

2.14. Wildfire Hazards

This section addresses potential wildfire hazards impacts that may result from construction and/or operation of the proposed Safari Highlands Ranch (SHR) project. The following discussion addresses existing wildfire hazard conditions of the project site and surroundings, considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation, as applicable.

The analysis in this section is largely based on the Fire Protection Plan (FPP), Safari Highlands Ranch, prepared by Dudek (2017) and peer-reviewed by Anchor Point and Michael Baker International. The report is included in its entirety in **Appendix 2.14**.

The table below summarizes the wildfire hazards impacts detailed in **Section 2.14.4**.

Summary of Wildfire Hazards Impacts

Threshold Number	Issue	Determination	Mitigation Measures	Impact After Mitigation
1	Exposure to Wildland Fire Risk	Less than Significant Impact	None required	Less than Significant Impact
2	Emergency Response and Evacuation	Potentially Significant Impact	WF-1	Less than Significant Impact
3	Physical Impacts from Provision of New Fire Protection Facilities	Less than Significant Impact	None required	Less than Significant Impact

2.14.1. Existing Conditions

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is located in proximity to open space or “wildland” areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. Steep hillsides and varied topography within portions of the City also contribute to the risk of wildland fires. Fires that occur in wildland-urban interface areas may affect natural resources as well as life and property.

The California Department of Forestry and Fire Protection (Cal Fire) has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program (FRAP). These maps place areas of the state into different fire hazard severity zones (FHSZ) based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. As part of this mapping system, land where Cal Fire is responsible for wildland fire protection and generally located in unincorporated areas is classified as a State Responsibility Area (SRA). Where local fire protection agencies, such as the City of Escondido Fire Department (EFD), are responsible for wildfire protection, the

land is classified as a Local Responsibility Area (LRA). Cal Fire currently identifies the project site as an SRA. In addition to establishing local or state responsibility for wildfire protection in a specific area, Cal Fire designates areas as very high fire hazard severity (VHFHS) zones or non-VHFHS zones. The project site is designated as VHFHS by the State of California.

The project site is located within the service boundaries of the Cal Fire Valley Center Fire Protection District. The Escondido Fire Department (EFD) provides fire protection and emergency medical services to the City and, through a contractual arrangement established in 1984, the Rincon Del Diablo Fire Protection District. A staff of 93 full-time safety (including Chief Officers), 18 full-time non-safety, 10 full-time administration, 3 part-time administration, and 27 senior volunteer personnel provide such services to a population of approximately 153,614 in an area covering 50 square miles in North San Diego County, California.

The EFD currently operates 7 fire stations which house emergency response personnel and equipment. The EFD addresses fire emergencies (e.g., structural, vegetation, and automobile); medical aid emergencies (all chief complaints including vehicle accidents); special rescue emergencies (e.g., confined space rescue, trench rescue, low angle rescue, high angle rescue, and water rescue); hazardous materials incidents (including explosive devices and weapons of mass destruction); and mass disaster incidents (e.g., earthquakes, flooding, and wind). **Table 2.14-1** summarizes the EFD's fire and emergency medical delivery system.

Table 2.14-1. Escondido Fire Department Responding Stations Summary

Fire Station	Address (all in Escondido)	Apparatus	Staffing (Total/Station)	Maximum Travel Distance*	Travel Time**
1	310 North Quince	Paramedic Engine Truck Company Brush Engine 2 Ambulances	27	7.3 miles	16 minutes
2	421 North Midway	Paramedic Engine Brush Engine Ambulance	9	6.2 miles	13 minutes
3	1808 Nutmeg Street	Paramedic Engine Brush Engine	9	9.3 miles	17 minutes
4	3301 Bear Valley Parkway	Paramedic Engine Brush Engine	9	6.1 miles	10 minutes
5	2319 Felicita Road	Paramedic Engine Brush Engine Ambulance	15	6.9 miles	15 minutes
6	1735 Del Dios Road	Paramedic Engine	9	7.8 miles	14 minutes
7	1220 North Ash	Paramedic Engine Ambulance	9	7 miles	15 minutes

* Distance measured to project entry gate located on Safari Highlands Ranch Road at the southern edge of the property.

** Assumes travel to the primary project's northern boundary and speeds calculated with the Insurance Service Office (ISO) travel time formula: Time = 0.65+1.7 (Distance)

The City of Escondido's Quality of Life Standard is to respond to all priority Level One or emergency-type calls within 7 minutes and 30 seconds, a total of 90 percent of the time. In 2012, the EFD's response time for all stations was 6 minutes and 32 seconds for all urgent calls (Dudek 2017, page 50; **Appendix 2.14**).

The outbreak and spread of wildland fires within the project area is a potential danger, particularly during the hot, dry summer and fall months. The buildup of dry brush provides fuel to result in potentially larger, more intense wildland fires. Various factors contribute to the intensity and spread of wildland fires: humidity, wind speed and direction, vegetation type, the amount of vegetation (fuel), and topography. The topography, climate, and vegetation of much of the project area are conducive to the spread of wildland fires once started.

Particularly at risk are the houses and structures in the inner rural and rural zones surrounding the project area. The project site is surrounded by the communities of Rancho San Pasqual and Rancho Vistamonte, residences in nearby unincorporated County of San Diego areas, and the San Diego Zoo Safari Park. The area to the north of Highway 78 is also adjacent to open space or agricultural fields, both of which are susceptible to wildland fires.

Since 1910, numerous wildfire events in the direct vicinity of the project site have been recorded by Cal Fire (Dudek 2017, page 31; **Appendix 2.14**). These fires, occurring in 1910, 1911, 1912, 1913, 1914, 1919, 1927, 1938, 1943, 1945, 1946, 1949, 1950, 1951, 1952, 1955, 1956, 1962, 1965, 1967, 1970, 1972, 1974, 1975, 1978, 1979, 1980, 1981, 1984, 1985, 1987, 1988, 1989, 1991, 1993, 1995, 1997, 2003, 2004, 2007, and 2013, burned within 5 miles of the project site. The site was burned completely in the 1910s, 1950s, 1993 (Guejito Fire), and 2007 (Witch Fire) and was partially burned in the 1930s. This information excludes fires less than 10 acres. However, there have been multiple fires throughout inland North San Diego County of less than 10 acres. Rapid and overwhelming response to these fires has resulted in their containment before they could grow to the size that would include them in Cal Fire's database.

The project site and several undeveloped natural areas to the east and west of the site last burned approximately nine years ago. These natural landscapes, as with much of the open space in the region, in their present state, represent a potential threat to the many existing homes scattered along Cloverdale Road, the San Diego Zoo Safari Park to the south, and the small avocado ranches and semi-rural homes along the northern and northwestern side of the project and beyond, which are all at risk from a Santa Ana wind driven wildfire (Dudek 2017, page 31; **Appendix 2.14**). Since the time of the last fire, the site has recovered with the natural vegetation having generally grown back.

With the proposed annexation of the project site to the City of Escondido, the San Diego Local Agency Formation Commission (LAFCO) would be approving a detachment from CSA #135 (SD Regional Communications) to the City.

2.14.2. Regulatory Framework

Federal

There are no federal regulations that apply to the proposed project with regard to wildfire hazards.

State

California Department of Forestry and Fire Protection

Cal Fire protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. Cal Fire's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year (Cal Fire 2012).

The Office of the State Fire Marshal supports Cal Fire's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

State Fire Regulations

Fire regulations for California are established in Sections 13000 et seq. of the California Health and Services Code and include regulations for structural standards (similar to those identified in the California Building Code); fire protection and public notification systems; fire protection devices such as extinguishers and smoke alarms; standards for high-rise structures and childcare facilities; and fire suppression training. The State Fire Marshal is responsible for enforcement of these established regulations and building standards for all state-owned buildings, state-occupied buildings, and state institutions within California.

California Fire Plan

The Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection. By placing the emphasis on what needs to be done long before a fire starts, the Fire Plan looks to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health. The current plan was finalized in early 2010.

California Public Resources Code

Fire Hazard Severity Zones – Public Resources Code Sections 4201–4204

Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–89 direct Cal Fire to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as fire hazard severity zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires. The project site is not designated as a fire hazard severity zone within the Local Responsibility Area for Escondido (Cal Fire 2009). However, as stated above, Cal Fire identifies the project site as a State Responsibility Area and designates the property as a VHFHS zone.

California Fire Code

The 2016 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. The City of Escondido has adopted the California Fire Code as part of its building regulations (Municipal Code Chapter 11, Article 2, Division 1, Section 11-17) and implements these standards through its building permit process.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated very high fire hazard, or that are in a State Responsibility Area, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Local

San Diego County Multi-Jurisdictional Hazard Mitigation Plan

The purpose of the County's Multi-Jurisdictional Hazard Mitigation Plan (San Diego County 2010) is to identify the county's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards. The City of Escondido participates in the Multi-Jurisdictional Hazard Mitigation Plan. An important component of the plan is the Community Emergency Response Team, which educates community members about disaster preparedness and trains them in basic response skills, such as fire safety, light search and rescue, and disaster medical operations. The City of Escondido is one of 20 jurisdictions that support and participate in the team.

County of San Diego Consolidated Fire Code

The County of San Diego, in collaboration with local fire protection districts, created the first Consolidated Fire Code in 2001. The Consolidated Fire Code contains amendments to the California Fire Code. The purpose of consolidation of the County's and the local fire districts' adopted ordinances is to promote consistency in the interpretation and enforcement of the

code for the protection of public health and safety, which includes permit requirements for the installation, alteration, or repair of new and existing fire protection systems, and penalties for violations of the code. The code establishes the minimum requirements for access, water supply and distribution, construction type, fire protection systems, and vegetation management. Additionally, the Consolidated Fire Code regulates hazardous materials and includes associated measures to ensure that public health and safety are protected from incidents relating to hazardous substance releases.

County of San Diego Code of Regulatory Ordinances Sections 96.1.005 and 96.1.202, Removal of Fire Hazard

The San Diego County Fire Authority, in partnership with Cal Fire, the Bureau of Land Management (BLM), and the US Forest Service (USFS), is responsible for the enforcement of defensible space inspections. Inspectors are responsible for ensuring that adequate defensible space has been created and maintained around structures. If violations of the program requirements are noted, inspectors list the required corrective measures and provide a reasonable time frame in which to complete the task. If violations still exist upon re-inspection, the local fire inspector will forward a complaint to the County for further enforcement action.

City of Escondido Weed and Rubbish Abatement Program

Municipal Code Chapter 11, Article 2, Division 2 establishes the City's Weed and Rubbish Abatement Program. The purpose of this ordinance is to designate the responsibility of the owners of real property in the City of Escondido in the elimination of the public nuisance created by weeds, rubbish, and refuse on or around their property. Section 11-41 declares the following as a public nuisance or fire hazard: all weeds growing upon the streets, sidewalks, parking, and private property in Escondido; and all rubbish upon the streets, sidewalks, parking facilities, and private property in the city. The Chief of the Escondido Fire Department, or any agent thereof, is vested with the authority to determine if vegetation on private property results in a fire hazard and must be removed.

City of Escondido General Plan

The City's General Plan Community Protection Element outlines goals and policies to achieve community protection standards. Relevant goals and policies include:

GOAL 1: A prepared and responsive community in the event of disasters and emergencies.

Emergency Services Policy 1.1

Provide for emergency response during and after catastrophic events.

Emergency Services Policy 1.2

Maintain and upgrade the city's disaster response plans and continue to participate in appropriate Mutual Aid Agreements that enhance disaster preparedness and emergency response.

Emergency Services Policy 1.3

Conduct periodic emergency exercises to test and improve jurisdictional and inter-department coordination and response to emergencies brought about by catastrophes such as fire, flood, earthquakes, and hazardous spills.

Emergency Services Policy 1.4

Plan for the continued function of essential facilities such as hospitals, fire stations, and emergency command centers following a major disaster to facilitate post-disaster recovery.

Emergency Services Policy 1.6

Require minimum road and driveway widths and clearances around structures consistent with local and state requirements to ensure emergency access.

Emergency Services Policy 1.8

Regularly review and revise identified evacuation routes for the public's use in the event of an emergency to ensure adequacy.

Emergency Services Policy 1.9

Promote public awareness through the Community Emergency Response Team (CERT) of possible natural and man-made hazards and measures which can be taken to protect lives and property during and immediately after emergencies.

Emergency Services Policy 1.10

Maintain and periodically update a database documenting wildfire, flooding, and seismic hazard areas and risks as input for the city's Emergency Preparedness and Response programs. The database shall include debris management operations and landfill diversion requirements for the safe and responsible removal and disposal of debris after an emergency that maximizes recycling and minimizes materials disposed in landfills.

GOAL 2: Protection of life and property through adequate fire protection and emergency medical services.

Fire Protection Policy 2.1

Regularly review and maintain the Standards of Response Coverage and the Fire Department Strategic Plan to address staffing, facility needs, and service goals.

Fire Protection Policy 2.2

Provide Fire Department response times for no less than 90 percent of all emergency responses with engine companies by achieving the following service standard:

- Provide an initial response time of seven and one-half (7½) minutes for all structure fire and emergency Advanced Life Support (ALS) calls and a maximum response time of ten (10) minutes for supporting companies in urbanized areas of the city.

Fire Protection Policy 2.3

Provide a minimum total of seven (7) fire stations each sized and staffed with facilities, services and equipment to meet current and anticipated needs including, but not limited to, engine and truck units and crews and Advanced Life Support (ALS) staff prior to General Plan build out to the extent economically feasible.

Fire Protection Policy 2.4

Require new residential and non-residential development to be constructed consistent with the California Fire Code and the requirements set by the state.

Fire Protection Policy 2.5

Commit to the use of state-of-the-art equipment, technologies, and management techniques for fire prevention and suppression.

Fire Protection Policy 2.6

Require new development to contribute fees to maintain fire protection service levels without adversely affecting service levels for existing development.

Fire Protection Policy 2.7

Continue to include the Fire Department in the review of development proposals to ensure that projects adequately address safe design and on-site fire protection.

Fire Protection Policy 2.8

Consider provisions for adequate emergency access, driveway widths, turning radii, fire hydrant locations, and Needed Fire Flow requirements in the review of all development applications to minimize fire hazards.

Fire Protection Policy 2.10

Establish and maintain an adequate fire flow in relation to structure, size, design, and requirements for construction and/or built-in fire protection.

Fire Protection Policy 2.11

Maintain and enhance an emergency vehicle traffic signal activation system to improve fire station service area coverage in conjunction with planned improvements to the city's major circulation system.

Fire Protection Policy 2.12

Maintain close coordination between planned roadway and other circulation improvements in the city to assure adequate levels of service and response times to all areas of the community.

Fire Protection Policy 2.13

Utilize Mutual Aid and Automatic Aid Agreements with other jurisdictions when appropriate to supplement fire station service area coverage and response times to all portions of the community.

Fire Protection Policy 2.14

Require new development in high wildfire risk areas to incorporate site design, maintenance practices, and fire-resistant landscaping to protect properties and reduce risks.

Fire Protection Policy 2.15

Continue to remove excessive/overgrown vegetation from city-owned properties, and require private property owners to remove excessive/overgrown vegetation to the satisfaction of the Fire Department, to prevent and minimize fire risks to surrounding properties.

Fire Protection Policy 2.16

Require fire protection plans for mitigation of potential grass and wildland fires within designated high fire hazard areas and other areas required by the Fire Department, that address the need for fire systems, water availability, secondary emergency access routes, construction requirements, and fire-resistant landscaping and appropriate defensible space around structures.

Fire Protection Policy 2.17

Maintain programs to minimize impacts on sensitive biological habitat and species when suppressing wildland fires, when feasible.

Fire Protection Policy 2.18

Educate the public about wildland fire prevention techniques to minimize the potential hazards of wildland fires.

2.14.3. Thresholds for Determination of Significance

City of Escondido Environmental Quality Regulations (Zoning Code Article 47) and Appendix G of the California Environmental Quality Act (CEQA) Guidelines as amended contain analysis guidelines related to the assessment of wildfire hazards impacts. A project would result in a significant impact if it would:

1. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
2. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
3. Result in substantial adverse physical impacts associated with the need and provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

2.14.4. Analysis of Project Effects and Determination of Significance

Threshold 1: Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Wildfires may potentially occur in wildland areas adjacent to the project site, or in on-site undeveloped open space or recreational areas. Under existing conditions, the project site includes numerous potential fire issues, including unmaintained, fire-prone vegetation. The project would include conversion of approximately 30 percent of the site to maintained urban development with designated landscaping and fuel modification areas. A fuel modification zone is a strip of land where combustible vegetation has been removed and/or modified and partially or totally replaced with more adequately spaced, drought-tolerant, fire-resistant plants in order to provide a reasonable level of protection to structures from wildland and vegetation fires.

The types of potential ignition sources that currently exist in the project area include vehicles, electrical transmission lines, machinery associated with agricultural operations, and residential neighborhoods, as well as arson. The existing physical condition poses as a challenge for fire protection to the surrounding communities because of heavy, flammable vegetation plant communities, lack of access due to topography and roads, and/or firefighter exposure. There are also no vegetation management actions based on prior fuel reduction projects.

The project would introduce new potential ignition sources in the form of building materials (e.g., wood, stucco), vegetation for landscaping, vehicles, and small machinery (e.g., for typical residential and landscape maintenance), but would also result in a large area separating ignition sources from native fuels as well as the conversion of existing ignitable fuels to maintained landscapes that are ignition-resistant. Therefore, the project would function as a fuel reduction project by helping create context-sensitive development and a new first-fuel break line of defensible space. In addition to current codes and standards which require defensible space to be provided around all structures located within a High Fire Hazard Area, the FPP prepared for the project identifies various policies and management actions for vegetation management. The vegetation management areas include private property, where vegetation management would occur in cooperation with the future landowners, as well as common areas. The FPP also outlines a suite of vegetation management methods to reduce wildland fuel hazards in and near the High Fire Hazard Area. This would ultimately reduce the potential flammability of the landscape. In addition, the project provides improved access throughout the site, which improves firefighters' access for wildland firefighting efforts.

In compliance with the County's Consolidated Fire Code (Section 96.1.4907.2) and the California Public Resources Code, the project proposes fuel modification zones (FMZ) ranging from a minimum of 100 feet to 200 feet, twice the required distance, or provides alternative measures to meet the intent of the FMZ requirement.

The FMZ would include two zones: Zone 1 and Zone 2. Lands within Zone 2 would require 50 percent thinning (removal of dead and dying, non-native, and fire-prone species), thereby slowing and reducing the intensity of an advancing fire as it approaches Zone 1. Zone 2 would be maintained on an annual basis to ensure that the reduced fuels remain at approximately 50

percent of typical. Zone 1 areas would require removal of all existing fuels during the project grading phase. These areas would be replanted with drought-tolerant species able to withstand ongoing irrigation to maintain high fuel moistures and maintenance to fire-safe conditions. Zone 1 areas would be maintained as reduced fuel zones to ensure that vegetation is not dense or continual. Plants in Zone 1 would be irrigated and be of higher moisture content and are intended to further reduce the potential for wildfire to advance or spread. Refer also to **Section 2.3, Biological Resources**, for discussion of potential project impacts on sensitive biological resources that may occur as the result of thinning and/or maintenance activities that would occur within the FMZs.

Additionally, the reduction of vegetation within the FMZs could cause a post-treatment, localized increase in soil erosion or potential downstream sedimentation. Therefore, Best Management Practices may be applied during fuel reduction activities that occur on on-site steep slopes. As appropriate, measures identified in the Fuel Modification Plan will be implemented to ensure that vegetation management activities do not result in an increased potential for erosion to occur. Refer also to **Section 2.8, Hydrology and Water Quality**, for discussion relative to maintaining storm water quality.

Acceptable plantings and required landscaping and maintenance are detailed in Section 7.4.1 of the FPP (Dudek 2017, page 62; **Appendix 2.14**). In addition, the developed portions of the site would be converted from native fuels to ignition-resistant managed and maintained landscapes and residences. These areas, combined with the perimeter fuel modification areas, would serve as a new fuel break that would further buffer communities to the south and east from advancing wildfires. In addition, the project applicant would remove invasive plants that have colonized the treated areas. Invasive plants are those that readily invade disturbed areas within native habitat areas, exhibit high rates of growth, and displace or otherwise adversely affect native vegetation due to their rapid and aggressive growth habits. The removal of such species would protect and possibly enhance native habitats in the High Fire Hazard Area. Native species are generally more adaptable to fire, and many are fire resistant.

Additionally, as identified in the FPP, all fuel modification area vegetation management shall occur as-needed for fire safety, compliance with the FMZ requirements detailed in the FPP, and as determined by the EFD. The project HOA or other established funding and management entity for each development area or neighborhood if separate, shall be responsible for all vegetation management throughout the respective project sites, in compliance with the requirements detailed herein and Fire Authority Having Jurisdiction requirements. The HOA(s) shall be responsible for ensuring long-term funding and ongoing compliance with all provisions of the FPP, including vegetation planting, fuel modification, vegetation management, and maintenance requirements throughout the project site (Dudek 2017, page 67; **Appendix 2.14**). Responsibility for fuel modification requirements will be identified in the Conditions of Approval adopted for the project.

The project would be subject to compliance with the 2016 California Building Code (or the most current version) and the 2016 edition of the California Fire Code (Part 9 of Title 24 of the California Code of Regulations), which would include ignition-resistant construction automatic interior fire sprinklers, a robust water delivery system, fire apparatus access, and defensible space, among others. All structures within a wildland-urban interface, as defined in

the San Diego County Building Code, must be built using ignition-resistive construction methods (San Diego County Code of Regulatory Ordinances Title 9, Division 2, Chapter 1). Project construction must meet all current Building Code (Chapter 7A) requirements for construction in wildland areas. Project conformance with ignition-resistant building requirements would greatly reduce the threat of wildfire, particularly with regard to flying embers entering a structure through attic ventilation or landing on a fuel and starting a new fire. Fire-resistive building features and/or landscape features that will be incorporated in the project are found in Section 7.2 of the FPP (Dudek 2017, page 59; **Appendix 2.14**).

Escondido is covered under the San Diego County Emergency Operations Plan (2014) and the San Diego County Operation Area Multi-Jurisdictional Local Hazard Mitigation Plan (2010). These plans provide guidance in effectively responding to any emergency, including wildfires. Implementation of these plans and policies in conjunction with compliance with the Fire Code would minimize the risk of loss due to wildfires.

The fire season typically runs from early May through October. Compounding the problem are Santa Ana wind conditions frequently experienced during the autumn months. The Escondido Fire Department has mandated conditions of approval for the SHR project (see Dudek 2017, Section 7.4, page 62; **Appendix 2.14**) to reduce the potential risk of wildfire at the project site. The project design would be required to conform to such measures to ensure that potential hazards relative to exposure of people or structures to significant risk of loss, injury, or death involving wildland fires are reduced to the extent feasible. The inclusion of such conditions in the project design will be verified by the City of Escondido Planning, Engineering, and Fire departments prior to issuance of a building permit.

As mentioned, the proposed project would improve fire protection to developed areas to the south/west by breaking up fuels and slowing fire spread. The project also includes provisions for an on-site fire station. The communities of Rancho San Pasqual and Rancho Vistamonte, residences in nearby unincorporated county areas, and the San Diego Zoo Safari Park would benefit from the project's conversion of wildland fuels and location upwind, which is anticipated to interrupt typical fire spread conditions. Additionally, the on-site fire station would provide a fire and medical emergency response capability that is not currently available in the area. The ability to respond quickly to emergencies proportionately raises the probability of successful outcomes.

The project would comply with applicable fire and building codes and would include a layered fire protection system designed to meet or exceed current codes and incorporate site-specific measures to achieve a development that is less susceptible to wildfire than surrounding landscapes and that would facilitate firefighter and medical aid response. Therefore, this impact is considered **less than significant**.

Threshold 2: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project includes a comprehensive circulation plan that provides access to the project site and facilitates vehicular circulation throughout the property in accordance with City standards. To minimize impediments to emergency access, all on-site roadways would be designed in

compliance with the County Consolidated Fire Code and EFD standards, as shown in Section 7.1 of the FPP (Dudek 2017, page 55; **Appendix 2.14**).

The San Diego County Sheriff's Department, California Highway Patrol, and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work closely within the Unified Incident Command System, with the County Office of Emergency Services, and with responding fire department personnel who assess fire behavior and spread, which ultimately influence evacuation decisions. As of this time, EFD, Cal Fire, City of San Diego Fire Department, San Diego County Fire Authority, County of San Diego Office of Emergency Services, San Diego County Sheriff's Department, and others have not adopted a comprehensive emergency evacuation plan applicable to this area. Section 9, Emergency Pre-Planning – Evacuation, of the Safari Highlands FPP (Dudek 2017, page 73; **Appendix 2.14**) is consistent with County evacuation planning requirements and can be integrated into a regional evacuation plan if area officials and emergency management stakeholders prepare and adopt one in the future. Refer also to **Figure 2.14-1**, which illustrates the proposed evacuation routes from the project site.

All evacuations in the County follow pre-planned procedures to determine the best plan for the type of emergency. The designated County emergency evacuation and law enforcement coordinator is the sheriff. The evacuation coordinator is assisted by other law enforcement and support agencies in emergency events. Law enforcement agencies, highway/street departments, and public and private transportation providers would conduct evacuation operations. Activities would include law enforcement traffic control, barricades, signal control, and intersection monitoring downstream of the evacuation area, all with the objective of avoiding or minimizing potential backups and evacuation delays.

Another factor in the evacuation process would be a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables subsequent traffic surges on major roadway to be minimized over a longer time frame and can be planned to result in traffic levels that flow more efficiently than when mass evacuations include large evacuation areas simultaneously. Law enforcement personnel and Office of Emergency Services staff would be responsible for ensuring that evacuations are phased appropriately, taking into consideration the vulnerability of communities when making decisions.

Evacuation Routes

Evacuation routes are generally identified by fire protection and law enforcement personnel, are determined based on the location and extent of the incident, and include as many predesignated transportation routes as possible. Primary evacuation routes within the Safari Highlands Ranch community would be accessed through a series of internal neighborhood roadways, which would intersect with the primary ingress/egress roads that intersect off-site primary and major evacuation routes. The community would be able to evacuate to the north (once off-site), south, east, and west depending on the nature and location of the emergency. Available evacuation routes for the residents and guests of Safari Highlands Ranch include the following:

- **Egress to the west and south via Rockwood Road** – Rockwood Road is the primary Safari Highlands Ranch access road that would interconnect with Cloverdale Road to the west. Cloverdale Road to the north is a dead end. Cloverdale Road to the south offers travel options to State Route (SR) 78 east or west, or continuing south to

- San Pasqual Road, which intersects Bear Valley Parkway to the south and west and leads into Escondido.
- **Egress to the south and west on Zoo Road** – This gated secondary access road would provide a route to Old Battlefield Road (gated road into the existing Eagle Crest Golf Course community) which connects into Rockwood Road and then to the south and west as described above. Zoo Road continues south past Old Battlefield Road to SR 78, for a distance of approximately 0.8 mile, from which point travel to the east or west is possible.
 - **Egress to the west via north emergency secondary egress route** – This gated emergency-only secondary access road, approximately 4 miles long, along Stonebridge Road would interconnect with Meadow Creek Lane to the west, which would then intersect Hidden Trails Road. Hidden Trails Road offers travel to Highway S6 (Bear Valley Parkway/Valley Center Road) or continued travel to the west into urban areas of Escondido. Travel to the west along this emergency secondary egress would be under the direction of law enforcement. The road will be improved to offer two 12-foot wide travel lanes along with turnouts. The City will require that water storage be provided along this road, and regular maintenance will be provided by the HOA along the roadway to ensure that fuel modification zones are properly maintained.
 - **Emergency Access Road Improvements** – Both emergency access roads would be improved to a minimum paved width of 24 feet. Other improvement standards including inclination, turning radii, paving specifications and turnouts would be subject to review and approval by the EFD.

Depending on the nature of the emergency requiring evacuation, it is anticipated that the majority of residents would exit the project site via Rockwood Road or Zoo Road. These are the most direct routes from the Village Core. The northern emergency access route may be used by the northerly neighborhoods, including E-1, E-2, R-4, and R-5, depending on the time available for evacuation and the need for additional movement via the northerly route. In a typical evacuation that allows several hours or more (as experienced in the 2003, 2007, and 2010 wildfires), all traffic may be directed to the south and out Rockwood Road and/or Zoo Road. If less time is available, fire and law enforcement officials may direct some neighborhoods, primarily E-1 and E-2, to use the northerly gated route.

Evacuation Analysis

Roadway capacity represents the maximum number of vehicles that can reasonably be accommodated on a road. Roadway capacity is typically measured in vehicles per hour and can fluctuate based on the number of available lanes, number of traffic signals, construction activity, accidents, and obstructions, as well as positive effects from traffic control measures.

Each roadway classification has a different capacity based on level of service, with freeways and highways having the highest capacities. Based on traffic engineer estimates (Linscott, Law & Greenspan 2017) and using peak numbers and a conservative estimate, roads that would be the most likely available to Safari Highlands Ranch residents and their hourly capacities are:

1. **Rockwood Road** – 2,600 vehicles per hour

2. ***Zoo Road*** – 1,900 vehicles per hour
3. ***Cloverdale Road*** – minimum 2,600 vehicles per hour
4. ***Northerly emergency evacuation route*** – 1,000 vehicles per hour

Using these averages, the time it will take for an area to evacuate can be determined by dividing the number of vehicles that need to evacuate by the total roadway capacity. Based on Safari Highland Ranch's estimated 550 single-family homes, and assuming 2.2 cars per household, during an evacuation, it is calculated that up to 1,210 vehicles could be evacuating in a major incident that required full evacuation of the community (Dudek, page 82; **Appendix 2.14** 2017). This is a conservative estimate. That number would likely be far lower, as many families would likely drive in one vehicle versus in multiple vehicles and depending on the time of day, many of these vehicles may already be off-site, such as if a fire occurred during typical work hours.

Neighboring communities that may be evacuating in a similar time frame, depending on the type of wildfire emergency, are the 580-unit Rancho San Pasqual community (accessed via Rockwood Road and Cloverdale Road) and the 80-unit Rancho Vistamonte community (accessed via Rockwood Road). Additionally, San Pasqual Union School located off Rockwood Road would affect typical evacuations.

Based on the number of units or daily use averages (school), the estimated time requirement for evacuation was calculated as follows:

Rancho San Pasqual: 580 units x 2.2 vehicles = 1,276 vehicles

Rancho Vistamonte: 80 units x 2.2 vehicles = 176 vehicles

San Pasqual Union School: 560 students and staff, 180 from outside the area = estimated 200 vehicles (others are already accounted for in community estimates)

Based on the combined vehicle estimates for existing communities and land uses neighboring the Safari Highlands Ranch project during an evacuation, it is calculated that up to 1,652 vehicles in addition to the 1,210 vehicles from Safari Highlands Ranch (total of 2,862 vehicles) could be evacuating in a similar time frame during a major incident that required full evacuation of the area, although, for reasons previously stated, this is a conservative estimate.

Based on the internal and external roadway capacities and using the lowest capacity roadway (bottleneck) as the determining factor, and discounting the capacity for the possibility that traffic would move slower during some evacuations, it is estimated that between 1 to 2 hours may be necessary for a complete evacuation of Safari Highlands Ranch. Evacuation of the neighboring communities and school is estimated to require approximately the same time frame. When occurring simultaneously, it is estimated that an additional hour may be necessary for evacuation of all communities (3 hours total).

As detailed in Section 5.2 of the FPP (Dudek 2017, beginning on page 32; **Appendix 2.14**), two main scenarios were modeled to determine the potential behavior of a wildland fire that could occur in the project vicinity: (1) a potential Santa Ana wind-driven fire approaching from

the east-northeast (“peak weather condition”); and (2) a potential fire approaching from the west-southwest during typical onshore weather patterns (“summer weather condition”).

For the first scenario, the arrival time to the project boundary is estimated to be approximately 4 hours from the modeled ignition locations near the intersection of State Routes 76 and 79. For the second scenario, the estimated arrival time to the project boundary would be approximately 40 minutes from the nearest ignition location (end of Wild Oak Lane), while fires originating along San Pasqual Road and Cloverdale Road were estimated to take 3 to 5 hours to reach the project boundary, as advancement of the fire would be slowed by existing development along Rockwood and Harwood roads.

Therefore, while under the most common scenario of a Santa Ana wind-driven fire approaching from the open lands to the east-northeast, there would be adequate time for a full evacuation of the project site and surrounding communities (4 hours for fire to reach Safari Highlands Ranch site and 3 hours maximum evacuation of all communities), other scenarios could result in inadequate evacuation times. Perhaps the “worst-case” scenario is a wildfire that encroaches upon Safari Highlands Ranch and neighboring communities in a short time frame, with Rockwood Road becoming the only viable exit for Safari Highlands Ranch residents due to blockages or hazards on the alternate egresses. In this scenario, law enforcement would have the option to conduct a phased evacuation of Safari Highlands Ranch residents, relocate residents within the project, or even instruct all residents to take temporary refuge in their homes or designated facilities within the Village Core.

While Safari Highlands Ranch is not officially designated a shelter-in-place community, the structures would be ignition-resistant, defensible, and designed to require minimal resources for protection, thereby enabling contingency options that may not be available to the neighboring communities. These project design features would enable law enforcement (Escondido Police Department or County Sheriff) to effectively manage the outflow of Safari Highlands Ranch residents’ vehicles onto Rockwood Road, such that existing evacuation times for the neighboring Rancho Vistamonte and Rancho San Pasqual communities are not adversely affected. Accordingly, impacts would be **less than significant**.

Emergency Response

The EFD documented 14,536 total emergency calls in 2015. The project’s estimated 1,760 residents (assumes an average of 3.2 occupants per residence for this type of community) would generate roughly 182 calls per year (or 0.5 calls per day), most of which are expected to be medical-related calls (approximately 80.4 percent of total emergency incidents). Service level requirements are not expected to be significantly impacted with the increase of 182 calls per year. The actual number of calls would likely be based on the EFD’s per capita volume (i.e., the average number of calls per Escondido citizen per year).

Performance objectives for fire protection services are identified in Quality of Life Standard 3 of the General Plan Community Protection Element, which states that in urbanized areas of the city, an initial response time of 7.5 minutes for all structure fire and emergency Advanced Life Support (ALS) calls and a maximum response time of 10 minutes for supporting companies shall be maintained. Response to the project site from the closest existing EFD fire stations would not achieve the response time standard of 7.5 minutes for the first fire truck to

arrive at the site. Station 4 response is calculated at roughly 10 minutes to the SHR community's main entrance. The full effective firefighting force is estimated to arrive within 16 minutes. Therefore, the project does not comply with the city's response time standard (Dudek 2017, page 50; **Appendix 2.14**).

Because of the project's location, a new fire station would be required in order to meet response time goals. The primary response (first in) would be provided by the proposed on-site fire station. This station may be a co-located station including the EFD and the City of San Diego Fire Department. The fire station would also improve emergency response for fire and medical emergencies in the area, thereby benefitting existing residents.

The developer is proposing to build and dedicate to the City of Escondido a fire station that would be located at the southern tip of the project boundary, near the main entrance of the site off Safari Highlands Ranch Road (refer to **Chapter 1.0, Project Description**). The new station would be approximately 6,000 to 7,000 square feet with three bays for apparatus and five dorm rooms for staff. The station would be staffed 24/7 at the discretion of the Fire Chief. The station would likely have one paramedic engine, one brush engine, and one ambulance, also at the discretion of the Fire Chief. Travel time from the new station to the most remote (distant) lot within the project boundaries is estimated to be 5.8 minutes. This time frame would allow under 2 minutes for dispatch and turnout and is considered to meet the 7.5-minute EFD response goal (Dudek 2017, page 50; **Appendix 2.14**).

As of this time, there is no mechanism in place to fund personnel, maintenance, and operational costs. These costs would be subject to further negotiations between the City of Escondido and any other funding source it may identify, such as shared responsibility with other fire districts or municipalities that may also benefit from the fire station's location.

Additional resources would be available from EFD Stations 2 and 4, which are not considered to be busy fire stations, having 1,034 and 2,676 engine company calls during 2015, or roughly 2.8 and 7.3 calls per day, respectively. The addition of 182 calls per year (0.5 calls per day) to both stations is considered substantial, but Stations 2 or 4 have available capacity to respond to the additional calls, as analyzed in Section 6.3 of the FPP. The anticipated 3.3 or 7.8 calls per day would be below the number considered a busy station. For perspective, urban fire stations that respond to 5 calls per day are considered average and 10 calls per day would be considered a busy station, while a suburban/rural station that responds to roughly 6 calls per day can be considered busy (Dudek 2017, page 53; **Appendix 2.14**).

The new on-site fire station would be adequate to respond to project-generated calls and would have significant capacity to respond to other calls from outside of Safari Highlands Ranch in a time frame that would represent a substantial improvement as compared to existing service. However, without assurances that the fire station is adequately staffed, equipped, and maintained, the project would have the potential to physically interfere with an adopted emergency response plan, and a **potentially significant** impact would occur. Implementation of mitigation measure **MM WF-1** would reduce the potential impact to a **less than significant** level.

Resident Awareness and Education Program

The Safari Highlands Ranch community will be registered with Reverse 911, Alert San Diego, and the local Escondido Community Notification System. Notification to SHR residents will be provided as needed in the event of an emergency through standard operating procedures implemented with these programs. In addition, the community homeowners association (HOA) would organize annual evacuation public outreach activities as well as maintain a fire-safe page on the community's web page, including key sections of the Safari Highlands Ranch FPP (e.g., Section 9.0 of the FPP (Dudek 2017; [Appendix 2.14](#)), which discusses proposed evacuation procedures), and links to important citizen preparedness information. Evacuation procedures would be regularly updated, as appropriate, with lessons learned from actual evacuation events, as they were following the 2003, 2007, and 2010 San Diego County wildfires.

As discussed in Section 9.0 of the FPP (Dudek 2017, page 73; [Appendix 2.14](#)), the proposed evacuation plan for the project would require implementation of a program known as "Ready, Set, Go." The focus of the program is on the public's awareness and preparedness, especially for those living in the wildland-urban interface areas. The program is designed to incorporate the local fire protection agency as part of the training and education process in order to ensure that the information is disseminated to those subject to the impact from a wildfire.

For the reasons above, it is not anticipated that the project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts in this regard would be **less than significant**.

Mitigation Measures

MM WF-1 The project applicant, homeowners association (HOA), or property owners shall be required to pay fair-share costs for the staffing, equipment, and maintenance of the proposed fire station, for the life of the project. Payment mechanisms (e.g., HOA assessment, property tax assessment, or similar) and the funding amount for the fire station shall be determined by the City of Escondido, the Cal Fire Valley Center Fire Protection District, and any other applicable agencies and shall be memorialized in a Fire Service Agreement to be completed prior to map recordation.

Timing/Implementation: Prior to map recordation

Enforcement/Monitoring: City of Escondido Planning Division; Cal Fire Valley Center Fire Protection District

Level of Significance After Mitigation

The project would introduce 550 new residential units that would increase demand for area fire protection services. Such additional demand may potentially affect emergency response times, thereby impairing implementation of or physically interfering with an adopted emergency response plan.

With project implementation, access for emergency fire protection service vehicles would be improved by the proposed extension of two roadways providing new site access points. These roadway extensions would result in improved emergency response accommodation. The new emergency access roads would be provided at the northwestern and southern property boundaries. The northwestern road would connect to Stonebridge Road in the Hidden Hills Trails development. The southern road would connect to the gated emergency access on Zoo Road with access to Highway 76. Both roads would be upgraded to meet the Escondido Fire and City Engineering Departments' requirements. Additional construction permits would also need to be obtained from San Diego County and the City of San Diego. Such improvements would effectively provide new and improved access out of the Rancho San Pasqual and Rancho Vistamonte communities, residences in nearby unincorporated County of San Diego, and the San Diego Zoo Safari Park in the event of an emergency.

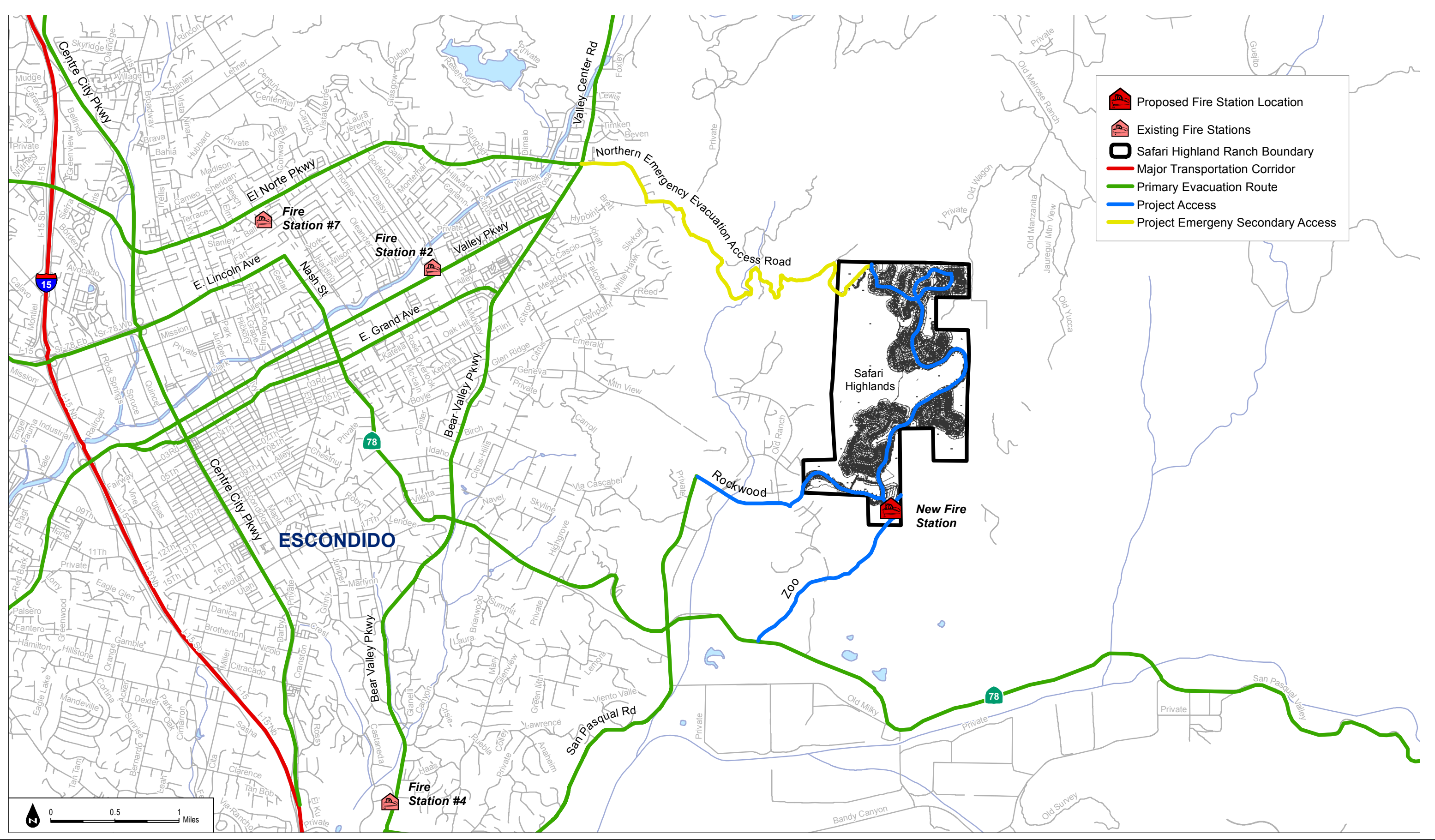
In addition, to ensure that the project does not adversely affect the provision of area fire protection services over the long term, mitigation is proposed to require the project applicant, HOA, or property owners, to make fair-share payment for ongoing operation and maintenance costs resulting with the new fire station (mitigation measure **MM WF-1**). The project's appropriate portion would be determined by the City based upon a fair-share formula. Given compliance with all proposed state, City of Escondido, and County of San Diego requirements related to land management within a Very High Fire Hazard Severity Zone, including the preparation of a Fuel Modification Plan, the project would not diminish the staffing or existing response times of existing fire stations in Escondido, nor would it create a special fire protection requirement on the site that would result in a decline in existing services levels in the Valley. Funding for maintenance and operation of the proposed fire station for the life of the project would ensure response times are adequate, and resulting impacts would therefore be **less than significant**.

Threshold 3: Would the project result in substantial adverse physical impacts associated with the need and provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection?

Refer to Threshold 2 above for a discussion of emergency response times. There are no direct or indirect impacts on the environment resulting with physical construction of the fire station or the provision of emergency ingress/egress that have not been addressed elsewhere in this EIR. Construction of the west emergency access road and the fire station would have the potential to result in impacts related to construction air quality, noise, cultural resources, biological resources, and other resource areas. These impacts are evaluated within the context of the entire project in **Sections 2.1** through **2.13** of this EIR. Thus, for purposes of this section, and so as not to be duplicative of others, physical impacts related to the provision or alteration of fire protection facilities are considered **less than significant**.

2.14.5. Sources Cited

- Cal Fire (California Department of Forestry and Fire Protection). 2009. Very High Fire Hazard Severity Zones in LRA [Escondido]. Accessed December 13, 2016. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/san_diego/Escondido.pdf.
- . 2012. About Us. Accessed December 13, 2016. <http://calfire.ca.gov/about/about>.
- Dudek. 2017. *Fire Protection Plan, Safari Highlands Ranch*. Appendix 2.14
- Escondido, City of. 2012. *General Plan*. <https://www.escondido.org/general-plan.aspx>.
- Linscott, Law & Greenspan. 2017. *Traffic Impact Analysis, Safari Highlands Ranch, Escondido, California*. Appendix 2.12



THIS PAGE INTENTIONALLY LEFT BLANK