in OSZ (subject to height limitations for airspace protection) ; All common aviation-related activities provided that FAA height-limit criteria are met **Limit:** Nonresidential uses same as Zone 3 **Avoid:** Residential uses unless airport related (noise usually also a factor); high-intensity nonresidential uses **Prohibit:** Children's schools, day care centers, hospitals, and nursing homes; auditoriums, stadiums, and group recreational uses; manufacture, storage, or distribution of explosives or flammable materials.

TABLE 8C Safety Zone Land Use Compatibility Standards for Charles M. Schulz – Sonoma County Airport

Safety Zone[11]	Maximum Population Density[1]	Maximum Residential Density in Units Per Acre[2]	Minimum Amount of Useable Open Space[10]	Land Use[3]
TPZ [12] Traffic Pattern Zone	**TPZ-A:** Uses in structures: 150 persons per acre Uses not in structures: 200 persons per acre Maximum persons in a single acre: 800 **TPZ-B**: Uses in structures or outdoors: 300 persons per acre Maximum persons in a single acre: 1,200	**TPZ-A:** 5 dwelling units per acre **TPZ-B:** No Limit	15% of gross area	**Normally Allow:** Residential uses where noise and overflight impacts are low **Limit:** large day care centers, hospitals and nursing homes **Avoid:** Discourage schools auditoriums, amphitheaters stadiums and similar uses with very high intensities[8]. Discourage uses involving, as the primary activity, manufacture, storage, or distribution of explosives or flammable materials and bulk quantities of highly hazardous materials[8]. **Prohibit**: No prohibitions

TABLE 8C NOTES:

1 Refer to Subsection 8.4.1.b and Appendix D for the method for determining the Maximum Population Density for any proposed use.

2 Maintain current zoning if density is less than the indicated maximum density for each zone. Refer to Subsection 8.4.1.b for the method for determining the Maximum Residential Density for any proposed use. Second Dwelling Units are not counted towards the density and are not restricted by this plan if such units are permitted under a local jurisdiction's zoning code.

3 The following summarizes the uses prohibited in all airport safety zones. Refer to Subsection 8.4.1.e for discussion of prohibited uses.

(a) Any use which would direct a steady light or flashing light toward aircraft.
(b) Any use which would cause sunlight to be reflected toward an aircraft.
(c) Any use which would generate smoke or water vapor or which would attract large concentrations of birds, or which may affect safe air navigation within the area.
(d) Any use which would generate electrical interference detrimental to aircraft operation.

Where used in this table, the following terms shall be interpreted and applied as follows:

(a) Normally Allow—Typical examples of the use are acceptable.
(b) Limit—Use is acceptable with limitations on density, intensity or size.
(c) Avoid—Use should be discouraged and generally should be permitted only if an alternative site outside the zone would not serve intended use.
(d) Prohibit—Use should not be permitted under any circumstances.

4 No structures permitted in RPZ. Airport owned property.

5 Significant obstructions include, but are not limited to, large trees, heavy fences and walls, tall and steep berms and retaining walls, non-frangible street light and sign standards, billboards.

6 A structure includes fully enclosed buildings and other facilities involving fixed seating and enclosures limiting the mobility of people, such as stadiums, arenas, and amphitheaters.

7 This does not apply to service stations if fuel storage tanks are installed underground.

8 Refer to Subsection 8.6.5 addressing findings for land uses which are to be discouraged.

9 Refer to Subsection 8.4.1.e addressing uses which are prohibited in all airport safety zones.

10 Usable open space should be at least 300 feet long by 75 feet wide (about the size of a football field) to be considered useable. This is a minimum size presumes that tall objects do not exist along the approach to the site which would prevent an aircraft from reaching it. Open land sites should be relatively level and free of objects such as structures, overhead lines, and large trees and poles that can send the plane out of control at the last moment. Parking lots or recreation areas, while not ideal, may be considered as acceptable in urbanized settings.

11 When a parcel is partially in one or more airport safety zones, apply the land use compatibility criteria and development standards designated for each zone only to that portion of the property within each designated zone.

12 OSZ-A and OSZ-B and TPZ-A and TPZ-B as shown on CALUP Figure 8D and C4. TPZ-A includes all TPZ areas within 3,000 feet of a runway or outside of an urban service area; TPZ-B includes all TPZ areas beyond 3,000 feet from runway and within an urban service area.