



Fire Protection Plan Entrada South and Valencia Commerce Center Project

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ASTM	American Society of Testing and Materials
CAL FIRE	California Department of Forestry and Fire Protection
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CFC	California Fire Code
CFPP	Construction Fire Protection Plan
County	County of Los Angeles
County Fire	Los Angeles County Fire Department
EIR	State-certified Environmental Impact Report
FMP	Fire Management Plan
FMZ	Fuel Modification Zone
FPP	Fire Protection Plan
FRAP	Fire and Resource Assessment Program
GHG	Greenhouse Gas
НОА	Homeowner's Association
LACBC	Los Angeles County Building Code
LASD	Los Angeles Sheriff Department
NFPA	National Fire Protection Association
OAERP	Operational Area Emergency Response Plan
OVOV Area Plan	Santa Clarita Valley Area Plan: One Valley One Vision
RMDP	Resource Management and Development Plan
SCE	Southern California Edison
SCP	Spineflower Conservation Plan
SFM	State Fire Marshall
SRA	State Responsibility Area
VCC	Valencia Commerce Center
VHFHSZ	Very High Fire Hazard Severity Zone
WFEP	Wildland Fire Evacuation Plan
WUI	wildland/urban interface

Executive Summary

This Fire Protection Plan (FPP) has been prepared for the Entrada South and Valencia Commerce Center (VCC) Project, which implements the development facilitated by the State-approved Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP) within the Entrada and VCC Planning Areas in the County of Los Angeles (County). The Project incorporates minor changes and refinements to the development of the Entrada and VCC Planning Areas, as compared to what was evaluated in the State-certified Environmental Impact Report (EIR) (SCH No. 2000011025; June 2017; hereafter referred to as the "State-certified EIR" or "2017 Approved Project"). As such, the Entrada South and VCC Project are referred to herein as the "Modified Project."

The Modified Project Site is located in an unincorporated portion of Santa Clarita Valley in northwestern Los Angeles County. The development proposed by the Modified Project within the Entrada Planning Area includes 1,574 dwelling units and 730,000 square feet of non-residential development, as compared to 1,725 dwelling units and 450,000 square feet of non-residential development for the 2017 Approved Project. The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of I-5 and north of Henry Mayo Drive and the Santa Clara River. The State-certified EIR analyzed the environmental implications of 3.4 million square feet of industrial/commercial space on approximately 164 acres, approximately 144 acres of open space, and about 13.7 acres of public facilities. No changes to the proposed 3.4 million square feet of industrial/business park space within the VCC Planning Area are proposed as part of the Modified Project.

The Entrada and VCC planning areas are located with State Responsibility Areas designated as Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2007) (Figure 2 Fire Hazard Severity Zones). The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety. The State-certified EIR determined that the Project would have a less than significant impact on adopted emergency response plans or emergency evacuation plans based on the location of fire states, a system of improved roads, and fire flows for the Project. The State-certified EIR also considered whether the Project would result in significant impacts from wildfire and found that while the Project provided sufficient access, water supply, fuel management, wildfire buffers and home sitting, the potential for a significant wildland fire hazard would still exist and require mitigation. However, with regulatory compliance and incorporation of mitigation measures, the State-certified EIR determined the Project would have a less than significant impact.

This FPP provides a comprehensive evaluation of the wildfire risks associated with the Modified Project and measures employed by the Modified Project to reduce such risks. The FPP assesses reducing fire risk for the Project, preventing off-site ignitions, and minimizing the demand for fire protection services associated with the Modified Project. To that end, the fire protection detailed in this FPP employs a systematic, project-wide approach that includes redundant layering of measures, including pre-planning, fire prevention, fire protection, passive and active suppression, and related measures proven to reduce fire risk and prevent Project-related ignitions. The fire protection system planned for the Modified Project has proven, through real-life wildfire encroachment examples throughout Southern California, to reduce the fire risk associated with this type of hardened, ignition resistant, and fire aware residential community and commercial development.



The FPP addresses the following overall topics:

- Environmental Setting: Existing Conditions and Fire History. The FPP summarizes the existing environmental setting, climatic and topographic conditions, and the history of fire patterns at the site.
- Regulatory Compliance and Mitigation Measures Applicable to the Modified Project The FPP details the extensive regulatory requirements that are mandatory upon the Modified Project based on compliance with the 2020 Los Angeles County Fire Code (Title 32) and the 2022 California Fire and Building Codes, as well as the fire protection-related adopted codes in effect at the time of building construction. Additionally, the Modified project is consistent with the LACoFD 2022 Strategic Fire Plan and the County of Los Angeles General Plan._The County of Los Angeles General Plan provides the policy framework and guides development decisions in unincorporated Los Angeles County. The Land Use Element designates the proposed general distribution and general location and extent of uses while also providing the "blue print" for how land will be used to accommodate growth and change throughout the unincorporated areas of the County. The Safety Element of the General Plan provides an overview of fire hazards in the County, including wildland fires, flooding, and mud and debris flows.

Accordingly, the FPP evaluates regulatory requirements and mitigation to reduce such risk to less than significant levels by employing risk-reduction measures related to fuel modification, building design and construction, site layout, water supply, evacuation, and other pertinent criteria for fire protection. Further, the FPP recommends additional mitigation measures to further reduce wildfire risks. Applicable regulatory requirements include but are not limited to:

- State-of-the-art, ignition-resistant construction standards for all new residential, non-residential, and public facility buildings meeting Chapter 7A of the California Building Code (CBC), Title 26 of the County of Los Angeles Building Code (LACBC), and the Los Angeles County Fire Department (County Fire) requirements. These standards require, among many other measures, fire-resistant roofing to resist ignition from embers or building-to-building fires, vent covering and opening limitations to avoid ember intrusion, noncombustible or ignition-resistant exterior walls, ignition-resistant eaves, and porch ceilings, insulated windows and exterior doors, fire-resistant exterior decks and walkways, and ignition-resistant under-flooring and appendages. These standards have proven to substantially reduce the risk of buildings catching fire or spreading fires during a wildfire event.
- FMZs of 100- to 200- horizontal feet, depending on County Fire direction and geographic constraints around the perimeter of the Modified Project to provide defensible space to protect against encroaching fires and minimize the risk of fires from the project moving offsite. The fuel modification zones are based on County Fire requirements and confirmed with site-specific modeling. The zones will be implemented by knowledgeable professionals, inspected by third-party inspectors, and maintained in perpetuity by the HOA.
- Ongoing, funded maintenance, inspections, and enforcement of fuel modification zones and other fire
 protection features by the HOA or similar organization funded by an assessment or tax on parcels within
 the Modified Project.
- Existing and planned firefighting capabilities to ensure a response to fire and medical emergencies.
- In all structures, additional fire protection systems, including internal fire sprinkler systems.
- Fire-resistant landscaping requirements.
- Multiple access routes for fire apparatus and emergency vehicles.
- Multiple evacuation routes during a wildfire event.



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- Water capacity, delivery, and availability.
- Ongoing resident fire safety education and evacuation planning.
- "Worst Case" Wildfire Risk Modeling to Predict Flame Lengths During Extreme Events and Benefits of Regulatory Compliance and Mitigation Measures – The FPP completes detailed modeling of "worst-case" fire conditions to determine flame lengths that may impact the site from worst-case scenarios, under both pre-development and post-development conditions (with regulatory compliance and mitigation implemented).
- County Fire Emergency Response Times The FPP assesses the impacts of the Modified Project on County Fire's response times based on existing and planned fire stations.
- Impact Analysis Based on CEQA Significance Criteria The FPP evaluates whether the Modified Project would result in a significant environmental impact under CEQA, including impacts related to wildfire encroaching onto the site, the potential for the Modified Project to exacerbate fire risks by increasing ignition sources, and evacuation planning.

The Modified Project site has long been designated by the Los Angeles County General Plan (through the One Valley One Vision Area Plan) and Zoning Ordinance for residential and commercial development consistent with the proposed land uses for the Modified Project. Further, the Modified Project is largely surrounded by existing development, roads, and infrastructure. The Entrada planning area is bounded by I-5 to the east, Magic Mountain to the north, the Mission Village development (fully graded and under development) to the west, and the existing Westridge community to the south. The Valencia planning area is bounded by I-5 to the east, existing business park development to the north, SR-126 to the south, and the Chiquita Canyon and other developments to the west.

Nevertheless, the Modified Project site is located with the VHFHSZ and is currently undeveloped; therefore, the potential exists for wildfires to encroach on the site, as demonstrated by the history of wildfires in the area. Based on an analysis of fire history data, specifically, the average interval between wildfires within 5 miles of the Modified Project Site's boundaries was calculated to be one year with intervals ranging between 0 (multiple fires in the same year) and 2 years.

Site-specific modeling was completed for this FPP by using the BehavePlus software in accordance with standard industry practice for evaluating fire behavior variables and objectively predicting flame lengths, fire intensity, and fire spread rates under a "worst-case" wildfire event (e.g., a wildfire during a strong wind Santa Ana event). The modeling evaluates both existing conditions and post-development conditions with fuel modification zones in place (assuming a 100- to 200-foot fuel modification zone in accordance with applicable standards). The modeling demonstrates the fuel modification zone's reduced flame length and intensity.

Entrada Planning Area: The 46.0-foot (Coastal scrub fuel bed) and 39.9-foot (grass fuel bed) tall flames predicted during pre-development extreme weather conditions are reduced to less than 10.6 feet tall at the outer edges and less than 3.0 feet within the planned development (i.e., within irrigated "Zone A" of the fuel modification zone). Fuel model assignments for all other areas remained the same as those classified for the existing condition.

VCC Planning Area: The 46.0-foot tall flames predicted during pre-treatment modeling for the VCC site during extreme weather conditions are reduced to 10.6 feet tall at the outer edges of the FMZ and 3.0 feet (i.e., within irrigated "Zone A" of the fuel modification zone). During onshore weather conditions, a fire approaching from the west would be reduced from 14.8-foot tall flames to less than 2.3 feet tall in both the irrigated and thinning zones with much lower fire intensity due to the higher live and dead fuel moisture contents.



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Based on the predicted flame lengths and intensities following implementation of the fuel modification zones, encroaching wildfires would not present a significant risk of directly intruding into the Modified Project even during extreme events (e.g., strong Santa Ana winds). Even if windblown embers were to fly over the fuel modification zones, the ignition-resistant buildings and fire-resistant landscaping would minimize the likelihood of any fires starting onsite, and even if isolated fires occurred, they would be unlikely to spread quickly or be of high intensity given the limited fuel sources. As described above, new communities with buildings built to the latest fire code standards have proven extremely resistant to burning even during extreme fire events.

The Modified Project is unlikely to exacerbate fire risks to surrounding areas. The ignition-resistant buildings and fire-resistant landscaping are unlikely to initiate a fire that would spread to surrounding areas, particularly because the fuel modification zones would limit the ability of any fire to move offsite. Because onsite fires are unlikely to occur and, even if so, would likely be low-intensity fires due to lack of fuel sources, the Modified Project is unlikely to produce embers that would fly across the fuel modification zones to surrounding areas.

County Fire has adequate existing and planned fire stations and apparatus in the near vicinity to provide fire services and emergency response for the Modified Project. Based on calculated increases in calls for an emergency response associated with the Modified Project, the estimated County Fire response times would be consistent with County Fire's goals for suburban uses.

The Modified Project is consistent with the EIR for One Valley One Vision (OVOV), the Santa Clarita Area Plan. As described in Traffic Analysis of the EIR the Regional Traffic Analysis analyzed the traffic impacts related to the built-out region. The Modified Project would not conflict with the regional traffic analysis in the OVOV EIR which determined the built-out region would not significantly impact vertical roadways or intersections. The Modified Project is also consistent with the policies identified in OVOV and includes a reduced population and reduced vehicle numbers from the previously approved project. OVOV also includes a number of evacuation and emergency access policies with which the Modified Project is consistent. As an additional Project Design Feature, the Modified Project also includes a project-specific evacuation plan under a separate cover and described in Section 7 of the FPP (Dudek 2022).

As detailed below, the FPP evaluates the Modified Project's potential to result in significant impacts based on the CEQA Appendix G questions. The FPP evaluates the Modified Project's potential to increase human-caused or related ignitions and considers the historical causes of wildfires in the area and Southern California as well as potential ignition sources presented by the type of proposed land uses. The FPP also considers whether these risks are addressed through the Modified Project's compliance with regulatory requirements and mitigation measures, including fuel modification zones, hardened homes, robust resident education, public outreach, and fire safety monitoring, amongst others described in detail herein. The modifications associated with the Modified Project do not result in any reduction of fire protection measures or fire resiliency. The Modified Project includes enhanced fire protection measures as compared to what was considered in the State-certified EIR wildfire analysis.

As detailed below, the FPP concludes that there are no new significant impacts associated with the Modified Project with the implementation of regulatory compliance measures and recommended measures. The FPP also concludes that the Modified Project does not result in a new significant impact related to increasing or exacerbating wildfire impacts on surrounding areas. Although the Modified Project is sufficiently mitigated by the identified regulatory compliance measures and mitigation measures, the FPP also determines that Newhall's historic and ongoing agricultural and grazing operations have the additional benefit of further reducing wildfire risks to the Modified Project and surrounding areas, thereby providing additional environmental benefits with respect to wildfire prevention.



1 Introduction

This Fire Protection Plan (FPP) was prepared for the Entrada South and Valencia Commerce Center (VCC) Project. The purpose of this FPP is to evaluate the potential impacts resulting from wildland fire hazards to and from the Modified Project and identify design features to adequately mitigate those risks to a level consistent with the County of Los Angeles (County) standards. Additionally, this FPP generates and memorializes the fire safety requirements of the fire authority having jurisdiction, which is the Los Angeles County Fire Department (County Fire). The FPP recommends protection features and measures to be incorporated into the Modified Project or made conditions of Project approval to ensure fire safety. Requirements, and recommendations detailed in this FPP are based on site-specific characteristics, applicable code requirements, and input from the applicant and County Fire. This FPP also evaluates potential CEQA-level environmental impacts from the Project on the local fire environment, habitats, and existing communities.

As part of the assessment, this FPP includes an evaluation of, among other site factors, the property location, topography, combustible vegetation (fuel types), climatic conditions, and the area's fire history. This FPP addresses water supply, access, structural ignitability, ignition-resistive building features, fire protection systems and equipment, potential impacts on existing emergency services, defensible space, and vegetation management. It also identifies and prioritizes areas for potentially hazardous fuel reduction treatments and recommends the types and methods of treatment to protect the community and essential infrastructure while minimizing the potential for off-site ignitions. This FPP also recommends measures that property owners should and the Homeowner's Association (HOA) will take to reduce the probability of structure and vegetation ignitions throughout the area.

The Entrada South and VCC Project are located within the boundaries of the County Fire in the unincorporated portion of the County. This FPP addresses County Fire's response capabilities and response travel time within the Project Area.

The following tasks were performed to complete this FPP:

- Gather site-specific climate, terrain, and fuel data.
- Process and analyze the data using the latest geographical information system (GIS) technology.
- Predict fire behavior using scientifically based fire behavior models, comparisons with actual wildfires in similar terrain and fuels, and experienced judgment.
- Analyze and guide the design of the proposed infrastructure.
- Analyze the existing emergency response capabilities.
- Assess the risk associated with the Project.
- Collect site photographs and map fuel conditions using 200-scale aerial images. Field observations were used to augment existing digital site data in generating the fire behavior models and formulating the recommendations presented in this FPP. Refer to Appendix A for site photographs of existing site conditions.
- Research and evaluate vegetation fire ignition sources.
- Evaluate nearby firefighting and emergency medical resources.

Prepare this FPP detailing how fire risk would be minimized through a system of fuel modification, structural ignition resistance enhancements, and fire protection delivery system upgrades.



1

1.1 Intent

The intent of this FPP is to provide fire protection planning guidance and requirements for reducing fire risk for the Project, preventing off-site ignitions, and minimizing the demand for fire protection services associated with the Project. To that end, the fire protection "system" detailed in this FPP includes redundant layering of measures, including pre-planning, fire prevention, fire protection, passive and active suppression, and related measures proven to reduce fire risk and prevent Project-related ignitions. The fire protection system planned for the Project has been proven, through real-life wildfire encroachment examples throughout Southern California, to reduce the fire risk associated with this type of hardened, ignition resistant, and fire aware residential community and commercial development.

1.2 Project Summary

1.2.1 Location

The Project Site is located in an unincorporated portion of Santa Clarita Valley in northwestern Los Angeles County as shown in Figure 1, Project Location. The Entrada and VCC planning areas are within with State Responsibility Areas designated as VHFHSZ by the CAL FIRE as seen in Figure 2, Fire Hazard Severity Zones (FRAP 2007).

The Project's region is located in a broad ecological and biogeographic transition zone for the coastal and mountain ecoregions. This alluvial Santa Clara River Valley also provides access via the Santa Clara River to the edges of the Mojave Desert and the foothills of the San Gabriel Mountains. While much of the region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steep-walled canyons, is south of the Modified Project Site.

The Project Site Is within the planning boundary of the State-approved Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP), which was the subject of a State-certified Environmental Impact Report (EIR) (SCH No. 2000011025; hereafter referred to as the State-certified EIR). In the State-certified EIR for the RMDP/SCP, the Project Site is identified as the "Entrada Planning Area" and the "VCC Planning Area." The Entrada Planning Area is also sometimes referred to as Entrada South.

Entrada Planning Area: The Entrada Planning Area consists of approximately 382 acres located west of Interstate 5 (I-5) and the City of Santa Clarita and south of the Santa Clara River and the Six Flags Magic Mountain theme park (Figure 1). The Entrada Planning Area is located in the U.S. Geological Survey (USGS) 7.5-minute Newhall quadrangle map, Township 4 North, Range 16 West, and generally in Sections 19, 20, and 30.

VCC Planning Area: The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of I-5 and north of Henry Mayo Drive (State Route-126) and the Santa Clara River (Figure 1). The VCC Planning Area is located in the U.S.G.S. 7.5-minute Newhall quadrangle map, Township 4 North, Range 17 West, and generally in Sections 11 and 12.



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1.2.2 General Plan and Zoning for Modified Project Site

The Modified Project site has long been designated for residential and commercial development consistent with the proposed land uses for the Modified Project.

Per the Santa Clarita Valley Area Plan: One Valley One Vision 2012 (OVOV Area Plan), the Modified Project is designated as follows: H5—Residential 5, south of Magic Mountain Parkway; CM—Major Commercial, north of Magic Mountain Parkway; OS-PR—Parks and Recreation, south of the Southern California Edison electric transmission lines; and IO—Industrial Office as shown in Figure 3a & 3b, Entrada South and Valencia Commerce Center OVOV Land Use Designations. The OVOV Area Plan is a component of the Los Angeles County General Plan intended to provide focused goals, policies, and maps to guide the regulation and development of unincorporated portions of the Santa Clarita Valley. Finalized in 2012, the OVOV Area Plan included extensive public input and resulted from a cooperative effort between the County and the City of Santa Clarita to create a unified plan for the buildout of the Santa Clarita Valley. The OVOV Area Plan was the subject of a Programmatic EIR (SCH No. 2008071119) (OVOV EIR), which included projections for the number of dwelling units, non-residential square footage, population, and employment in the OVOV Area Plan. The OVOV EIR analyzed potential environmental impacts associated with the buildout of the OVOV Area Plan based on the identified land use designations.

Zoning for the site includes the following: R-1—Single-Family Residence, south of Magic Mountain Parkway; C-3— General Commercial, north of Magic Mountain Parkway; C-R—Commercial Recreation, south of the Southern California Edison electric transmission lines; and M-1.5-DP—Restricted Heavy Manufacturing/Development Program as shown in Figure 4a & 4b, Entrada South and Valencia Commerce Center Zoning Designations.

1.2.3 Modified Project Description

1.2.3.1 Overview and Background

The Entrada South and VCC Modified Project implement the development facilitated by the approved RMDP/SCP within the Entrada and VCC Planning Areas. The California Department of Fish and Wildlife (CDFW) certified the State-certified EIR in June 2017, at which time it also approved the RMDP/SCP and related State permits. The County was a responsible agency for the RMDP/SCP and participated in the State-certified EIR process through the receipt and review of the Draft and Final EIRs as well as the Draft and Final Additional Environmental Analysis and the submittal of comments, which were addressed by CDFW.

The proposed Entrada South and VCC Modified Project reflect minor changes and refinements to the development of the Entrada and VCC Planning Areas, as compared to what was evaluated in the State-certified EIR. As such, the Entrada South and VCC Project are referred to herein as the "Modified Project." The Supplemental EIR that will be prepared for the Modified Project will facilitate consideration by the County and other responsible agencies of additional discretionary entitlements needed to develop the Entrada and VCC Planning Areas under the Modified Project.

As described below, the modifications associated with the Modified Project do not result in any reduction of fire protection measures or fire resiliency. The slight changes in land use mix between residential and commercial uses within the Entrada Planning Area do not materially affect the wildfire analysis. In fact, the Modified Project includes



enhanced fire protection measures as compared to what was considered in the State-certified EIR wildfire analysis, including, but not limited to the following:

- More stringent building and fire-resistance requirements for new construction as defined in Chapter 7A of the California Fire Code
- Enhanced fuel break and buffer zones around homes and businesses as required by the California Fire Code and County Fire standards
- Design features addressing potential ignitions sources from construction and addressing long term compliance and maintenance of fuel modification
- Customized education program and evacuation plan to raise wildfire risk awareness of potential project occupants and residents

1.2.3.2 Modified Project Description

Entrada Planning Area

The State-certified EIR for the 2017 Approved Project evaluated the environmental impacts of 1,725 dwelling units, 450,000 square feet of non-residential development, a public facilities area for a neighborhood park and a potential school site, private recreational amenities, a spineflower preserve, and trails and infrastructure within the Entrada Planning Area.

The proposed minor changes and refinements under the Modified Project, as compared to the 2017 Approved Project analyzed in the State-certified EIR, include:

Refinements to the Balance of Residential and Non-Residential Development. The Modified Project includes 1,574 dwelling units, 730,000 square feet of non-residential development, a public park and potential school site, a spineflower preserve, and trails and infrastructure within the Entrada Planning Area. As such, this analysis considers the environmental implications of reducing the number of residences by 151 units and increasing the amount of non-residential development by 280,000 square feet. These minor refinements do not substantially change the scope of the Entrada South land-use plan when comparing the Modified Project to the 2017 Approved Project. Non-residential development could include any allowable uses consistent with the C-3 zoning designation, including but not limited to commercial, office, retail, and hotel uses. If a school site is not ultimately needed in Entrada South, that area would become available for residential development provided the overall number of allowable units (1,574 dwelling units) is not exceeded. The Conceptual Land Use Plan for the Entrada Planning Area is shown in Figure 3a, Conceptual Land Use Plan—Entrada South.

Enhanced Environmental Protections. The Modified Project increases environmental protections for wetlands and related biological resources within the Entrada Planning Area. The Modified Project enhances and restores the majority of a drainage channel referred to as Unnamed Canyon 2. With the proposed design refinements, portions of Unnamed Canyon 2—from the natural drainages at the southern Entrada boundary to Magic Mountain Parkway—would be enhanced and restored as a natural, open, vegetated drainage channel with grade control structures that would retain the look and feel of a natural canyon, thus reducing permanent impacts to biological resources and jurisdictional waters and providing additional open space within the developed portions of the Modified Project Site. This environmentally beneficial modification would result in increased open space, restored drainage areas, and habitat for species as compared to that evaluated in the State-certified EIR.



VCC Planning Area

The State-certified EIR analyzed the environmental implications of 3.4 million square feet of industrial/commercial space on approximately 164 acres, approximately 144 acres of open space, and about 13.7 acres of public facilities. No changes to the proposed 3.4 million square feet of industrial/commercial space within the VCC Planning Area are proposed as part of the Modified Project.

The proposed minor changes and refinements under the Modified Project, as compared to the 2017 Approved Project analyzed in the State-certified EIR, include:

Enhanced Environmental Protections The proposed minor changes and refinements within the VCC Planning Area include additional environmental protections. More specifically, to provide increased environmental protections to wetlands and related biological resources within the VCC Planning Area, the Modified Project involves a reduction in permanent impacts to Hasley Creek and Castaic Creek (although such areas may be temporarily impacted during construction, as analyzed in the State-certified EIR, but would be restored and revegetated after construction based on the Modified Project design) which traverse the VCC Planning Area, including a reduction of permanent impacts to certain vegetation communities and jurisdictional stream habitat. This environmentally beneficial modification would result in increased open space, restored drainage areas, and habitat for species.

VCC was approved for development by Los Angeles County through the issuance of various entitlements and certification of an EIR (SCH No. 1987-123005) in 1991 (referred to herein as the County-certified VCC EIR), which is incorporated by reference. The County's existing entitlement allows approximately 12.6 million square feet of industrial/commercial space at build-out, of which approximately 9 million square feet have been constructed. The VCC Planning Area evaluated herein is comprised of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center. The VCC Planning Area will be developed with up to 3.4 million square feet of non-residential development under the Modified Project. Additional portions of the VCC also are undeveloped and, while not part of the Modified Project, may be built out as allowed by the County's 1991 approval of the VCC entitlements. The Conceptual Land Use Plan for the VCC Planning Area is shown in Figure 3b, Valencia Commerce Center Conceptual Land Use Plan.



SOURCE: ESRI 2019; Hunsaker 2019

1 Miles FIGURE 1 Project Location Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



SOURCE: County of Los Angeles/CAL FIRE 2023

3,000

Fire Hazard Severity Zones Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



SOURCE: FIVEPOINT 2021

DUDEK



Source: Los Angeles County DRP Land Use Policy -Community/Area Plan, 2021



FIGURE 3a Entrada South OVOV Land Use Designations

Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



SOURCE: FIVEPOINT 2021

DUDEK



Source: Los Angeles County DRP Land Use Policy -Community/Area Plan, 2021



FIGURE 3b Valencia Commerce Center OVOV Land Use Designations Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



SOURCE: FIVEPOINT 2021

DUDEK

FIGURE 4a Entrada South Zoning Designations Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



SOURCE: FIVEPOINT 2021

DUDEK





FIGURE 4b Valencia Commerce Center Zoning Designations Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

1.3 State-Certified EIR Analysis of Wildfire and Evacuation Impacts Associated with the 2017 Approved Project

In 2010, the California Department and Fish and Wildlife and the United States Army Corps of Engineers prepared a joint EIS/EIR to analyze the development of the Newhall Ranch Specific Plan area along with the Entrada South and VCC planning areas. The Project was first approved in December of 2010 however, in 2015 the California Supreme Court identified that additional environmental analysis was required. In June of 2017, the Project was re-approved and certified by the California Department of Fish and Wildlife. In the State-certified EIR, wildfire impacts were discussed in Section 4.17 Hazards, Hazardous Materials, and Public Safety. The existing conditions identified that at the time of the EIR, the area from SR-126 to the south of the Santa Clara River was a moderate fire hazard while the remainder of the site was classified as a high fire hazard, based on vegetative cover, water availability, access, and topography. Wildfire impact was analyzed under two criteria:

- Significance Criterion 4 Would the project impact the implementation of or interfere with an adopted emergency response plan or evacuation plan?
- Significance Criterion 6 Would the project expose people or structures to a significant risk of loss, injury, or death involving wildfires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Regarding Significance Criteria 4, the State-certified EIR analyzed whether the 2017 Approved would impact an adopted emergency response or evacuation plan. While the 2017 Approved Project would increase demand on emergency response, firefighting capabilities would be provided by existing and planned fire stations over buildout. The Project would also provide a system of improved roads meeting County standards. The State-certified EIR determined that the circulation system was found to serve the safety needs of the community based on the access design and compliance with applicable County safety standards to be met at the time of the building permit issuance. In addition, the 2017 Approved Project would comply with mitigation measure PH-7 requiring secondary access routes to ensure that potential impacts to public safety related to emergency access responsive services and emergency evacuation within the Entrada and VCC Planning areas were reduced to less than significant levels.¹ PH-7 applies to the Modified Project and is provided as follows: "All development of the Newhall Ranch Specific Plan site and the VCC and Entrada planning areas shall be in compliance with the provisions of the Los Angeles County Code, Title 21, Section 24.020 for secondary evacuation access."

Regarding Significance Criteria 4, the State-certified EIR found that impacts from wildland fires were significant but mitigable. The impact was analyzed based on how the development would contribute to or impact limited access, lack of adequate water supplies, type of vegetative cover, and topography. The Project would provide access that would be consistent with County Code and include provisions for secondary access for evacuation. Water supply for the Project would be provided for both domestic and non-domestic uses including supporting fire suppression activities. The Project would include water mains, fire hydrants, and fire flow per County standards and no significant water-related fire hazards would occur. Topographically, the Project area includes a steep canyon covered in combustible vegetation however development would only occur within the central and northern portion of the site where slopes are moderate. However, portions of the proposed development would

¹ Final State-certified EIR, p. 4.17-60.

be adjacent to heavy vegetative cover comprised of highly combustible plant communities, posing a potentially significant fire protection impact. As the development occurs the fire hazard associated with the natural vegetation would be replaced with irrigated and less combustible plants however, the potential for wildfire fire would still exist at the wildland-urban interface. This is based on the presence of brush, increased human activity, and the potential for fires due to accidental and arson-related causes. However, the Project would implement Mitigation Measure PH-14 requiring the development of a Wildfire Fuel Modification Plan to reduce the wildfire hazard in the interface zone. With adherence to regulatory compliance obligations and the implementation of Mitigation Measure PH-14, the State-Certified EIR found that the impact for Significance Criterion 6 was less than significant.² PH-14 applies to the Modified Project and is provided as follows:

At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMAs, a Wildfire Fuel Modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the Los Angeles County Fire Department. The Wildfire Fuel Modification plan shall depict a fuel modification zone, the size of which shall be consistent with the Los Angeles County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material, and weed and grass cutting shall take place as required by the fuel modification ordinance. The Wildfire Fuel Modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the Los Angeles County Fire Department requirements. The fuel modification zone will not extend onto any spineflower preserve.

The State-certified EIR also analyzed the potential for development of the Entrada and VCC Planning Areas to cause offsite impacts related to both emergency response and emergency evacuation plans and related to wildland fires. The State-certified EIR determined that the 2017 Approved Project would not result in significant off-site impacts related to these topics.³

² Final State-certified EIR, p. 4.17-60 4.17-61.

³ Final State-certified EIR, p. 4.17-62.
2 Existing Setting: Project Study Area Conditions, Risk Factors, and Fire History

2.1 Field Assessment

Following a review of available digital Study Area information, including topography, vegetation types, fire history, and the Project's development footprint, Dudek fire protection planners conducted a field assessment of the Study Area on December 18, 2019, and again during September and October 2021. Dudek's assessment was aided by Dudek's staff biologists who conducted numerous biological surveys specific to the Project Site since 2002 and again in 2019 (Dudek 2019a, 2019b).

Among the field tasks completed were the following:

- Vegetation estimates and mapping refinements
- Fuel load analysis
- Topographic features documentation
- Regional land uses, existing communities, potential vulnerabilities
- Photograph documentation
- Confirmation/verification of hazard assumptions
- Ingress/egress documentation

Study Area photographs were collected (Appendix A), and fuel conditions were mapped using aerial images. Field observations augmented existing Study Area data in generating the fire behavior models and formulating the requirements provided in this FPP.

2.2 Study Area Characteristics and Fire Environment

The following sections discuss the characteristics of the Study Area on a regional scale. Evaluating conditions at this macro-scale provides a better understanding of the regional fire environment, which represents the fuel bed for wildfires that may ignite in the vicinity of, and burn toward, the Modified Project's planned and maintained fire buffers, landscapes, and ignition-resistant structures. This area also presents the habitat and fuel load that is the focus of fire prevention efforts and features that are part of the Modified Project's design and ongoing maintenance planning efforts.

2.2.1 Climate

The Modified Project Site is situated at relatively low elevations within the Santa Clara River Valley. The climate of this region is influenced by both the arid continental climate to the east and the moister Mediterranean climate to the west; therefore, the region is described as having a hot-to-cold and semi-arid to sub-humid climate. As such,



temperatures are subject to much more variability on a daily and seasonal basis. Typically, the area has hot dry summers followed by cold wet winters. In the summer months and early fall daily, highs can range from 78°F to over 95°F. According to the Piru 2 ESE (East-South-East) weather station⁴ in Los Angeles County, the mean annual rainfall for the region is 17.2 inches of rain per year (WRCC 2019); however, some portions of the region remain in the rain shadow of the Santa Susana Mountains and receive considerably less rainfall than areas north of the Santa Clara River.

From a regional perspective, the fire risk in southern California can be divided into three distinct "seasons" (Nichols et al. 2011, Baltar et al 2014). The first season, the most active season and covering the summer months, extends from 25 May to 26 September. This is followed by an intense fall season characterized by fewer but larger fires. This season begins on 27 September and continues until 7 November. The remaining months, 8 November to 24 May cover the mostly dormant, winter season. Mensing et al. (1999) and Keeley and Zedler (2009) found that large fires in the region consistently occur at the end of wet periods and the beginning of droughts.

Prevailing winds on the Modified Project site are from the east-northeast and average 14 miles per hour. The winds are influenced by the Pacific Ocean which causes a diurnal wind pattern known as the land/sea breeze system. Winds in the summer season have higher average speeds than during the winter season due to greater pressure gradient forces. Typically, the highest fire danger in southern California coincides with Santa Ana winds. During recent major fires near the Modified Project under Santa Ana wind conditions, sustained wind speeds were recorded exceeding 19 mph with gusts over 50 mph (Los Angeles Times, 2019). The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis near the end of fire season during late summer and early fall. They are dry, warm winds that flow from the higher desert elevations in the east through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors. Localized wind patterns on the Modified Project Site are strongly affected by both regional and local topography. The Modified Project Site is occasionally subject to strong Santa Ana wind events.

2.2.1.1 Climate Change

A rapidly warming climate is expected to impact California and the Western U.S. from both direct and indirect effects. Since 2006, the State has monitored and created climate change assessments to assess the impacts and risks of climate change. Based on California's Fourth Climate Change Assessment, published in 2019, the current average annual maximum daily temperature is projected to increase between 5.6 and 8.8 degrees by 2100 (State of California, 2019a). The rising temperature is expected to result in increased heat waves in cities by 2050. The increased temperature and increased probability of heat waves that will impact electricity demand, especially in inland and Southern California. Climate change is also predicted to, directly and indirectly, increase the risk associated with public health resulting in earlier deaths and increased illnesses. Currently, there is not a strong consensus on how California will become wetter while the southern portion of California will become drier (State of California, 2019a). However, water supply from snowpack is projected to decline by at least 2/3 by 2100 due to less precipitation falling as snow; with water shortages occurring by 2050. Further, over 3,000 miles of highways are projected to be exposed to temporary flooding because of increased 100-year storm events (State of California, 2021).

⁴ Piru weather station is 709 feet above mean sea level and located at 34.42° North 118.79° West.

A major factor in climate change is greenhouse gas (GHG) emissions and wildfires can contribute to emissions as well. The California Air Quality Resource Board in 2020 completed a public draft assessment of the GHG and carbon impacts of wildfire and forest management activities (CARB, 2020a). The report is a result of SB 901 which required CARB to assess and report the GHG emissions associated with wildfire and forest management activities. Wildfire CO₂ emissions vary annually with annual emissions ranging from 1 million metric tons (MMT) of CO₂ in 2010 to 39 MMT of CO₂ in 2018 with an overall average CO₂ emission of 14 MMT from 2000-to 2019. Fires in forests and woodlands were the largest contributors to wildfire-caused emissions due to higher fuel loads than in areas dominated by shrubs and grasses. While in 2017, forest and shrublands had roughly equal areas of burned acres the fires in the forest created more than double the emissions. The 2020 fire season resulted in multiple large fires in forest areas and created record-high emissions with over 106 MMT of CO₂ (CARB, 2020b).

Because wildfires can contribute to climate change via GHG emissions and be affected by climate change, the Fourth Climate Assessment also examined how climate change is expected to impact wildfires across the State. Fire frequency and intensity are expected to be impacted by the rapidly changing climate; however, as wildfires are affected by multiple complex drivers the projections range from modest to large increases in wildfire regimes. The area burned by wildfire has been found to increase parallel to the increasing air temperatures. The average area burned may increase by 77% by 2100, if emissions continue to rise. The statewide maximum burn area is projected to rise by 178% and extreme wildfires are predicted to occur 50% more often by the end of the century. However, model projections regarding wildfire intensity, spread, and duration are limited. The changes to temperature, loss of snowpack, and earlier snowmelt are expected to result in dryer "dry" seasons and result in more susceptible forests. Wildfires are occurring at higher elevations and this trend is expected to be exacerbated by climate change. Late Santa Ana winds will continue to be most frequent in December and January. However, there is a lack of consensus on how Santa Ana wind-driven wildfires will change. Additional research is needed to better understand the effect of climate change on extreme wind events and wildfires (State of California, 2019a).

Wildfire simulations found that forested areas, especially the Sierra Nevada, are projected to have the greatest increases in burned areas under extreme weather (State of California, 2018). The burned area is likely to increase in conjunction with warming temperatures and has a stronger effect on montane forests in the northern two-thirds of the State. The increased burned areas were also found to be consistent with current experiences and trends already exhibited in the State and the western U.S. Impacts to tree mortality as a result of fine fuels encroaching on forest canopy areas were only expected to have a small increase from 1-7% in the near future and within the systems natural variability. It was also found that depending on vegetation type and fuel amount the impact from climate viability changed demonstrating great spatial diversity in wildfire response to climate change (State of California, 2018).

The Fourth Climate Assessment also prepared assessments based on regions to capture region-specific effects of climate change (State of California, 2019b). The Los Angeles Region includes all of Ventura, Los Angeles, and Orange Counties as well as the urbanized areas of San Bernardino and Riverside Counties. This region has a highly variable topography ranging from coastal plains to mountain ranges to desert areas. In the Los Angeles region, average maximum temperatures are projected to increase around 4-5 degrees by 2050 and 5-8 degrees by 2100. As a result, the number of extremely hot days is also expected to increase across the region. By the late century, the hottest day of the year is predicted to be up to 10° F hotter for most locations across the region. Precipitation is projected to only exhibit small changes in average precipitation amounts. However, extreme precipitation events, both wet and dry, are expected to increase. Areas are projected to experience a 25-30% rise in the wettest day of the year by the end of the century. As a result, the atmospheric river events are expected to see an increase in frequency and severity (State of California, 2019b).

Within southern California, Santa Ana winds are a unique climatic feature. These winds result in strong northeasterly downslope offshore winds that can be a catalyst for wildfire within the region. Currently, Santa Ana winds are most frequent in December and the strongest in January. These events have significant interannual variability and there have been no significant trends yet regarding a decline in their intensity, duration, and frequency. How climate change may impact future Santa Ana wind events is uncertain and inconclusive. Some studies have exhibited the wind events increasing while others have shown them to decrease with climate change.

Wildfires in the Modified Project area are influenced by the Mediterranean climate, Santa Ana winds, drought, type and spatial distribution of vegetation, topography, large WUI interfaces, fire suppression, and human activities within the Los Angeles region. Nearly 80% of all wildfires currently occur in the summer and fall with a quarto of those fires happening under Santa Ana wind conditions. However, there remains significant uncertainty over how climate change will affect fire frequency and intensity in the region. Some future projections indicate that wildfires in the Los Angeles area will increase in burned are by the mid-21st century with the burned area increasing 60% for Santa Ana-based fires and 75% for non-Santa Ana-based fires. However, other climate projections using different statistical models found the average area burned to be much lower and that the annual area burned by the mid-century to increase by over 2000 hectares. Further, similar yet slight lower increases in wildfire areas burned were also projected to occur by the late 21st century as continued warming could cause an overall fuel decline in the region. These discrepancies highlight that there while wildfires are projected to increase in the Los Angeles Region there is still a large uncertainty about how exactly climate change will affect fires in this region and to what degree will wildfire frequency change (State of California, 2019b).

The effect climate change will have on future fire regimes is not unilateral, especially in Southern California (Keeley & Syphard, 2016). Future fire regimes are not only changing in response to climate change but also in response to ignitions, with human ignitions complicating the role of climate change in driving wildfires. In Southern, California humans account for 95% of fires and have altered the timing of wildfires by increasing the probability of ignitions during Santa Ana wind events. Although there are no studies to date that link fire-hardened, master-planned communities with new ignitions. While research has indicated that climate change will affect montane forests lower elevation landscapes, like the Los Angeles Region are not strongly climate limited as in these regions the primary driver of wildfire is human-caused ignitions. The regional analysis demonstrates that in Southern California climate drivers are eclipsed by human ignition drivers and increased population on the landscape-altering future climate regimes (Keeley & Syphard, 2016).

2.2.2 Topography

The Modified Project Site is located in the Santa Clara River Valley, between the Santa Susana Mountains to the south and the Topatopa Mountains to the north. The Modified Project Site is topographically diverse with slope gradients ranging from moderate to steep on the hillsides to very gentle in the Santa Clara River floodplain and major tributary canyons.

The Entrada Planning Area is located south of the Santa Clara River on rugged terrain dominated by steep slopes. It is dissected by four south–north-trending tributaries to the Santa Clara River, including one along Magic Mountain Canyon and three unnamed tributaries (Figure 5a, Topography). All four tributaries exit the Entrada Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the southern portion of the site is dominated by north–south-trending ridges. A narrow panhandle (roughly 330 feet wide) extends along the western portion of the site to a fairly level former pasture area.



The VCC Planning Area is located north of the Santa Clara River and is dissected by two south-north-trending tributaries to the Santa Clara River: Castaic Creek and Hasley Creek (Figure 5b). Both tributaries exit the VCC Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the site is situated in relatively flat areas along Castaic Creek and within the lower elevations of Hasley Canyon. The remaining portions of the site have greater topographic relief. Site elevations range from approximately 990 feet amsl along the Castaic Creek bottom to approximately 1,210 feet amsl at the top of the north-central ridge (Dudek 2020).

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up-slope and slower spread down-slope. Terrain that forms a funneling effect, such as chimneys, chutes, or saddles on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind. Topographic features that may present a fire spread facilitator are the slope and canyon alignments, which may serve to funnel or channel winds, thus increasing their velocity and potential for influencing wildfire behavior. From a regional perspective, the alignment of the Santa Clara River floodplain, tributary canvons, and dominant ridges are conducive to channeling and funneling wind, thereby increasing the potential for more extreme wildfire behavior in the region. Additionally, slope failures, mudflows, and landslides are common in areas with steep hillsides and embankments. These conditions would be exacerbated in a post-fire environment where vegetation cover has been burned off. Given the Project's location in a fire-prone area, occupants and structures could be exposed to downslope or downstream flooding or landslides are a result of post-fire conditions. As discussed in Section 2.2.5 Historic Wildland Fires, the Rye Fire in 2017 was the most recent fire to burn onto the Modified Project Site. Surveys conducted by Dudek in 2019 concluded that the vegetation has regenerated since the 2017 Rye Fire, thus stabilizing the surrounding slopes. Both planning areas are within identified liquefaction zones; the Entrada South Planning Area is bisected by a liquefaction zone and the Valencia Planning Area is almost completely zoned as a liquefaction area (County of Los Angeles, 2020). Many of the ridgelines in the planning areas are also identified as having the potential for earthquake-induced landslides (County of Los Angeles, 2021). However, neither planning area shows evidence of landslide or slope slippage activity (California Geologic Survey, 2020). Grazing measures and mitigation would be incorporated into the construction to address any landslide hazards or related issues.

2.2.3 Existing Land Uses

2.2.3.1 Entrada South Planning Area

Most of the Entrada Planning Area is undeveloped due to its rugged terrain, but there is direct disturbance from past and ongoing oil and natural gas operations on about 26% (approximately 130 acres) of the site, including associated dirt roads and oil pad ground clearance zones. The northernmost of the Entrada Planning Area next to the Santa Clara River is an agricultural field used as non-irrigated pasture. The southeastern corner of the Entrada Planning Area is dedicated to a 29.17-acre spineflower preserve.

There is significant development influence near the Entrada Planning Area, including I-5 to the east, State Route 126 (SR-126) to the north, and secondary road infrastructure to the south, east, and north. The Westridge development, medium-density residential housing, and an integrated golf course are adjacent to the site on the south and southeast, and major commercial land use adjacent to the north and east includes the Six Flags Magic Mountain theme park. The planned development, including the Mission Village and Legacy Village communities, within the Newhall Ranch Specific Plan area, is located to the west and southwest, respectively. The approved Mission Village community, which will provide a new fire station, is under construction. Additionally, the proposed



Entrada North community would be to the north. Southern California Edison (SCE) and Southern California Gas Company have transmission corridors within easements along the southern boundary of the site. SCE actively maintains the easements/transmission lines and access roads. The Westridge golf course is south of the SCE transmission line easement.

2.2.3.2 Valencia Commerce Center Planning Area

Most of the VCC Planning Area is undeveloped, but there is direct disturbance from sand and gravel production, cattle grazing, and agricultural operations on about 27% (approximately 169 acres) of the site, including associated dirt roads and graded areas. There is also an existing parking lot associated with Castaic Junction along the eastern boundary of the site. Paved roads connecting to commercial development north of the VCC Planning Area also occur on the site. The southern portion of the site includes ongoing agricultural uses. In addition, SCE and Southern California Gas Company have distribution lines and access roads within easements on the site.

Land uses surrounding the VCC Planning Area include commercial and residential development as well as vacant land. Castaic Junction is located immediately east of the Planning Area. Beyond that is vacant land. Residential development is immediately north of the VCC Planning Area. Commercial development is north, northwest, and west of the Planning Area in addition to vacant land. The Valencia Travel Village is south of the Planning Area between the SR-126 and the Santa Clara River. A commercial center and the California Highway Patrol Newhall Station are located southeast of the site between The Old Road and I-5. Hotel and commercial uses are located to the southeast across The Old Road. Los Angeles County Fire Station 76 and a small gas station are located between Henry Mayo Drive and SR-126, immediately west of the Castaic Junction off-ramp exiting SR-126. The development currently planned on vacant land south of the VCC Planning Area includes the proposed Entrada North community (Vesting Tentative Tract Map (VTTM) 071377) and the approved Mission Village community (VTTM 061105) within the Specific Plan area.

2.2.3.3 Historic and Ongoing Grazing Program

Newhall has engaged in historic and ongoing grazing of certain lands adjacent to and in the vicinity of the Modified Project. The historic grazing program has occurred around the Entrada South site as a part of the stewardship of ranchlands. The grazing program functions as a thinning zone by reducing fuel loads adjacent to the built environment resulting in a large buffer. Grazing has been shown to regulate the accumulation of fuel loads and aid in fuel management and complement standard wildland fire hazard reduction techniques (Starns et al., 2019). Grazing programs can not only reduce the risk of catastrophic wildfire but provide environmental benefits such as enhancing native grassland planets, maintaining grassland, and preventing shrub intrusion (University of California Agriculture and Natural Resources, 2021). The intent of the grazing program complements the Modified Project features and further setbacks wildland/unmaintained fuels from the Modified Project, however, it is not required to lower the fire behavior. As indicated in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions the implementation of the Modified Project setbacks, construction measures, and defensible space result in reduced fire behavior. The grazing program facilitates the historic land use and stewardship of the area while also maintaining and reducing the vegetative fuels. Because of the variability of the historic grazing practices, this FPP considers the grazing program as an additional environmental benefit but, conservatively, this FPP does not rely upon those benefits when determining the Modified Project's potential impacts under CEQA.



2.2.4 Vegetation (Fuels)

Extensive vegetation type mapping is useful for fire planning because it enables each vegetation community to be assigned a fuel model, which is used in a software program to predict fire behavior characteristics, as discussed in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions. Generally, WUI interfaces with shrubland-dominated vegetation are found to be more fire-prone than those with grasslands or other natural spaces (Elia et al., 2019). The Modified Project Site's vegetative fuels are primarily annual grassland, scrub and chaparral habitat, and riparian forest. Man-made land cover types, such as agriculture and disturbed land were also previously mapped on the Entrada and VCC Planning Areas. These vegetation community and land cover types were confirmed by Dudek fire protection planners in the field and the dominant vegetation types were assigned fuel models for use during fire behavior modeling (see Section 4.1.1 Fire Behavior Modeling Analysis). The vegetation communities are shown in Figure 6a for the Entrada Planning Area and Figure 6b for the VCC Planning Area.

Post-development vegetation composition proximate to the Entrada South and VCC footprints is expected to be significantly different than current conditions. Following build-out, irrigated landscape vegetation associated with fuel modification zones (FMZ) are expected to cover the immediate area surrounding the Modified Project Site, extending 100- to 200- horizontal feet from each of the structures, depending on County Fire direction and geographic constraints. Consistent with requirements, native and naturalized vegetation occurring within FMZ Zone C is not expected to be irrigated, although overall fuel volumes will be reduced by removing dead and dying plants, non-natives, highly flammable species, and thinning the remaining plants so they would not readily facilitate the spread of fire on an ongoing basis. The provided FMZ areas will be maintained in order to comply with County Fire Fuel Modification Plan guidelines.

2.2.4.1 Vegetation Dynamics

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading. For example, the native shrublands that compose the coastal scrub community on the Modified Project sites are a high potential hazard based on such criteria.

Existing vegetation distribution throughout the Modified Project Site varies by location and topography. Areas, where the proposed development is located, are primarily disturbed or covered with non-native grasses, while the adjacent slopes support coastal scrub cover. The importance of vegetative cover in fire suppression efforts is its role in affecting fire behavior. For example, fire burning in grasslands may have shorter flame lengths than those burning in coastal scrub; however, fire in grasslands, due to its flashy (easily ignited when dry) nature, often spreads more rapidly than fire in other vegetation types.

As described, vegetation plays a significant role in fire behavior. A critical factor to consider is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes affect plant community succession. A succession of plant communities, most notably the gradual conversion of shrublands to grasslands with high-frequency fires and grasslands to shrublands with fire exclusion, is highly dependent on the fire regime. Biomass and associated fuel loading will increase over time, assuming that disturbance or fuel reduction efforts are not diligently implemented.



Wildfire disturbances can also have dramatic impacts on plants and plant composition. Heat shock, accumulation of post-fire charred wood, and change in photoperiods due to removal of shrub canopies may all stimulate seed germination. The post-fire response for most species is vegetative reproduction and stimulation of flowering and fruiting. The combustion of aboveground biomass alters seedbeds and temporarily eliminates competition for moisture, nutrients, heat, and light. Species that can rapidly take advantage of the available resources will flourish. It is possible to alter successional pathways for varying plant communities through manual alteration. This concept is a key component in the overall establishment and maintenance of the proposed FMZs on the Modified Project Site. FMZs are modified landscape areas that minimize fire spread progressively through various restrictions, treatments, and maintenance. FMZs provide a buffer between off-site fuels and the urbanized landscapes that have the dual benefit of protecting communities while also protecting habitats by minimizing the potential for project-related ignitions.



SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL QUADRANGLE

FIGURE 5a Entrada South Topography Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

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SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL AND VAIL VERDE QUADRANGLES

810 Beet

Valencia Commerce Center Topography Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK





SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 6a Entrada Planning Area's Vegetation Communities and Land Cover Types Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

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Modified Project Off-Site Project Impact C Valencia Commerce Center Tract Boundary **General Vegetation Communities and Land Cover Types** Coastal Scrub Grass and Herb Dominated Communities Oak woodland Riparian Man-made land cover Specific Vegetation Communities and Land Cover Types AGR = Agriculture BES = Blue elderberry stands CGL = California annual grassland CSB = California sagebrush scrub CSB-CB = California sagebrush scrub-California buckwheat DEV = Developed DL = Disturbed land MFS = Mulefat scrub ORN = Ornamental RW = River wash SCBR = Scale broom scrub SCWRF = Southern cottonwood-willow riparian forest SPM = Short-podded mustard stand TAM = Tamarisk scrub VOW = Valley oak woodland dCB = Disturbed California buckwheat dCSB-CB = Disturbed California sagebrush scrub-California buckwheat dRRBS = Disturbed rubber rabbitbrush scrub dSCBR = Disturbed scale broom scrub



SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 6b VCC Planning Area's Vegetation Communities and Land Cover Types Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK

2.2.5 Historic Wildland Fires

Fire history is an important component of an FPP. Historic fire data provides valuable information regarding fire spread, fire frequency, fire type, most vulnerable Modified Project areas, and significant ignition sources, amongst others. One important use for this information is as a tool for pre-planning. It is advantageous to know which areas may have burned recently and therefore may provide a tactical defense position, what type of fire burned on the site, and how a fire may spread. Fire history represented in this FPP utilizes the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP) database. FRAP summarizes fire perimeter data dating to the late 1800s, but it is incomplete due to the fact that it includes only fires over 10 acres in size and has incomplete perimeter data, especially for the first half of the 20th century (Syphard and Keeley 2016). However, the data does provide a summary of recorded fires and can be used to show whether large fires have occurred in the Modified Project Area, which indicates whether they may be possible in the future.

According to available data from CAL FIRE's FRAP (CAL FIRE 2020)⁵, 183 wildland fires have burned in a 5-mile vicinity of the Modified Project Area since the beginning of the historical fire data records. Recorded wildfires range from 0.1 acres to 115,537 acres (1970 Clampitt Fire). However, the average fire size is 3,482 acres.⁶ The 2020 Hasley Fire (6.7 acres) and the 2020 Equestrian Fire (85 acres) are the most recent fires, which occurred adjacent to the Entrada South and VCC Planning Areas. County Fire may have data regarding smaller fires (less than 10 acres) that have occurred on or near the Modified Project Site that have not been included herein. In addition to the Rye Fire, the 2007 Magic Fire (2,825 acres) and 2013 Magic Fire (145 acres) burned onto the Entrada Planning Area. The 1962 Golden Fire and the 1979 Hasley Fire with a total burned area of approximately 9,233 acres and 656 acres, respectively, burned onto the VCC Planning Area. Fire history for the general vicinity of the Modified Project Site is illustrated in the map in Appendix B. One of the most recent fires, the 2022 Route Fire, occurred approximately 4 to 5 miles north of VCC. According to CAL FIRE, the Route Fire near Castaic totaled 5,208 acres and was an active fire for 6 days between August 31 and September 6. Fire ignited along the I-5 Freeway near Lake Hughes Road and temporarily caused the closure of all lanes of the I-5 between Wednesday, August 31 and Thursday morning. Traffic became congested quickly, especially for northbound lanes as the Labor Day weekend approached. The day after the fire ended (September 8, 2022) all of the northbound lanes were opened and two of the southbound lanes opened as well. Two of the northbound lanes remained closed due to fire damage. At Vista Del Lago, southbound lanes were closed while northbound lanes were closed at Lake Hughes Road.

The fire caused evacuation orders to be issued in nearby communities. For examples, residents north of the fires (in Paradise Ranch Mobile Homes) were sheltered at Frazier Mountain High School. Northlake Hills Elementary School, located between the I-5 and Ridge Route Road, was evacuated shortly after the fire's ignition on Wednesday. The Sheriff's Department confirmed that all Northlake Hills staff and students were safe during and following the evacuation. The Red Cross opened evacuation centers the first day at West Ranch High School in Santa Clarita and at Frazier Mountain High School in Lebec.

While traffic congestion occurred on various surface streets due to the rerouting of I-5 traffic, re-routed vehicles remained safe and out of harm's way due to enactment of pre-planned procedures (see Operations Snowflake) that provide for gate closures across the I-5 and pre-planned re-routing of traffic. Evacuations almost always include

⁶ This calculation does not include the 1970 Fire or fires smaller than 10 acres.



⁵ Based on polygon GIS data from CAL FIRE's FRAP, which includes data from CAL FIRE, USDA Forest Service Region 5, BLM, NPS, Contract Counties and other agencies. The data set is a comprehensive fire perimeter GIS layer for public and private lands throughout the state and covers fires 10 acres and greater between 1878–2020.

traffic congestion, but emergency managers employ technical resources for situation awareness and then manage traffic movement through intersection control based on potential threat and vulnerability. Generally, traffic that is not moving is not within a high threat area and they have been placed in a hold so that populations that are in higher threat areas can be moved first.

Another example of the employment of available resources that helped reduce the Route Fire's potential impacts, including those on traffic congestion, was the deployment of the contract aerial firefighting force known as the Quick Reaction Force. According to the Quick Reaction Force Report⁷, available resources, including helicopters that can operate at night, reduced the fire size significantly, aiding the ability to reopen I-5.

Based on an analysis of this fire history data set, specifically, the years in which the fires burned, the average interval between wildfires within 5 miles of the Modified Project Site's boundaries was calculated to be one year with intervals ranging between 0 (multiple fires in the same year) and 2 years. Based on an analysis of fire history, it is expected that wildfire may burn within 5 miles of the Project at least every year. Following proposed development activity in the area, would break up large expanses of non-maintained fuels, however, the proximity of the Modified Project Site to large expanses of open space to the south in the Santa Susana Mountains and potential ignition sources along I-5, SR-126, and surface streets in the Stevenson Ranch, Valencia, and Santa Clarita there remains an increased wildfire hazard in the area. Additionally, the terrain within the Santa Clara River Valley, including multiple sub-drainages and canyons, has the potential to funnel Santa Ana winds, thereby increasing local wind speeds and increasing wildfire hazards in the region.

Note that once the Entrada South and VCC Planning Areas are built out, the fire spread patterns on the property would be modified, as both developments would present substantial fuel breaks, significantly interrupting the continuous fuels across the Planning Areas.

2.3 Existing Fire Hazard

Based on the existing conditions, the existing fire hazard in the Modified Project is significant. The current conditions as they relate to topography, climate, land use, and vegetation have the potential to facilitate a significant wildfire. Additionally, as described above in Section 2.2.5 Historic Wildland Fires, the area has been subject to a large number of fires with an average return interval of one year. Further, it is expected the wildfires will continue to burn within the Modified Project's vicinity.

⁷ Quick Reaction Force (QRF) Cost Benefit Analysis: Route Fire. A qualitative review of the Quick Reaction Force and estimated cost savings provided on the Route Fire - 08/31/2022 22 pp.



3 Fire Safety Requirements - Regulatory Requirements and Recommended Project Design Features

3.1 Applicable Codes/Existing Regulations

This FPP demonstrates that the Project would comply with applicable portions of Title 32 of the Los Angeles County Code, as amended, which adopts by reference the 2019 edition of the California Fire Code (CFC) with July 2021 Supplement. Title 32 is hereafter referred to as the Los Angeles County Fire Code (2020 or current edition) or "Fire Code". The Project also shall comply with Chapter 7A of the 2019 California Building Code (CBC) with July 2021 Supplement; the 2019 California Residential Code, Section 237; and the 2018 Edition of the International Fire Code as adopted by the County. The Project would also be subject to the provisions of section 4291 of the Public Resources Code regarding brush clearance standards around structures and the Los Angeles County Fire Department guidelines for Fuel Modification Plans.

Chapter 7-A of the CBC addresses exterior structural ignition resistance and ember penetration into homes, a leading cause of structure loss from wildfires (California Building Standards Commission 2019). Thus, code compliance is an important component of the requirements of this FPP, given the Project's wildland-urban interface (WUI) location that is within an area statutorily designated as a State Responsibility Area (SRA) Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2007). Fire hazard designations are based on topography, vegetation, and weather, among other factors with more hazardous sites, including steep terrain, unmaintained fuels/vegetation, and WUI locations. Projects situated in VHFHSZ require fire hazard analysis and the application of fire protection measures to create defensible communities within these WUI locations.

As described in this FPP, the Project would meet applicable code requirements for building in these higher fire hazard areas or meet the intent of the code through the application of site-specific fire protection measures. These codes have been developed through decades of wildfire structure save and loss evaluations to determine why buildings were lost to fire or why they survived. The resulting fire codes now focus on mitigating former structural vulnerabilities through construction techniques and materials so that the buildings are resistant to ignitions from direct flames, heat, and embers, as indicated in the 2019 California Building Code (Chapter 7-A, Section 701A Scope, Purpose, and Application) (California Building Standards Commission 2019).

3.1.1 California Attorney General's Office Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act

The California Office of the Attorney General issued (October 2022) guidance (Guidance) outlining best practices for analyzing and mitigating wildfire impacts of development projects under the California Environmental Quality Act (CEQA). The Guidance does not impose additional legal requirements on local governments, nor does it alter any applicable laws or regulations. Instead, the Guidance is intended to help local governments' evaluation and

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approval considerations for development projects in fire-prone areas, and to help project design in a way that minimizes wildfire ignition and incorporates emergency access and evacuation measures. The following provides an overview of the Guidance and relevant elements of the Project. A discussion of the Guidance regarding evacuations measures is addressed in the Entrada South and Valencia Commerce Center Wildfire Evacuation Plan (Dudek 2023).

Attorney General Guidance for Analyzing Project's Impacts on Wildfire Risks

Baseline Conditions

The Guidance states that an EIR's discussion of existing environmental (baseline) conditions should include information about open space areas and habitats within the project area that may be fire prone, a discussion of fire history and fuels on the project site and a description of existing available water supplies for fire-fighting. This FPP provides details regarding each of these baseline conditions, including indicating there are no on-site open space habitat areas, analysis of the off-site preserved areas, a detailed assessment of fire history within 5 miles of the Project, and confirmation that the Project will be provided water necessary for fire-fighting.

Modeling

The Guidance encourages modeling fire scenarios to "quantify" increased wildfire risks resulting from a project adding more people to wildfire prone areas and assessing risks. This FPP models fire scenarios utilizing BehavePlus fire behavior model to estimate fire intensity, flame lengths, and spread rates. Modeled scenarios included fires igniting near the Project within the preserved conservation areas and including extreme weather conditions. The models confirm that the Project's provided defensible space buffers and walls are sufficient to slow wildfire spread and keep it from impacting the site. These same results, coupled with the fire protection features detailed in this FPP are shown to perform a dual role of 1) minimizing the potential for fire starts on site, 2) providing suppression capabilities both within structures and by nearby firefighting resources to quickly control ignitions that do occur, 3) creating and maintaining wide fuel modification buffers that reduce fire intensity and slow fire spread – all of which minimize the likelihood of a Project fire spreading off-site into open space areas. Likewise, neighboring developed areas and their provided protections required by LACoFD perform a similar function during wildfires in the Project area.

Qualitative Assessment

The Guidance indicates that an EIR qualitatively assess relevant variables on the risk of wildfire, including:

Project Density – Project density influences how likely a fire is to start or spread and how likely it is that occupants will be in danger. The Guidance states that "Fire spread and structure loss is more likely to occur in low- to intermediate-density developments." The Project is a walkable, urban influenced master-planned community that clusters development on areas long planned for residential and commercial uses, converting the developed area to ignition resistant landscapes with no inclusion of unmaintained vegetation within the converted footprint. The Project is largely surrounded by existing development or roadways. The nearest open space vegetation is separated from the site's ignition resistive structures by 100- to 200- feet wide fuel modification zones. The buildings and development footprint are clustered and present one, defensible interface, unlike lower density development which incorporates fuels within and around buildings and multiple building interfaces, a condition that is significantly harder to defend and creates multiple exposures when compared with the Project's master planned community condition.



Location in the Landscape_- Where a project's structures are placed in the landscape relative to fire environment features (vegetation, topographical features, and wind alignments) also influences wildfire risk. The Project is largely surrounded by existing development or roadways. The nearest open space vegetation is separated from the site's ignition resistive structures by 100- to 200- feet wide fuel modification zones. The Project creates a flat pad on which the Project's structures and infrastructure are placed. Fuels in the Project area are not conducive of extreme fire intensity and terrain varies but does not include extreme steep slopes and has been comprehensively evaluated and confirmed that even under the extreme weather conditions that have been recorded in the area, the provided defensible space and ignition resistant structures are appropriately designed to minimize the potential for structure ignitions.

Water Supply and Infrastructure_- Water supply and infrastructure to address firefighting within the project site are relevant to evaluating wildfire risk. The Project water supplier prepared a detailed Water Supply Assessment under SB 610 that confirms that it has capacity needed for domestic and firefighting needs. As indicated in the FPP, the Project will provide internal waterlines supplying sufficient fire flows and pressure to meet the demands for required on-site fire hydrants and interior fire sprinkler systems for all structures to meet LACoFD requirements.

Mitigating Wildfire Risk – Potential Measures

The Guidance identifies potential mitigation measures and design features that may reduce a project's wildfire risk impacts, such as:

- Avoiding and minimizing low-density development patterns or "leapfrog-type" developments with undeveloped wildland between developed areas. The Project is consistent with the OVOV, constituting infill development within existing developed areas and roadways (e.g., within the existing Valencia Commerce Center and adjacent to existing development at Mission Village, Magic Mountain and Westridge) and thereby avoiding leapfrog development. OVOV accounted for the planned buildout of the Santa Clarita Valley area and accounted for wildfire and evacuation risks. The Project relies on a clustering design to increase density and open space areas.
- Decreasing a project's "edge" or wildland interface area and creating buffer zones and defensible space measures within and adjacent to the project. The Entrada South and VCC Planning Areas are surrounded by existing development or roadways and do not have an intermixed, extended "edge" with a wildland interface area. The Project involves a clustered design and complies with the requirements found to protect communities within fire hazard severity zones. The Project would provide FMZ and specific methods to reduce the potential for wildfire encroachment. The FMZ will be maintained over the life of the project through the Project's HOA.
- Undergrounding power lines. The Project's power lines will be undergrounded, eliminating the potential for electrical transmission line-caused fires on the site.
- Upgrading building materials and installation techniques to increase a structure's resistance to heat, flames and embers (i.e. "fire hardening") and requiring fire-hardened communication facilities to the project site. The Project's buildings will be designed in conformance with the latest ignition-resistant building design measures California Building Code Chapter 7-A and [list other relevant code measures]. As discussed in this FPP, structures constructed to current Fire Code standards and located within a master-planned community have proven to be highly resistant to ignition during a wildfire. Communication infrastructure including telephone and internet will be provided via underground or protected above ground conduits.



- Requiring adequate water supplies during a wildfire. The Project water supplier prepared a detailed Water Supply Assessment under SB 610 that confirms that it has capacity needed for domestic and firefighting needs. The Project provides connections from internal waterlines to significant water main lines that will supply sufficient fire flows and pressure to meet the demands for required onsite fire hydrants and interior fire sprinkler systems for all structures. Water supply must meet a 2-hour fire flow requirement of 2,500 gpm, which must be over and above the daily maximum water requirements for this development. Water utilities will be connected prior to any construction.
- Parking limitations to ensure access roads are not clogged with parked vehicles. The Project provides for parking restrictions and an HOA to enforce parking restrictions. Fire apparatus access roads are not obstructed by designated parking areas and where parking is prohibited, signage and/or curb marking will be provided.
- Placement of development close to adequate emergency services, existing or planned ingress/egress, and designated evacuation routes. The Project is located adjacent to regional transportation networks with multiple points of access. The Project is consistent with OVOV, which accounting for wildfire and evacuation risks. The Project is within an acceptable distance to existing and planned fire stations with fast response to all planned structures. The Project provides new surface streets and connects to existing streets and is near major highway/freeway corridors, facilitating emergency vehicle ingress.

As described above and consistent with the Guidance, this FPP, the Evacuation Plan, and the Supplemental EIR provide an in-depth analysis of the Project's potential wildfire impacts.

3.2 Defensible Space and Vegetation Management Regulatory Requirements

3.2.1 Fuel Modification Zones

An important component of a fire protection system for the Modified Project Site is the provision of fire-resistant landscapes and modified vegetation buffers. Fuel modification zones (FMZ) are designed to provide vegetation buffers that gradually reduce fire intensity and flame lengths from advancing fire by strategically placing thinning zones and irrigated zones adjacent to each other on the perimeter of the WUI exposed structures. FMZs not only help protect new communities and structures from external wildfire risks, but FMZs also reduce the risk of fire originating from such new communities or structures and spreading to surrounding natural resources/habitat areas (Braziunas et al., 2021; Cochrane et al., 2012; Price et al., 2021).⁸ FMZs thereby provide a duel benefit of buffering communities and structures from encroaching wildfires while separating the new community and structures (and potential introduction of new ignition sources associated with the new community) from surrounding open space, fuel sources, or habitat areas (Bhandary & Muller, 2009; Braziunas et al., 2021; Cochrane et al., 2012; Fox et al., 2018). Research has also indicated that the likelihood of ignitions occurring in a given location is significantly influenced by the existing vegetation/fuel available (Elia et al., 2019). In addition to protecting structures, fuel treatments, and defensible space, when utilized in conjunction with place-based fire-hardened design also act as a buffer for natural areas and surrounding communities (Safford et al., 2009; Scott et al., 2016).

⁸ Historically, CAL FIRE originated as a conservation agency implemented brush management, like fuel modification and fire breaks to protect natural resource areas from fires originating in developed areas, such as the Ponderosa Way a 800 mile fire break in the Sierra Nevada Mountain Range (CAL Fire, Thorton, 1995; Gafni 2021).

Based on the modeled extreme weather flame lengths for the Modified Project Site, average wildfire flame lengths in the un-maintained fuel beds are projected to be approximately 40 to 46 feet high in limited areas of Development Footprints-adjacent grasslands, and coastal scrub fuels. The fire behavior modeling system used to predict these flame lengths was not intended to determine sufficient FMZ widths, but it does provide the average predicted length of the flames, which is a key element for determining "defensible space" distances for providing firefighters with room to work and minimizing structure ignition. Implementing defensible space can reduce the likelihood of structural ignition and support landscape-level risk reduction (Mockrin et al., 2020; Warziniack et al., 2019). Defensible space also serves to decrease the chance of spot fires and allows firefighters to operate around the home (Price et al., 2021). For the Entrada South and VCC Planning Areas, the FMZ widths outside the lot lines would be 100- to 200- horizontal feet depending on County Fire direction and geographic constraints, ranging from 2.0 to 5 times the modeled flame lengths based on the fuel type represented adjacent to the Development Footprint and meeting the industry guidelines for acceptable defensible space.

3.2.1.1 State Responsibility Areas Fuel Modification Zone Standards

An FMZ 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, low-fuel-volume plants in order to provide a reasonable level of protection to structures from wildland fire. The purpose of this section is to document SRA standards and make them available for reference. The State Fire Code Section 4906 requires defensible space to be maintained around all buildings and structures in all unincorporated land designated by the State Board of Forestry and Fire Protection as SRA per PRC 4290 and "SRA Fire Safe Regulations" California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 2, Section 1270. County Fire contracts with CAL FIRE to manage State Responsibility Areas within Los Angeles County. County Fire's 2022 Strategic Fire Plan summarizes the Los Angeles County Unit, its Mission, Values, and Vision, and its role in reducing wildfires within Los Angeles County.

County Fire's 2022 Strategic Fire Plan describes the local fire environment and actions the Los Angeles County Unit has conducted to prioritize hazards and its efforts to target highest priority areas for hazard reduction efforts, such as landscapes featuring, urban populations, water supplies, and threatened ecosystems. Specifically, the plan identifies structures, major roads, and transmission lines as the highest priority assets for County Fire, emphasizing the importance of fire access roads the fact that power delivery and communication sites susceptible to extended loss of service due to fire or interruption of these services is a public safety and welfare issue. With respect to water quality, the plan explains that watersheds can burn in the dry season and then discharge torrents of debris into downstream-populated plains during subsequent severe, wet-season storms. The plan also outlines the Unit's efforts to prevent fires through passive protections, pre-fire planning, pre-fire engineering, community support, and structural fire hardening requirements. Examples include educating communities on benefits of proper safety practices and identifying and eliminating all types of hazardous conditions posing a threat to life, property, and the environment, safety inspections, and defensible space management, hazard fuel reduction, proper brush clearance, fire-resistive landscaping, fire-resistive construction, and good housekeeping around structures plays a critical role in increasing survivability in a wildfire. The plan further describes County Fire's vegetation management strategies, the designated Fuel Modification Unit that reviews new development defensible space, and discusses its fire suppression philosophy. For example, the Forestry Division's Fuel Modification Unit's objective is to create defensible space necessary for effective fire protection in newly constructed and/or remodeled homes within the FHSZ. Once homes are constructed, inspections confirm implementation of the approved landscape plan and fuel modification parcels are subsequently moved into a "Brush Clearance Inspection Program."



As noted above, the County will be reviewing the Modified Project on behalf of the State, and a fuel modification plan shall be submitted and have preliminary approval prior to any subdivision of land; or, have final approval prior to the issuance of a permit for any permanent structure used for habitation; where, such structure or subdivision is located within areas designated as a Fire Hazard Severity Zone within State Responsibility Areas (Los Angeles County Fire Code Title 32, Section 4908.1). As designated by PRC 4291 a fuel modification typically consists of at least 100 feet, measured in a horizontal plane, from the exterior façade of all structures towards the undeveloped areas. The Modified Project includes FMZ widths of 100- to 200- horizontal feet depending on County Fire direction and geographic constraints. Although not currently required by law, the Modified Project will also include an Ember Resistant Zone (ERZ) within Zone A, consistent with Assembly Bill 3074 which amends PRC 4291 to include more intense fuels reduction within the immediate vicinity of structures.⁹ The ERZ is from the 5 feet of a building and includes the area under and around all attached decks.

A Fuel Modification Plan shall be reviewed and approved by the Forestry Division of the County Fire for consistency with defensible space and fire safety guidelines on behalf of the State. Figures 7a and 7b display FMZ Zones A and B for the Entrada South and VCC Planning Areas that are consistent with County Fire requirements pending final approval from the Forestry Division.

To ensure long-term identification and maintenance, a fuel modification area shall be identified by a permanent zone marker meeting the approval of County Fire. All markers will be located along the perimeter of the fuel modification area at a minimum of 500 feet apart or at any direction change of the fuel modification zone boundary. FMZs will be maintained on at least an annual basis or more often as needed to maintain the fuel modification buffer function.

An on-site inspection will be conducted by staff of the Forestry Division of the County Fire upon completion of landscape installation before a certificate of occupancy is granted by the County's building code official.

ERZ – 0 to 5 feet from the structure

The ERZ, per PRC 4291, is designed to keep fire or embers from igniting materials that can spread to structures. It includes the area under and around all attached decks and requires more stringent wildfire fuel reduction. In 2020, the concept of the ERZ was added to PRC 4291 to designate a more intense fuel reduction area immediately adjacent to homes and/or structures to reduce the likelihood of ember-based home ignition. However, the requirement for an ERZ under PRC 4291 will not take effect for new structures until the Board of Forestry releases updated regulations and guidance documents by January 1, 2023. Although not currently required, CALFIRE's website recommends the following guidance for the ERZ, and in anticipation of the regulation going into effect, the ERZ has been included in the Modified Project. Per PRC 4291, the ERZ is measured from building, structures, decks, etc. outward 5 feet (horizontal distance) and includes the following:

- 1. Hardscape, such as gravel, pavers, concrete, and other non-combustible materials are permitted within this zone.
- 2. The use of combustible bark or mulch is prohibited.

⁹ Assembly Bill 3074, passed into law in 2020, which requires a third zone for defensible space and amends PRC 4291. The amendment requires the Board of Forestry and Fire Protection to develop the regulation for new ember-resistant zone (ERZ) within 0 to 5 feet of a structure by January 1, 2023. CAL FIRE currently recommends the implementation of an ERZ. In anticipation of the ERZ requirements becoming codified in PRC 4291 the ERZ has been included in the defensible space requirements for the Modified Project. The above listed requirements are based on the current recommendations for creating an ERZ detailed on CAL FIRE Defensible Space website (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/). These requirements will be reviewed and updated once the Board of Forestry and Fire Protection updates the regulations for the ERZ in PRC 4291.



- 3. This zone shall be free of all dead and dying weeds, grass, plant, shrubs, trees, branches, and vegetative debris.
- 4. Plants should be limited to low growing, nonwoody, and be irrigated and maintained.
- 5. Combustible items within this zone, including on decks, should be limited.
- 6. Any firewood or lumber should be relocated within Zone B.
- 7. Fencing, gates, and arbors attached to homes or structures should be made with non-combustible materials.
- 8. Garbage and recycling containers should not be kept within this zone.
- 9. Create separation between trees, shrubs, and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

Zone A – minimum 30 feet from the structure

Zone A is an irrigated, limited planting area measured from the outermost edge of the structure or appendage outward to 30 feet (horizontal distance), or the property line for perimeter lots adjacent to native vegetation.

- Zone A should be planted with plants from Appendix D: Acceptable Plant List by Fuel Modification Zone¹⁰. Plant selection for Zone A should consist of small herbaceous or succulent plants less than two to three feet in height or regularly irrigated and mowed lawns.
- 2. Plants identified as "Target" or undesirable plants (See Appendix E: Fuel Modification Zone Undesirable Plant List¹¹) by County Fire shall not be planted within Zone A.
- 3. Trees should be spaced to allow a minimum 10-foot canopy clearance at full maturity to the structure.
- 4. Inorganic mulches, such as gravel, shall be used within 10 inches of the structure.
- 5. A 5-foot wide pathway shall be provided around and abutting any structures for firefighter access.

Zone B – from the outer edge of Zone A up to 100 feet from the structure

Zone B is the area (maybe irrigated or not irrigated) measured horizontally from the outer edge of Zone A to 100 feet from the structure or property line, whichever is first.

- 1. Zone B can be planted with a slightly higher plant density than Zone A as long as the landscape does not create any horizontal or vertical fuel ladders (e.g., fuel that can spread fire from the ground to trees).
- 2. Exception: Screen plantings are permissible if used to hide unsightly views. However, hedging is discouraged as it promotes the accumulation of dead litter inside the live hedge.
- 3. Trees found in Appendix D can be planted, if they are Zone B appropriate and the tree canopies at maturity are not continuous.
- 4. Plants identified as "Target" or undesirable plants (See Appendix E) by County Fire shall not be planted within Zone B.
- 5. Avoid planting woody plant species taller than 3 feet in height at maturity directly underneath any tree canopy
- 6. Zone B may not be landscaped, but it is still subject to brush clearance standards (https://www.fire.lacounty.gov/ forestry-division/fire-hazard-reduction-programs/)

¹⁰ (County Fire 2021)

¹¹ (County Fire 2020)

Zones C and D - from the outer edge of Zone B up to 200 feet from the structure

Zones C and D would be provided and detailed on a fuel modification plan, and would extend FMZ from 100 to 200 feet, if required by LACoFD and subject to geographic constraints.

3.2.1.2 Annual Fuel Modification Maintenance

In order to ensure that fuel modification is appropriately maintained, the Modified Project would require the Modified Project HOA or equivalent organization to maintain the FMZs in perpetuity. All vegetation management within the FMZs shall be completed annually by May 1 of each year and more often as needed for fire safety, as determined by County Fire. The Modified Project HOA shall be responsible for all vegetation management throughout the common areas of the Modified Project site, in compliance with the requirements detailed herein and County Fire fuel modification guidelines. Any water quality basins, flood control basins, channels, and waterways would be kept clear of flammable vegetation, subject to Section 3.3.2 Stormwater Basins. (See Section 9: Project Specific Recommended Design Features)

3.2.1.3 Annual Fuel Modification Inspection

To ensure that the Modified Project HOA carries out its FMZ maintenance duties, the Modified Project will require that a third-party inspector, hired by the Modified Project HOA or equivalent entity, will conduct an annual inspection by June 1 of each year. The inspector will evaluate the FMZs, including the ERZ, ensuring that they meet regulations and are performing accordingly. The inspector will notify the HOA of any non-compliant FMZs and recommend measures for remediation. An inspection report will be submitted to County Fire each year. The Modified Project HOA shall be responsible for ensuring the long-term funding of the inspections. (See Section 9: Project Specific Recommended Design Features.)



ES_HA_UpdateOffsites_1.31.22 Entrada South Tract Boundary Spineflower Preserve Fuel Modification Zones



Zone B (30'-100' irrigated or not) $^{\prime\prime}$ 10-Ft Roadside Zone

Fuel Mod within Spineflower Preserve

Land Uses

Basin

Perimeter Manufactured Slope

Development



SOURCE: ESRI 2019; Hunsaker 2019



FIGURE 7a Entrada South Fuel Modification Map Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK





SOURCE: ESRI 2019; Hunsaker 2021

FIGURE 7b VCC Fuel Modification Map Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK

3.3 Other Vegetation Management Regulatory Requirements

3.3.1 Roadway Fuel Modification Zones

As required under the Los Angeles County Fire Code, fire engine apparatus roads will be maintained with a minimum 20-foot wide roadway that is clear to the sky. All flammable vegetation or other combustible growth shall be removed on each side of the roadway for a minimum of 10 feet (Title 32 Section 325.10). The clearance of 10 feet does not apply to single specimen trees, ornamental shrubbery, or cultivated ground cover, such as grass, ivy, succulents, or similar plants used as ground cover, provided that they do not form a means of readily transmitting fire. The minimum clearance of 10 feet may be increased if the fire code official determines additional clearance is required to provide reasonable fire safety.

Roadside fuel modification for the Entrada South and VCC Planning Areas consists of mowing grasses to less than 4-inches in height and/or maintaining ornamental landscapes, including trees, clear of dead and dying plant materials. Roadside fuel modification shall be maintained by the HOA.

3.3.1.1 Existing Roadside Fuel Modification Projects

Within the vicinity of the Project, there are existing roadside fuel modification projects. Two CAL Fire Projects have been completed within the Project area. The first is a right of way clearance treatment that is part of the Santa Clarita System Project. This project is part of CAL FIRE's Fire Plan Program. From April 22, 2019, to October 6, 2021, the project resulted in 59.0 treatment acres. The second project is also a right-of-way treatment project which is part of the High Country System Project. The High Country System Project treated 69.1 acres from February 5, 2019, to October 27, 2021. Both projects are considered active and ongoing (CAL FIRE, 2021).

3.3.2 Stormwater Basins

Fire-safe vegetation management will be performed within the basins on a yearly basis in accordance with the following guidelines.

- Groundcovers or shrubs included in the basin shall be low-growing with a maximum height at maturity of 36 inches. Single tree specimens or groupings of two to three trees per grouping of fire-resistive trees or tree form shrubs may exceed this limitation if they are located to reduce the chance of transmitting fire from vegetation to habitable structures and if the vertical distance between the lowest branches of the large, trees or tree form shrubs and the tops of adjacent plants are three times the height of the adjacent plants to reduce the spread of fire through ladder fueling.
- 2. All trees shall be planted and maintained at a minimum of 10 feet from the tree's mature drip line to any combustible structure.
- 3. The water detention basin area will be irrigated and maintained to brush management Zone A standards.
- 4. Grasses must be maintained/mowed to 6 inches in height.
- 5. The water quality basins will not be re-vegetated with plant species that are found in Appendix D.
- 6. This area shall be maintained annually free of dying and dead vegetation.

3.3.3 Southern California Edison Transmission Easement

A Southern California Edison (SCE) transmission easement occurs along the southern edge of the Entrada Planning Area. This easement will be maintained by SCE in accordance with its vegetation management program and standard policies mandated by the California Public Utilities Commission (CPUC), including the General Order (GO) 95 (e.g., vegetation maintenance requirements) (CPUC 2015a) and GO 165 (e.g., inspection protocols of electric distribution lines) rules (CPUC 2015b). Accordingly, hazardous fuel conditions will be addressed by SCE in a timely manner. The Entrada South FMZs adjacent to this area account for the native fuels that occur within this easement.

3.3.4 Spineflower Preserve Fire Management Plan

A Fire Management Plan (FMP) (Dudek 2014) for the Newhall Ranch Spineflower Preserves was developed to avoid and minimize direct and indirect impacts on the San Fernando Valley spineflower (Chorizanthe parryi var. Fernandina), a state-listed endangered species. The FMP was developed to be consistent with the SCP (Dudek 2010) and mitigation measures (MM SP-4.6-72 and BIO-26) outlined in the State-certified EIR. The FMP is specific to the seven spineflower preserves identified in the RMDP-SCP and includes the Entrada Planning Area. The Entrada Spineflower Preserve encompasses 27.19 acres located in the southeastern corner of the Entrada Planning Area. (There is no spineflower preserve within the VCC Planning Area.) In accordance with MM SP-4.6-72, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. The portion of the FMZ that overlaps with the Entrada Spineflower Preserve would require annual thinning and will implement the approved FMP MM SP-4.6-72 and proposes no modifications thereto. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County Fire and California Department of Fish and Wildlife. The Modified Project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants, and clearing of trash and other debris in accordance with the County Fire.

3.3.5 Undesirable Plants

Certain plants are considered prohibited in the landscape due to characteristics that make them highly flammable. These characteristics can be physical (structure promotes ignition or combustion) or chemical (volatile chemicals increase flammability or combustion characteristics). The plants included in the FMZ Undesirable Plant List (refer to Appendix E) are unacceptable from a fire safety standpoint, and will not be planted or allowed to establish opportunistically within FMZs or landscaped areas.

3.3.6 Construction Phase Vegetation Management

Vegetation management requirements shall be implemented at commencement and throughout the construction phase for each phase. Vegetation management shall be performed pursuant to County Fire on all building locations prior to the start of work and prior to any import of combustible construction materials. Adequate fuel breaks shall be created around all grading, site work, and other construction activities in areas where there is flammable vegetation.



3.4 Fire Apparatus Access Regulatory Requirements

3.4.1 Access

Modified Project Site access, including road widths and connectivity, will be consistent with the County's roadway standards (Title 21) and the 2020 CFC Section 503 for both the Entrada and VCC Planning Areas and will include:

 The Modified Project Site's primary routes are accessed through a series of internal neighborhood roadways, which connect with the primary ingress/egress roads (e.g., Magic Mountain Parkway, CommerceCenter Drive, and The Old Road) that intersect off-site primary and major transportation routes. There are multiple primary ingress/egress routes in each Planning Area.

Entrada South Primary Ingress/Egress Routes:

- Eastern Primary Route: Magic Mountain Parkway, or to The Old Road or I-5 to the north or south.
- Southern Primary Route: Westridge Parkway to Valencia Blvd then east to The Old Road or I-5.

Valencia Commerce Center Primary Ingress/Egress Routes:

- Southern Primary Route: Commerce Center Drive to SR-126 to the east or west.
- Northern Primary Route: Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- Western Primary Route: Franklin Parkway to Wolcott Way to SR-126 to the east or west.
- Eastern Secondary Routes: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.
- Interior circulation streets include all roadways that are considered common or primary roadways for traffic flow through the site and fire department access serving all proposed residential and commercial structures. Any dead-end streets serving new buildings or dwellings that are longer than 150 feet shall have approved provisions for fire apparatus turnaround.
- Typical, interior Modified Project roads, including collector and local roads, will be constructed to a
 minimum of 24-foot, unobstructed widths and shall be improved with aggregate cement or asphalt paving
 materials. Private or public streets that provide fire apparatus access to buildings three stories or more in
 height shall be improved to 30 feet unobstructed width. All interior residential streets will be designed to
 accommodate a minimum of 75,000-lb. fire apparatus load. Fire apparatus access roads shall not exceed
 15 percent in grades.
- Fire apparatus access roads shall not be obstructed in any manner, including parking of vehicles or use of traffic calming devices, including but not limited to speed bumps or speed humps. The widths and clearances in Sections 503.2.1 and 503.2.2 shall be maintained at all times.
- Private and public streets for each phase shall meet all project-approved fire code requirements and/or mitigated exceptions for maximum allowable dead-end distance, paving, and fuel management prior to combustibles being brought to the site.
- The vertical clearance of vegetation (lowest-hanging tree limbs), along roadways, will be maintained a minimum 20-foot wide path that is clear to the sky.



- Roads with a median or center divider will have 20 feet of unobstructed width on both sides of the center median or divider.
- Cul-de-sacs and fire apparatus turnarounds will meet requirements and County Fire cul-de-sac length restrictions (County Code Section 21.24.190) as follows:
 - 500 feet in length, when serving land zoned for industrial or commercial use.
 - 700 feet in length, when serving land zoned for residential uses having a density of more than four dwelling units per net acre.
 - 1,000 feet in length, when serving land zoned for residential uses having a density of four or fewer dwelling units per net acre.
- End of cul-de-sac streets and fire apparatus turnarounds for dead-end alleys will meet the requirements of County Fire cul-de-sac length restrictions and County Code Section 21.24.180.
- Any roads that have traffic lights shall have approved traffic pre-emption devices (Opticom) compatible with devices on the fire apparatus.
- Roadways and/or driveways will provide fire department access within 150 feet of all portions of the exterior walls of the first floor of each structure.
- Access roads shall be completed and paved prior to the issuance of building permits and prior to the occurrence of combustible construction.
- The developer will provide information illustrating the new roads, in a format acceptable to the County Fire for updating Fire Department response maps.

3.4.2 Gates

Gates on private roads are permitted but subject to Fire Code requirements and standards. Gates shall be equipped with conforming sensors for detecting emergency vehicle "54istory" strobe lights from any direction of approach if required. All entrance gates will be equipped with a key switch, which overrides all command functions and opens the gate. Gate activation devices will be equipped with a battery backup or manual mechanical disconnect in case of power failure. In addition, the gates would comply with AB 2911 which requires additional standards for comprehensive sire, and risk reduction requires roads to be unobstructed if being relied on for secondary access. As such, if gates are installed along the secondary access road then whit will be supplied with backup power and open upon the approach of a vehicle whether via pressor sensors or infrared sensors. In addition, should a gate be installed along the secondary access road it shall also comply with the minimum requirements set forth in this section per Title 32 Section 503.6 and CFC Section 503.6. Any gates within the Modified Project site will be:

- Minimum 20 feet wide of clearance for one-way traffic when fully open at the entrance.
- Gates shall be swinging or sliding type.
- Construction of gates shall be of materials that allow manual operation by one person.
- Gates shall be maintained in operative condition at all times and replaced/repaired when defective.
- Electric gates shall be listed in accordance with UL 325
- Gates intended for automatic operation shall be designed, constructed, and installed in accordance with American Society for Testing and Materials (ASTM) F2200.
- Minimum of two feet wider than road width at the exit.
- Constructed from non-combustible or exterior fire-rated treated wood materials.



• Inclusive of provisions for manual operation from both sides, if power fails. Gates will have the capability of manual activation from the development side or a vehicle (including a vehicle detection loop).

3.4.3 Premises Identification

Identification of roads and structures will comply with Fire Code as follows:

- All commercial/industrial structures are required to be identified by street address numbers at the structure. Numbers to be a minimum of 4 inches high with a ½-inch stroke, visible from the street. Numbers will contrast with the background and shall be electrically illuminated during the hours of darkness where building setbacks exceed 100 feet from the street or would otherwise be obstructed; numbers shall be displayed at the property entrance.
- All residential structures shall be identified by street address. Numbers shall be 4 inches in height, ¹/₂ -inch stroke, and located 6 to 8 feet above grade. Addresses on multi-residential buildings shall be 6 inches high with a ¹/₂-inch stroke. Numbers will contrast with the background.
- Multiple structures located off common driveways or roadways will include posting addresses on structures and the entrance to individual driveways/roads or at the entrance to the common driveway/ road for faster emergency response.
- Streets will have street names posted on non-combustible street signposts. Letters/numbers will be per County standards.

3.5 Structural Ignition Resistance Regulatory Requirements

In WUI areas, homes can be considered fuel as well as an ignition point for wildfires. The WUI fire problem is structural; therefore, the best mitigation is to reduce the likelihood of building ignition occurring. (Zhou, 2013). Structural characteristics play a large role in whether or not a building burns, which is important in WUI environments as ill-prepared structures may also serve as fuel (Gorte, 2011). Preventing the ignition of structures can result in the reduction of fire spread in surrounding WUI areas (Maranghides & Mell, 2012). The benefit of structure-based mitigation is that it not only lowers the onsite risk but also lowers the risk of wildfire across a landscape (Mockrin et al., 2020).

The proposed structures within the Modified Project will be built utilizing the most current construction methods designed to mitigate wildfire exposure, required by County Fire, at the time of construction. Within the limits established by law, construction methods intended to mitigate wildfire exposure will comply with the wildfire protection building construction requirements contained in the Los Angeles County Building Code and the 2022 CBC including the following:

- 1. California Building Code, Chapter 7A
- 2. Los Angeles County Building Code, Chapter 7A
- 3. Los Angeles County Residential Code, Section R327
- 4. Los Angeles County Referenced Standards Code, Chapter 12-7A

Construction practices respond to the requirements of the County Fire Code Title 32 and the Los Angeles County Building Code (Title 26, Chapter 7A), "Construction Methods for Exterior Wildfire Exposure." These requirements include the ignition resistant requirements found in Chapter 12-7A of the Los Angeles County Referenced Standards Code. A key component to addressing the wildfire problem is to address the structural ignition. (Zhou, 2013). Addressing structural ignition potential is an effective mitigation strategy for preventing wildfires and increasing WUI ignition resistance (Zhou, 2013). Research has found that structural characteristics, especially roofing, play a significant role in reducing a structure's vulnerability to fire and the likelihood of burning (Gorte, 2011; Knapp et al., 2021; Kolden & Henson, 2019; Manzello et al., 2011; Syphard et al., 2017; Zhou, 2013). Further, reducing a structure's likelihood of ignitions reduces the risk for the individual homeowners and the risk associated with fire spreading to other homes or wildland areas (Mockrin et al., 2020). While these standards will provide a high level of protection to structures in this development and should reduce or eliminate the need to order evacuations, there is no guarantee of assurance that compliance with these standards will prevent damage or destruction of structures by fire in all cases.

The 7A Materials and Construction Methods for Exterior Wildfire Exposure (CBC) chapter detail the ignition resistant requirements for the following key components of building safely in wildland-urban interface and fire hazard severity zones. Each of the critical exterior building features summarized below has been addressed within Chapter 7A to minimize the potential for structural ignition from wildfire exposure as well as from airborne embers.

3.5.1 Roofing Assemblies

Roofing shall comply with Chapter 7A and Chapter 15 of the CBC. Roof assemblies shall be a Class A rating in accordance with ASTM E108 or UL790. Where the roof allows a space between the roof covering and roof decking the space shall be constructed to prevent the intrusion of embers, or is installed over a combustible deck, be fire stopped with a 72 In cap sheet meeting the ASTM D3909 Standard Specification for "Asphalt Rolled Roofing Surfaces with Mineral Granules", shall be installed over the roof deck. Bird stops are to be used at the eaves, and hip and ridge caps will be mudded in to prevent the intrusion of embers. Roof valley flashing shall be no less than 0.019 inches No. 26 gauge galvanized sheet corrosion-resistant metal installed over no less than one layer of minimum 72 lb. mineral surfaced nonperforated cap sheet compliant with ASTM D3909, at least 36 inches wide running the full length of the valley. Gutters shall be provided with means to prevent the accumulation of embers.

Wood shake shingles and wood shakes are prohibited in any Fire Hazard Severity Zone regardless of classification per LACBC Section 705A.2.

3.5.2 Vents and Openings

Any vent openings, enclosed eaves soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation shall comply with Section 1203 and Section 706A.1 through 706A.3 of the CBC and Section 706A of the LACBC. All vents and openings shall be fully covered with Wildland Flame and Emer Resistant vents approved and listed by the California State Fire Marshal or WUI vents listed in ASTM E2886. This also applies to any gable ends, ridge ends, crawl spaces, foundations, and all other cents that mount onto a vertical wall. Vents shall not be installed on the underside of eaves or cornices unless they are WUI vents as described above.


3.5.3 Exterior Wall Covering

Exteriors walls shall comply with Section 707A.3 of the CBC and be either noncombustible or ignition-resistant. This applies to exterior wall coverings, exterior wall assembly, exposed undersides or eaves or soffits, undersides of porch ceilings, the underside of floor projections, and exterior underfloor areas.

3.5.4 Open Roof Eaves

Any exposed roof deck material on the underside of open roof eaves shall either be noncombustible, ignition resistant, one layer of 5/8 inch thick Type X gypsum, or 1-hour fire resistive exterior wall assembly designed for exteriors fire exposure using gypsum panel and sheeting in accordance with CBC Section 707A.4.

3.5.5 Closed Roof Eaves and Soffits

Enclosed eaves and soffits shall comply with CBC Section 707A.5. The exposed underside of enclosed eaves or soffits shall be protected by either noncombustible material, ignition-resistant material, one layer of 5/8 inch Type X gypsum sheeting, 1-hour fire restive exteriors wall assembly, assemblies that meet the performance criteria in Section 707A.10 or assemble that meet the performance criteria in State Fire Marshall (SFM) Standard 12-7A-3.

3.5.6 Floor Projections and Underfloor Protection

The underside of floor projections must comply with Section 707A.7 of the CBC. The exposed underside of a cantilevered floor projection, where a floor assembly extends over an exterior wall, must be protected by noncombustible materials, ignition-resistant materials, one layer of 5/8 in Type X gypsum, 1-hour fire resistive exterior wall assembly that meets the criteria in Section 707A.10, or meets performance criteria in SFM Standard 12-7A-3. The underfloor area of an elevated or overhanging building shall be enclosed in accordance with CBC Section 707A.8.

3.5.7 Underfloor Appendices

When required by County Fire, the underside of overhanging appendages shall be enclosed per CBC Section 707A.9. Or the underside of the exposed underfloor shall consist of noncombustible material, ignition-resistant material, one layer of 5/8 inch Type X gypsum, 1-hour fire resistive exterior wall assembly, or meets the performance criteria in SFM Standard 12-7A-3 or ASTM E2957.

3.5.8 Windows, Skylights, and Doors

Assemblies shall meet one of the following requirements:

- Be constructed of multiplane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing.
- Be constructed of glass block units.
- Have a fire-resistive rating of no less than 20 minutes per National Fire Protection Association (NFPA) 257.
- Be tested to meet the performance requirements of SFM Standard 12-7A-2.

Skylights shall be protected by a non-combustible mesh screen with openings of no more than 1/8 inches. Wall assemblies behind structural glass veneers shall comply with Section 707A.3 of the CBC.

3.5.9 Exterior Doors

Exterior doors shall be constructed as follows:

- Noncombustible material
- Ignition-resistant construction
- A solid wood core that has stiles and rails no less than 1 3/8-inch-thick and panels no less than 1 1/4 inch thick.
- Fire-resistance rating of no less than 20 minutes per NFPA 252
- Surface or cladding that meets the performance criteria of CBC Section 707A.3.1 when tested per ASTM E2707 or SFM Standard 12-7A-1.

Garage doors shall resist the intrusion of embers by preventing gaps between doors and roof openings at the top, bottom, and sides of doors. Gaps can not exceed 1/8 inch and shall be controlled by either weather stripping that meets ASTM D638 and ASTM G155, weather stripping shall also have a V-2 or better flammability rating, be constructed so that doors overlap onto jams and headers, or the garage door jams and headers are covered with metal flashing.

3.5.10 Decking

Any deck, porch, balcony, or stairs within 10 feet of a building shall comply with CBC Section 709A. The walking surface shall either comply with Section 709A.4 when tested per ASTM E2632 and ASTM E2726, ignition-resistant material, material that meets the criteria of SMF Standard 12-7A-4 and SFM Standard 12-7A-5, noncombustible material, any material that meets SFM Standard 12-7A-4A when attaches to exterior walls that are noncombustible or ignition-resistant or any material that meets Section 709A.5 and is attached to an exterior wall that is noncombustible or ignition-resistant.

3.5.11 Accessory Structures

Accessory structures are applied to buildings covered by LACBC Section 710A.3, Exception 1 as well as any building that requires a permit including but not limited to trellises, arbors, patio covers, gazebos, and similar structures within less than 3 feet of the building or otherwise determined by County Fire. Buildings that are less than 120 square feet in floor area and are more than 30 feet but less than 50 feet from structures shall be noncombustible or ignition-resistant per CBC Section 704A.2. No requirements shall apply to an accessory building or miscellaneous structures when located at least 50 feet from an applicable building. Applicable accessory buildings and attached miscellaneous structures, or detached miscellaneous structures that are installed at a distance of fewer than 3 feet from an applicable building, shall comply with LACBC Section 710A. Structures that meet the requirements of an accessory or miscellaneous structures shall be noncombustible or ignition resistant per CBC Section 704A.2.



3.6 Fire Protection Systems Regulatory Requirements

3.6.1 Water Supply

The Modified Project will be consistent with County Title 20, Section 20.16.060, and with County Title 32 Section 507 for fire flow and fire hydrant requirements within a VHFHSZ. The minimum fire flow and fire hydrant requirements shall be determined by the fire chief or fire marshal and be based upon 20 pounds per square inch (p.s.i.) residual operating pressure remaining from the street main from which the fire flow is being measured at the time of measurement. The minimum fire flow may be adjusted as determined by the fire chief or fire marshal based on local conditions, exposure, and/or congestion, and construction of buildings. Building permits shall be accompanied by evidence indicating to County Fire a reliable water supply and a certificate from County fire that there is sufficient water supply for fire protection. The water supply for the Modified Project shall be consistent with approved types of water supply such as reservoirs, pressure tanks, elevated tanks, water mains, or other fixed systems capable of providing required fire flow per Title 32 Section 507.2. Any water tanks and associated structures shall be installed and maintained in accordance with NFPA 22 and County Fire.

Within the internal roadways of each Planning Area, additional 12-inch water supply lines will provide the main water supply to commercial and domestic services to each structure and common landscape area. These internal waterlines will also supply sufficient fire flows and pressure to meet the demands for required onsite fire hydrants and interior fire sprinkler systems for all structures.

In addition, County Fire helicopters can obtain water for dropping on wildland fires from Castaic Lake to the north of the VCC Planning Area or from numerous ponds that are located throughout the golf course immediately south of the Entrada Planning Area.

The Modified Project would meet all water and water pressure requirements for fire flow.

3.6.2 Hydrants

Fire Hydrants shall be located along fire access roadways as determined by the Fire Chief or Fire Marshal and current fire code requirements to meet operational needs. The required fire hydrant spacing will be no more than 600 feet apart for single-family residential. The required fire hydrant spacing for multi-family residential, commercial, and institutions within the Modified Project Site will be 300 feet apart. If cul-de-sac length exceeds 450 feet (residential) or 200 feet (commercial) hydrants shall be required at mid-block.

Fire Hydrants will be consistent with applicable County Design Standards. Hydrants will have one 2.5-inch outlet and one 4- inch outlet and be of bronze construction per the County fire code. Fire hydrants will be constructed within four feet by four feet by four inches concrete base. A 4-foot clear space shall be maintained around the circumference of fire hydrants. Reflective blue dot hydrant markers shall be installed in the street to indicate the location of the hydrant. Crash posts will be provided where needed in on-site areas where vehicles could strike fire hydrants or fire department connections. Prior to the issuance of building permits, the appropriate number of fire hydrants and their specific locations will be approved by County Fire.



3.6.3 Automatic Fire Sprinkler Systems

All structures in the Modified Project, of any occupancy type, in accordance with County Fire and National Fire Protection Association (NFPA) Standards 13, 13R, and 13D will include automatic sprinklers. This is crucial in preventing off-site impacts as embers can also be generated by a structure fire and can be blown over the fuel modification into native fuels. Automatic sprinklers can isolate a fire to the point of origin, limit its ability to spread to the rest of the building, and even extinguish a fire before the responding firefighters arrive, thus damping the likelihood of ember production (NFPA, 2021). Automatic sprinklers have an extremely high success rate in controlling or suppressing interior structure fires (NFPA, 2021). This also reduces impacts on fire response capacity as the automatic sprinklers will allow firefighters to focus on reducing additional ignitions beyond the point of origin. The Modified Project is inclusive of both protection measures including components to resist ignitions from wildland fuels, and the built environment.

3.7 Pre-Construction Regulatory Requirements

Per Los Angeles County Fire Code, 4908.1, A fuel modification plan shall be submitted and have preliminary approval prior to any subdivision of land; or, have final approval prior to the issuance of a permit for any permanent structure used for habitation; where, such structure or subdivision is located within areas designated as a Fire Hazard Severity Zone within State Responsibility Areas or Very High Fire Hazard Severity Zone within the Local Responsibility areas, applicable Fire Hazard Zone maps, and Appendix M of this code at the time of application. An on-site inspection must be conducted by the personnel of the Forestry Division of the Fire Department and final approval of the fuel modification plan issued by the Forestry Division prior to a certificate of occupancy being granted by the building code official. Construction activities would also comply with Chapter 33 of the CFC, Fire Safety During Construction and Demolition, and with the Modified Project's Construction Fire Protection Plan (CFPP).

3.7.1 Construction Fire Prevention Plan

To reduce potential ignition sources due to construction activities, the Modified Project will require that prior to bringing combustible materials to residential or commercial structure buildings, improvements, including utilities, operable hydrants, and access roads with an approved temporary roadway surface, and fuel modification zones, be established. Note that combustible materials related to pre-building construction may be brought onto the site (e.g., forms for cast-in-place concrete or others, as needed). LACoFD will approve site conditions prior to the construction of any structures being undertaken. (See Section 9: Project Specific Recommended Design Features.)

3.8 Regulatory Requirements Applicable to Activities in a Hazardous Fire Area

The Modified Project will comply with County Fire requirements for activities per Section 326 Activities in Wildfire Risk Areas of Title 32:

1. Permits shall be required for the following similar activities: recreational activities such as but not limited to rifle ranges, carnivals, public assembly events, fireworks, open burning, stands for cooking, or other activities which could provide an ignition source.



- 2. The following but not limited to fire protection facilities/conditions shall be required to maintain fire safety during activities:
 - a. Adequate water supply
 - b. Firebreaks
 - c. No smoking signs
 - d. Removal of dry grass and weeds along roadways, parking areas, or other areas accessible to the public/participants of the activity
 - e. Fire watch or fireguards when the activity is taking place
 - f. Adequate access and parking facilities to prevent congestion, permit adequate egress for evacuation, and permit movement of fire apparatus equipment
 - g. Restriction of activities during periods of high fire hazard weather conditions
 - h. Fencing
 - i. Other conditions, limitations, or provisions to maintain reasonable fire safety
- 3. Any portion of public or private land in a wildfire risk area may be closed to the public by the fire code official at the request of the owners when in the opinion of the fire official the closure is necessary to prevent fires.
- 4. No person shall use or operate in, upon, or within a wildfire risk area any tractors, construction equipment, machinery, or any steam, oil, or gasoline operated stationary or mobile equipment unless said equipment is provided with a qualified device or spark arrestor.
- 5. Any chimney to a fireplace, incinerator, or heating appliance that uses a solid or liquid fuel within a wildfire risk area shall be maintained with a spark arrestor with heavy wire mesh or other non-combustible material with no more than ½ inch openings.
- 6. No person shall operate or use an open flame device within a wildfire risk area.
- 7. No person except for a public officer shall drive or park a motorcycle, motor scooter, or motor vehicle upon any fire road or firebreak, obstruct the entrance to a fire road or firebreak, or install or maintain radio or television aerials or any other obstruction on a fire road or fire break that is less than 16 feet above said fire road or fire break.

In addition, a construction fire prevention plan will be prepared for the Modified Project and will designate fire safety measures to reduce the possibility of fires during construction activities based on performance criteria established by the County Fire. The plan shall include the following measures to reduce fire risks during construction: fire watch/ fire guards during hot works and heavy machinery activities, hose lines attached to hydrants or a water tender, Red flag period restrictions, required on-site fire resources, and others as determined necessary. Maintenance to the Modified Project utilities such as fuel modification, roads, vegetation management, and utilities would comply with all CFC and Title 32 requirements including requirements for activities in Hazardous Fire Area, CFC Chapter 33, and the Modified Project's CFPP.

3.9 Examples of Communities Designed Against Wildfire

When communities incorporate the regulatory requirements and mitigation measures like the ones described above, they can offer a safer landscape that is resistant to WUI fire disasters. The 2017 Thomas fire in Santa Barbara County consumed over 1,000 homes predominately during the high wind events in the first few days of the incident (Kolden & Henson, 2019). The unincorporated area of Montecito is classified as VHFHSZ and has



significant fire history inclusive of home loss (Kolden & Henson, 2019). Two decades prior to the Thomas Fire, the Montecito Fire Protection District started to address wildfire vulnerability in the community using place-based reduction strategies (Kolden & Henson, 2019). These strategies focused on recurring structural ignition potential, fire-resistant materials, structural modifications, increasing defensible space, fire scaping, and developing a fire protection code (Kolden & Henson, 2019). As a result, when the Thomas Fire, during Sundowner winds, spread to Montecito the area experienced minimal damage and was largely passed over (Kolden & Henson, 2019). By having mitigation not be isolated to wildland areas or just to homes, but implemented on multiple scales, Montecito was able to effectively protect not just the WUI areas, but the entire community.

The Witch Creek fire was one of the most destructive fires in California's 62istoryy and destroyed thousands of homes in San Diego County (Mutch et al., 2011). However, after the 1990 Paint Fire in Santa Barbara and the 1991 Oakland Hills Tunnel Fire the community-started efforts to become adaptive to a very high fire hazard environment (Mutch et al., 2011). They implemented fire codes, and developed restricted defensible space rules, home hardening measures, and vegetation restrictions; all of which were maintained and enforced by the HOA (Mutch et al., 2011). As a result, when the Witch Creek fire spread to Rancho Santa Fe in the five communities that adopted this approach no homes were lost versus the older communities which were heavily impacted (Mutch et al., 2011).

Additionally, the following communities which feature similar fire protection measures as the Modified Project, have experienced minimal to no fire encroachment as a result of their design:

- Casino Ridge, Yorba Linda¹²
- Serrano Heights, Anaheim Hills¹³
- Cielo, Rancho Santa Fe¹⁴
- 4S Ranch, San Diego¹⁵
- Stevenson Ranch Fire, Santa Clarita¹⁶

As described above, the Modified Project site is designed to not only be hardened against fire but designed to prevent fires from occurring and quickly suppressing them when they do occur. The Modified Project takes a multi-scaled approach to fire protection through wildfire education, ignition prevention, fuels management, increased response capacity, and ignition-resistant construction. The dual benefit of creating a development that can prevent a fire is that it offers protection to the surrounding communities and the environment. The requirements and recommendations outlined in the FPP have been designed specifically for the proposed construction in VHFHSZ and HFHSZ and can significantly reduce the potential threat to offsite areas.

¹⁶ (Murphy 2003)



¹² (Orange County Fire Authority, 2008)

¹³ (FEMA, n.d.)

¹⁴ (Mutch et al., 2011)

¹⁵ (Audencial, 2016)

4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions

4.1 Fire Behavior Modeling

Fire behavior modeling was conducted to document the type and intensity of a fire that would be expected adjacent to the Entrada South and VCC Planning Areas, given characteristic site features such as topography, vegetation, and weather during "worst case" fire conditions (e.g., during Santa Ana winds). For planning purposes, the averaged worst-case fire behavior is the most useful information for conservative fuel modification design.

With this FPP, Dudek utilized BehavePlus software package version 5.05 (Andrews, Bevins, and Seli 2008) to analyze potential fire behavior for the northern, eastern, southern, and western edges as appropriate of the sites, with assumptions made for the pre-and post-project fuel conditions. Results are provided below and a more detailed presentation and explanation of the BehavePlus analysis, including fuel moisture and weather input variables, is provided in Appendix C.

4.1.1 Fire Behavior Modeling Analysis

An analysis utilizing the BehavePlus software package was conducted to evaluate fire behavior variables and to objectively predict flame lengths, intensities, and spread rates for three modeling scenarios for Entrada South and three modeling scenarios for VCC. These fire scenarios incorporated observed fuel types representing the dominant on-site and off-site vegetation on vacant land adjacent to the proposed developments, in addition to measured slope gradients, and wind and fuel moisture values derived from Remote Automated Weather Stations (RAWs) weather data sets (Del Valle Station, ID No. 045445) for both the 50th percentile weather (on-shore winds) and the 97th percentile weather (off-shore winds). Modeling scenario locations were selected to better understand different fire behavior that may be experienced on or adjacent to the site. Identification of fire scenarios' locations is presented graphically in Figure 8a for Entrada South and Figure 8b for VCC.

Baseline vegetation types, which were derived from the field assessment for the Modified Project Site, were classified into a fuel model. Fuel Models are simply tools to help fire experts realistically estimate fire behavior for a vegetation type. Fuel models are selected by their vegetation type; fuel stratum most likely to carry the fire; and depth and compactness of the fuels. Fire behavior modeling was conducted for vegetative types that surround the proposed development. Fuel models were selected from *Standard Fire Behavior Fuel Models: a Comprehensive Set for Use with Rothermel's Surface Fire Spread Model* (Scott and Burgan 2005). Fuel models were also assigned to the perimeter fuel management areas to illustrate post-project fire behavior changes. Based on the anticipated preand post-project vegetation conditions, six different fuel models were used in the fire behavior modeling effort presented herein. Fuel model attributes are summarized in Table 1.

Fuel Model Assignment	Vegetation Description	Location	Fuel Bed Depth (Feet)
8	Zone A – irrigated, landscapes	Perimeter fuel modification zone	<3.0 ft.
Gr1	Zone B: grasses cut to 6 inches in height	Perimeter fuel modification zone	<0.5 ft.

Table 1. Baseline Fuel Model Characteristics

Fuel Model Assignment	Vegetation Description	Location	Fuel Bed Depth (Feet)
Gr4	Non-native grasslands	Hillsides surrounding the sites	<2.0 ft.
Sh1	Zone B: 50% thinning shrubs	Perimeter fuel modification zone	_
Sh4	Southern cottonwood-willow riparian, Shrubby understory	Riverbed or drainages	<8.0 ft. = understory 35+ ft. = tree heights
Sh5	Coastal scrub	Occurs on hillsides on both sites	<4.0 ft.

Table 1. Baseline Fuel Model Characteristics

The results of baseline fire behavior modeling analysis are presented in Tables 2 and 3 for pre-project conditions and Tables 4 and 5 for post-project conditions. Post-project conditions include modified fuel model characteristics to represent the reduced fuels, high plant moisture, and engineered landscapes that result in reduced flame lengths, spread rates, and fire intensity.

Table 2. BehavePlus Modeling Results - Pre-Project Baseline Conditions for EntradaPlanning Area

Fire Scenarios	Flame Length (feet)	Fireline Intensity (Btu¹/feet/second)	Spread Rate (mph ²)	
Scenario 1:south-east-facing, 25% slope; Offshore 52 mph gusts (97th percentile)				
Valley oak/grass (Gr4)	39.9	17,131	17.9	
Coastal scrub (Sh5)	46.0	23,393	7.2	
Scenario 2: south-facing, 20% slope; Offshore 52 mph gusts (97 th percentile)				
Coastal scrub (Sh5)	45.7	23,045	7.1	
Scenario 3: north-facing, 27% slope; Onshore 14 mph winds (50 th percentile)				

Notes (for Tables 2, 4, and 5):

¹ Btu = British thermal unit(s)

² mph = miles per hour

³ Spotting distance from a wind-driven surface fire

Table 3. BehavePlus Modeling Results - Pre-Project Baseline Conditions for VCC Planning Area

Fire Scenario	Flame Length (feet)	Spread Rate (mph ¹)	Fireline Intensity (Btu²/ft/s)	Spotting Distance ³ (miles)	Surface Fire to Tree Crown Fire
Scenario 1: flat, <5% slope; Offshore 52 mph sustained gusts (97 th percentile)					
Grass (Gr4)	39.7	17.7	16,929	2.3	No
Coastal scrub (Sh5)	45.7	7.1	23,043	2.5	No
Southern Cottonwood- Willow Riparian2,3 (Sh4)	24.5	4.5	5,938	1.6	Crowning ⁶
Scenario 2: south-facing, 10% slope; Onshore 14 mph sustained winds (50 th percentile)					
Grass (Gr4)	6.7	0.6	351	0.3	No



Table 3. BehavePlus Modeling Results - Pre-Project Baseline Conditions for VCC Planning Area

Fire Scenario	Flame Length (feet)	Spread Rate (mph ¹)	Fireline Intensity (Btu²/ft/s)	Spotting Distance ³ (miles)	Surface Fire to Tree Crown Fire
Coastal scrub (Sh5)	14.8	0.8	1,989	0.5	No
Southern Cottonwood- Willow Riparian ^{4,5} (Sh4)	7.1	0.4	396	0.3	Crowning ⁶
Scenario 3: north-facing, 40% slope; Offshore 52 mph sustained gusts (97 th percentile)					
Coastal scrub (Sh5)	46.3	7.3	23,684	2.6	No

Notes (For Table 3):

¹ mph = miles per hour

² Btu = British thermal unit(s)

³ Wind-driven surface fire.

⁴ Riparian overstory torching increases fire intensity. Modeling included canopy fuel over Sh4, which represents surface fuels beneath the tree canopies.

⁵ A surface fire in the mixed willow riparian forest would transition into the tree canopies generating flame lengths higher than the average tree height (35 feet). Viable airborne embers could be carried downwind for approximately 1.0 miles and ignite receptive fuels.

⁶ Crowning= fire is spreading through the overstory crowns.

-Table 4. BehavePlus Modeling Results - Post-Project Baseline Conditions for Entrada Planning Area

Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Scenario 1: Fuel treatments, South-east-facing, manufactured slopes, Offshore 52 mph gusts (97 th percentile)						
Fuel modification zone A (FM8)	3.0	63	0.2	0.4		
Fuel modification zone B (Sh1)	10.6	959	1.5	0.9		
Fuel modification zone B (Gr1)	4.0	115	0.7	0.5		
Scenario 2: Fuel Treatments, s (97 th percentile)	south-facing, ma	anufactured slopes; O	ffshore 52 mph	gusts		
Fuel modification zone A (FM8)	3.0	63	0.2	0.4		
Fuel modification zone B (Sh1)	10.6	959	1.5	0.9		
Scenario 3: Fuel Treatments, north-facing, manufactured slopes; Onshore 14 mph winds (50 th percentile)						
Fuel modification zone A (FM8)	1.3	10	0.03	0.1		
Fuel modification zone B (Sh1)	0.9	4	0.03	0.1		

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Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Scenario 1: Fuel treatments, manufactured slopes, Offshore 52 mph gusts (97 th percentile)						
Fuel modification zone A (FM8)	3.0	63	0.2	0.4		
Fuel modification zone B (Sh1)	10.6	959	1.5	0.9		
Scenario 2: Fuel Treatments, manufactured slopes; Onshore 14 mph winds (50th percentile)						
Fuel modification zone A (FM8)	1.5	14	0.05	0.1		
Fuel modification zone B (Gr1)	2.3	33	0.3	0.1		
Scenario 3: Fuel Treatments, manufactured slopes; Offshore 52 mph gusts (97th Percentile)						
Fuel modification zone A (FM8)	3.0	63	0.2	0.4		
Fuel modification zone B (Sh1)	10.6	959	1.5	0.9		

Table 5. BehavPlus Modeling Results – Post-Project Baseline Conditions for VCC Planning Area

The results presented in Tables 2 through 5, which are described in further detail below, Section 4.2, Wildfire Behavior Summary, depict values based on inputs to the BehavePlus software and are not intended to capture changing fire behavior as it moves across a landscape. Changes in slope, weather, or pockets of different fuel types are not accounted for in this analysis, but the models provide a worst-case wildfire behavior condition as part of a conservative approach. Wind and weather data were processed using data from Remote Automated Weather Stations (RAWs) weather data sets (Del Valle Station, ID No. 045445) and analyzed with FireFamily Plus version 5.0 to determine weather conditions to be incorporated into modeling efforts (FireFamily Plus, 2019). The selected weather scenario used 97th percentile fire conditions which mimic a fire event during Santa Ana wind conditions. These weather values were then utilized in the BehavePlus software package in combination with site topography, fuel types, and fuel moistures in order to model fire under 97th percentile conditions. For planning purposes, the averaged worst-case fire behavior is the most useful information for conservative fuel modification design.¹⁷

- 4.2 Wildfire Behavior Summary
- 4.2.1 Pre-Project Baseline Conditions

4.2.1.1 Entrada Planning Area

As presented in Table 2, wildfire behavior in non-treated Coastal scrub, presented as a Fuel Model Sh5, represents the most extreme conditions, varying with different wind speeds. In this case, flame lengths can be expected to reach up to approximately 46.0 feet with 52 mph gusts (Offshore wind conditions) and 15.0 feet with 14 mph wind speeds (Onshore winds). Spread rates for Coastal scrub fuel beds range from less than 1.0 mph (Onshore winds) to 7.2 mph (Offshore winds). Spotting distances, where airborne embers can ignite new fires downwind of the initial fire, range from 0.5 miles to 2.5 miles. In comparison, a grass fuel type could generate flame lengths up to 39.9 feet high with a rapid spread rate of 17.9 mph. The fire could potentially be spotting from a distance of 2.3 miles.

¹⁷ Please note, model results should be used as a basis for planning only, as actual fire behavior for a given location would be affected by many factors, including unique weather patterns, small-scale topographic variations, or changing vegetation patterns.

4.2.1.2 Valencia Commerce Center Planning Area

As presented in Table 3, the maximum flame lengths anticipated in untreated, surface fuels, including grasslands and Coastal scrub, could reach 39.7 to 45.7 feet, respectively, in height with rates of the spread between 7.1 and 17.7 mph under extreme weather conditions, represented by Santa Ana winds blowing at gusts of 52 mph. Should ignition in the Castaic Creek riverbed occur, the riparian understory would be expected to burn aggressively due to the presence of large amounts of biomass from dense stands of shrubby willows. Modeling outputs indicate a transition to crown fire is expected from a fire burning in the riparian understory since the canopy heights to the lowest branch are roughly 3 feet above the ground and in most situations the canopies touch the ground. Under such conditions, expected surface flame lengths in peripheral riparian surface fuels could reach up to 24.5 feet and ignite the tree canopies with flame lengths in excess of 35 feet, and potentially up to 100 feet. Embers could be generated from both surface and crown fires resulting in the ignition of receptive fuel beds 1.6 to 2.6 miles downwind.

Fires burning from the west and pushed by ocean breezes exhibit less severe fire behavior. Under typical onshore weather conditions, a grass fire could have flame lengths of 6.7 feet in height and spread rates less than 1.0 mph. A wildfire in Coastal scrub could generate flame lengths of 14.8 and spread at less than 1.0 mph. Modeling outputs indicate flame lengths (7.1 feet) in the shrubby willow understory would transition to a crown fire with flame lengths in excess of 35 feet. Spotting distances, where airborne embers can ignite new fires downwind of the initial fire, range from 0.3 to 0.5 miles.

4.2.2 Post-Development Baseline Conditions

As presented in Table 4, Dudek conducted modeling of the Entrada Planning Area for post-FMZ fuel recommendations for this Modified Project. Fuel modification includes the establishment of irrigated and thinned zones on the periphery of the Modified Project's neighborhoods. For modeling the post-FMZ treatment condition, fuel model assignments were re-classified for the FMZ 1 (Fuel Model 8) and FMZ 2 (50% thinning zones — Fuel Model Sh1). The FMZ areas experience a significant reduction in flame length and intensity. The 46.0-foot (Coastal scrub fuel bed) and 39.9-foot (grass fuel bed) tall flames predicted during pre-treatment modeling during extreme weather conditions are reduced to less than 10.6 feet tall at the outer edges and less than 3.0 feet in the FMZ 1 near the structures of the development due to the higher live and dead fuel moisture contents. Fuel model assignments for all other areas remained the same as those classified for the existing condition. As depicted, the fire intensity and flame lengths in untreated, Spineflower Preserve areas would remain the same.

Dudek also conducted modeling of the VCC Planning Area for post-FMZ fuels treatment recommendations as shown in Table 5. Fuel modification includes the establishment of irrigated landscaping on the periphery of the proposed commercial development. For modeling the post-FMZ treatment condition, fuel model assignments were re-classified for the developed Fuel Modification Zone A (Fuel Model 8), and Fuel Modification Zone B (Fuel Model SH1 for thinning Coastal scrub and Gr1 for grasses cut to 6 inches in height). The FMZ areas experience a significant reduction in flame length and intensity. The 46.0-foot tall flames predicted during pre-treatment modeling for the VCC site during extreme weather conditions are reduced to 10.6 feet tall at the outer edges of the FMZ and 3.0 feet by the time the inner portions (i.e., irrigated, Zone A) of the FMZ are reached. During onshore weather conditions, a fire approaching from the west would be reduced from 14.8-foot tall flames to less than 2.3 feet tall in both the irrigated and thinning zones with much lower fire intensity due to the higher live and dead fuel moisture contents. Fuel model assignments for all other areas remained the same as those classified for the existing conditions. As



depicted in Table 5, the fire intensity and flame lengths in untreated, biological open space areas (i.e., Coastal scrub and cottonwood-willow riparian areas) would remain the same.

4.3 Modeling Results When Including Ongoing Livestock Grazing

The Modified Project, along with the larger region, benefits from reduced fire ignitions and fire behavior resulting from the ongoing Newhall Land agricultural and grazing activities. Specifically, the livestock grazing program utilizes practices implemented on the greater Ranch over the last several decades and continues these practices as part of the holistic land management approach and managing wildfire risk simultaneously. This modeling described above conservatively does not take into account any benefits from Newhall's ongoing grazing operations by analyzing the Modified Project area's fire behavior with a vegetation baseline condition that is assumed to be untreated/undisturbed, native fuel beds. This conservative approach ensures that the provided FMZ widths are adequate for protecting the structures and future populations even if the ongoing grazing operations were to cease in the future for a period of time.

However, for information purposes, the modeling also considered the scenario with ongoing livestock grazing, which results in reduced fire behavior in terms of flame lengths, fire spread rates, heat output, and overall intensity. For example, flame lengths are reduced throughout the treated area and the highest modeled flame lengths were reduced from 58 feet to 18 feet. It is anticipated that the livestock grazing program will continue to provide these benefits, but even if the program is halted at some future date, the Modified Project's planned FMZs provide the necessary setbacks and protection and do not rely on livestock treatments. Thus, the ongoing livestock grazing program provides additional benefits with respect to wildfire protection but is not necessary for the purpose of this FPP's evaluation.

4.4 Modified Project Area Fire Risk Assessment

Wildland fires are a common natural hazard in most of southern California with a long and extensive history. Southern California landscapes include a diverse range of plant communities, including vast tracts of grasslands and shrublands, like those found adjacent to the Modified Project Site. However, because the adjacent lands are part of a historic grazing operation, the fuels are lighter, spacing is less dense, and ongoing grazing maintains reduced fire behavior. Wildfire in Mediterranean-type ecosystems ultimately affects the structure and functions of vegetation communities (Keeley 1984) and will continue to have a substantial and recurring role (Keeley and Fotheringham 2003). Supporting this are the facts that 1) native landscapes, from forests to grasslands, become highly flammable each fall, and 2) the climate of southern California has been characterized by fire climatologists as the worst fire climate in the United States (Keeley 2004) with high winds (Santa Ana) occurring during autumn after a six-month drought period each year. The most common type of fire anticipated in the vicinity of the Modified Project Area is a wind-driven fire from the north/northeast, moving through the grazed remnants of non-native grasses and sage scrub shrubs found on the slopes and base east of I-5. With the conversion of the landscape to ignition-resistant development, wildfires may still encroach upon and drop embers on the Modified Project Site, but would not burn through the Site due to the lack of available fuels. Wildfires starting on the Modified Project Site would not be anticipated to increase from existing levels due to the ignition-resistant landscapes, and perimeter fuel modification zones which are designed to protect the Modified Project while also minimizing the likelihood that an on-site fire escapes into wildland areas.



Therefore, it will be critical that the latest fire protection requirements, developed through intensive research and real-world wildfire observations and findings by fire professionals, for both ignition-resistant construction and for creating defensible space are implemented and enforced. The Modified Project, once developed, would not facilitate wildfire spread and would reduce projected flame lengths to levels that would be manageable by firefighting resources for protecting the Modified Project Site's structures, especially given the ignition resistance of the structures and the planned ongoing maintenance of the Site's landscapes. In addition, the proposed 100- to 200- horizontal feet FMZ widths, depending on County Fire direction and geographic constraints and the fuel breaks provided by the grazed lands immediately adjacent to the Modified project provide a significant buffer and reduce wildfire intensity and flame lengths to levels that present a much lower threat to a hardened community like the Modified Project.

Variables Used for Fire Behavior Modeling Efforts

Variable	Summer Weather Condition (Onshore Winds)	Extreme Weather Condition (offshore/Santa Ana Winds)
1h Moisture	4%	1%
10h Moisture	5%	2%
100h Moisture	10%	5%
Live Herbaceous Moisture	45%	30%
Live Woody Moisture	90%	60%
20-foot Wind Speed (upslope/downslope)		19 mph (sustained winds)
	14 mph (sustained winds)	and wind gusts of 52 mph
Wind Direction	225°	45°
Wind Adjustment Factor (BehavePlus)	0.4	0.4

Source: Del Valle (045445) Remote Automated Weather Station

Fire Behavior Model Results—Existing Conditions for Entrada South

Fire Scenarios	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Scenario 1:south-east-facing, 25% slope; Offshore 52 mph gusts (97th percentile)						
Valley oak/grass (Gr4)	39.9	17,131	17.9	2.3		
Coastal scrub (Sh5)	46.0	23,393	7.2	2.5		
Scenario 2: south-facing, 20% slope; Offshore 52	Scenario 2: south-facing, 20% slope; Offshore 52 mph gusts (97th percentile)					
Coastal scrub (Sh5)	45.7	23,045	7.1	2.5		
Scenario 3: north-facing, 27% slope; Onshore 14 mph winds (50th percentile)						
Coastal scrub (Sh5)	15.0	2,059	0.83	0.5		

Fire Behavior Model Results—Post-Project Conditions for Entrada South

Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)	
Scenario 1: Fuel treatments, South-east-facing, n	nanufactured slo	pes, Offshore 52 mph	gusts (97th percen	tile)	
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4	
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9	
Fuel modification zone 2 (Gr1)	4.0	115	0.7	0.5	
Scenario 2: Fuel Treatments, south-facing, manu	factured slopes;	Offshore 52 mph gusts	s (97th percentile)		
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4	
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9	
Scenario 3: Fuel Treatments, north-facing, manufactured slopes; Onshore 14 mph winds (50th percentile)					
Fuel modification zone 1 (FM8)	1.3	10	0.03	0.1	
Fuel modification zone 2 (Sh1)	0.9	4	0.03	0.1	



SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 8a BehavePlus Fire Behavior Analysis for Entrada Planning Area Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK

Variables Used for Fire Behavior Modeling Efforts

Variable	Summer Weather Condition (Onshore Winds)	Extreme Weather Condition (offshore/Santa Ana Winds)
1h Moisture	4%	1%
10h Moisture	5%	2%
100h Moisture	10%	5%
Live Herbaceous Moisture	45%	30%
Live Woody Moisture	90%	60%
20-foot Wind Speed (upslope/downslope)		19 mph (sustained winds)
	14 mph (sustained winds)	and wind gusts of 52 mph
Wind Direction	225°	45°
Wind Adjustment Factor (BehavePlus)	0.4	0.4

Source: Del Valle (045445) Remote Automated Weather Station

Fire Behavior Model Results—Existing Conditions for Valencia Commerce Center

Fire Scenario	Flame Length ¹ (feet)	Spread Rate ¹ (mph)	Fireline Intensity ¹ (Btu/ft/s)	Spot Fire ¹ (miles)	Surface Fire to Tree Crown Fire	
Scenario 1: flat, <5% sl	Scenario 1: flat, <5% slope; Offshore 52 mph sustained gusts (97th percentile)					
Grass (Gr4)	39.7	17.7	16,929	2.3	No	
Coastal scrub (Sh5)	45.7	7.1	23,043	2.5	No	
Southern Cottonwood- Willow Riparian ^{2,3} (Sh4)	24.5	4.5	5,938	1.6	Crowning ⁴	
Scenario 2: south-facing	g, 10% slope;	Onshore 14 mph sust	ained winds (50th percentile)			
Grass (Gr4)	6.7	0.6	351	0.3	No	
Coastal scrub (Sh5)	14.8	0.8	1,989	0.5	No	
Southern Cottonwood- Willow Riparian ^{3,4} (Sh4)	7.1	0.4	396	0.3	Crowning ⁴	
Scenario 3: north-facing	g, 40% slope;	Offshore 52 mph sus	tained gusts (97th percentile)		
Coastal scrub (Sh5)	46.3	7.3	23,684	2.6	No	

Note:

1. Wind-driven surface fire.

- 2. Riparian overstory torching increases fire intensity. Modeling included canopy fuel over Sh4, which represents surface fuels beneath the tree canopies.
- 3. A surface fire in the mixed willow riparian forest would transition into the tree canopies generating flame lengths higher than the average tree height (35 feet). Viable airborne embers could be carried downwind for approximately 1.0 mile and ignite receptive fuels.
- 4. Crowning= fire is spreading through the overstory crowns.

Fire Behavior Model Results—Post-Project Conditions for Valencia Commerce Center

Scenario Scenario 1: Fuel treatments manufactured slope	Flame Length (feet) s. Offshore 52 m	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4		
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9		
Scenario 2: Fuel Treatments, manufactured slopes; Onshore 14 mph winds (50th percentile)						
Fuel modification zone 1 (FM8)	1.5	14	0.05	0.1		
Fuel modification zone 2 (Gr1)	2.3	33	0.3	0.1		
Scenario 3: Fuel Treatments, manufactured slopes; Offshore 52 mph gusts (97th Percentile)						
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4		
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9		

SOURCE: AERIAL-EAGLE AERIAL 2018

DUDEK Ø <u>462.5</u> 925 Feet



FIGURE 8b BehavePlus Fire Behavior Analysis for VCC Planning Area Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK

DUDEK

5

Additional Factors for Considering Potential Wildfire Risks Associated with the Modified Project's Introduction of New Development

Research indicates that while humans can drive wildfire ignition risk in the WUI, comprehensive actions can be taken to mitigate such risks to less than significant levels (Elia et al., 2019). When fire protection is implemented at the parcel level and leverages ignition resistant building materials, infrastructure improvements, increased response capacity, and incorporates landscape design FMZs, the wildfire risk can be reduced not only within the proposed development but in the surrounding environment as well (Newman et al., 2013). The following section summarizes factors for determining wildfire risk from new development and potential opportunities to mitigate such risks.

Research has indicated that increased human activity in WUI areas can result in an increased likelihood of ignition (Keeley & Syphard, 2018; Syphard, Clayton, et al., 2007; Syphard & Keeley, 2015). As such, residential development within fire-prone areas is commonly characterized as the principal driver of wildfire risk (Keeley & Syphard, 2018; Syphard, Clayton, et al., 2007; Syphard & Keeley, 2015). However, as humans can drive wildfire risk they can in turn reduce it by household level or parcel level decisions, such as home siting, building materials, and landscape design that can reduce risk in the WUI environment (Newman et al., 2013). These decisions can take the form of reducing fire ignition risks by converting fire-prone areas to ignition-resistant, maintaining ground covers, constructing ignition-resistant homes and hardscapes, and increasing the development setback from the wildland-urban interface (Newman et al., 2013). This change occurs through the strategic implementation of fire protection measures that result in planned alterations to fuel, increased ignition resistant construction, enhanced fire protection features, higher wildfire risk awareness, and maintenance of fire protection features. When developments are planned accordingly, the fuel availability and fuel continuity decrease, while the probability of fire suppression increases (Fox et al., 2018).

The dual benefit of building a fire-hardened development is that the same features that protect the development from a wildfire also play a significant role in protecting wildlands and surrounding areas from Modified Project-related fires through ignition reduction.

5.1 Reducing Wildfire Risks Associated with Introducing Ignition Sources and increasing Human Activities in the WUI

As previously mentioned, in southern California humans play a major role in ignitions by influencing the timing and spatial pattern of fires (Keeley & Syphard, 2018). As a result, humans account for more than 95% of ignitions in the region (Keeley & Syphard, 2018). The relationship between human activities and natural dynamics has contributed to altering fire regimes (Syphard et al., 2007). One alteration is that urban development increases the risk of repeated fires on the landscape (Syphard, Clarke, et al., 2007). As humans move into landscapes with patterns of ignitions change as well (Syphard, Clarke, et al., 2007). However, the number of ignitions and the area

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burned varies by an ignition source (Syphard & Keeley, 2015). Overall, human-caused ignitions peaked in 1980 and have since dropped likely due to increased efficiencies in fire prevention, changes in infrastructure, a decline in smoking, neighborhood watch program, penalties for arsonists, and new developmental rules (Keeley & Syphard, 2018). However, while the number of ignitions has decreased the area burned has not changed, indicating while fires are fewer they are larger in magnitude (Keeley & Syphard, 2018). The relationship between ignitions and human development is complex. While human-caused ignitions increase as populations and development expand into the WUI this increase reaches a peak and then declines at the point at which development or impervious surfaces (hardscape) outweigh the wildland fuels (Keeley & Syphard, 2018).

By analyzing all wildfire ignitions included in the CAL FIRE Fire and Resource Assessment Program (FRAP) database dating back over 100 years it was found that in the case of one Southern California county (San Diego County), equipment-caused fires were by far the most numerous (Syphard & Keeley, 2015). These ignitions accounted for most of the area burned, followed closely by the area burned by power line fires (Syphard & Keeley, 2015). This pattern is consistent beyond San Diego County and is applicable in Los Angeles County. In Los Angeles County a common source of wildfire ignition stems from human activities such as smoking, playing with fire, and powerlines (Keeley & Syphard, 2018). Ignitions are classified as equipment caused resulted from exhaust or sparks from power saws or other equipment with gas or electric motors, such as lawnmowers, trimmers, or tractors. In San Diego County and Los Angeles County, ignitions were more likely to occur close to roads and structures, and intermediate structure densities (Syphard & Keeley, 2015). Powerline-based ignitions that have caused or contributed to recent fires, such as the Camp Fire in 2018, have demonstrated how the presence of powerlines (particularly the lower height distribution lines) can result in significant wildfire ignitions. Part of the challenge is that as humans push into WUI areas powerlines are often located in areas where access is difficult creating challenges for firefighting tactics (Syphard & Keeley, 2015). Research has indicated that important factors in structure loss are the coincidence of human-caused ignitions with severe weather and the location and pattern of housing development (Schwartz & Syphard, 2021). However, it is important to note that often these themes are researched in isolation with small proportions studying two more themes limiting our understanding of the interactions and dependencies (Price et al., 2021).

Given the number and intensity of wildfires in recent years, there has been an increasing focus on wildfires and reducing the size of wildfires (Syphard et al., 2014). However, addressing wildfires in the WUI with fuels reduction and prescribed burning is often faced with challenges related to private property constrictions (Schwartz & Syphard, 2021). Studies have shown that land-use decision-making, defensible space, homeowner preparation, and ignition prevention can complement traditional management in reducing wildfires and addressing fuels management (Schwartz & Syphard, 2021; Syphard et al., 2017). Further, given the importance of the WUI and often the lack of capacity for large-scale fuels reduction creating safer spaces within the WUI is critical (Schwartz & Syphard, 2021). Because most fires are caused by humans ignition reduction is a powerful management strategy (Syphard & Keeley, 2015). Given that we are moving into a more hazardous wildfire future land-use planning and ignition prevention represent the most effective long term solutions while traditional management and fuel breaks still play a role in addressing the coincidence of human-caused ignitions and severe fire weather (Schwartz & Syphard, 2021; Syphard et al., 2017).

To minimize the negative effects, the Modified Project has designed multi-scaled fire protection features to address the existing fire hazard, reduce ignition probability, and lower the fire risk for the Modified Project and the surrounding area. As discussed above, one of the most effective solutions to wildfire problems in the WUI is to address the wildfire hazard through land-use planning and ignition prevention. In terms of land use planning, the Modified Project is located in areas of the OVOV Area Plan that have long been designated for commercial and residential use, and the Modified Project would result in the conversion of readily ignitable fuels, such as coastal sage scrub and grasses, to irrigated/thinned landscaping and development. Notably, the Modified Project minimizes ignition risk by incorporating 100- to 200- horizontal feet FMZs, depending on County Fire direction and geographic constraints around the entire project perimeter, which will provide defensible space and reduce fire intensity and flame lengths in the event of ignition occurring. These FMZs, which are based on County Fire requirements and confirmed with site-specific modeling, will be implemented by knowledgeable professionals, inspected by third-party inspectors, and maintained in perpetuity by the Modified Project HOA. Additionally, other fuel modification/landscaping requirements like the Modified Project's roadway fuel modification zones, stormwater basin vegetation management, and the prohibition of certain highly flammable plants will further reduce the risk of fire ignition and spread despite the introduction of additional humans in the area. Critically, the structures in the Modified Project will also be built in accordance with the most state-of-the-art, ignition-resistant construction standards and building codes required by the County and the State, including Chapter 7A of the Los Angeles County Building Code (Title 26, Chapter 7A), which requires that the buildings are resistant to ignitions from direct flames, heat, and embers. Other structural requirements include fire-resistant roofing, vent covering and opening limitations, noncombustible or ignition-resistant exterior walls, ignition-resistant eaves, and porch ceilings, insulated windows and exterior doors, and other measures that have proven to substantially reduce the risk of building ignition and fire spread. Finally, a key component of reducing the chances of fire ignition and spread involves educating residents to have a high fire risk awareness. In this respect, the Modified Project includes as mitigation a robust education awareness program that will provide residents with wildfire safety information and create greater risk awareness for occupants and their employees. Through this program, residents will learn about necessary landscape maintenance, activities in a wildfire risk area, preventing wildfires, structural-based fire protection features, and wildfire evacuation information.

As evidenced by these measures and the other measures described in Section 3 Fire Safety Requirements – Regulations and Design Features, the Modified Project has outlined steps in which it will implement ignition reduction from common anthropogenic ignition sources, leverage its capacity for implementing fuels reduction including defensible space, and consider both onsite and offsite wildfire risk. Still, there are other project-specific anthropogenic fire risks that are worthy of being highlighted for the purposes of this FPP. These include powerlines, vehicles, and machinery. Each is discussed below.

5.1.1 Powerlines

Common ignition sources in southern California are related to powerlines and many destructive fires across the State have been caused by powerlines (Keeley & Syphard, 2018). However, this risk can be mitigated by burying powerlines. The Modified Project will underground all project-related distribution power lines on the Modified Project site.

5.1.2 Vehicles

A potential source of vegetation ignitions in the Modified Project area is the existing Interstate (I-5), Magic Mountain Parkway, Valencia Boulevard, and other roads used by Modified Project residents and occupants. However, the Modified Project is not increasing vehicle trips compared to the State-certified EIR. Further, the Modified Project is not anticipated to increase the number of cars on the existing roadways compared to the 2017 Approved Project and therefore will not raise the existing potential for vehicle-based ignitions. Even so, the Modified Project provides roadside fuel modification via the removal of flammable vegetation and provisions for landscaping along roads it controls. Additionally, the Newhall's historic grazing program in areas adjacent to developed and developing areas



reduces fuel loads adjacent to Valencia Boulevard, I-5, and Magic Mountain Parkway. The Modified Project includes provisions for creating increased separation from potential roadside ignition sources and potential fuel beds that will not only protect the Modified Project but also adjacent communities such as Stevenson Ranch. These efforts reduce or minimize the ability of a vehicle-related spark, catalytic converter failure, or another ignition source to ignite and spread fire from the roadsides into unmaintained fuels. Ongoing maintenance along I-5 is provided by CalTrans and is expected to continue, if not increase in frequency as part of overall fire reduction efforts that are beyond the control of the Modified Project As such, the Modified Project is not expected to significantly increase the already known fire risk associated the preexisting roads. The onsite roadways would comply with all fire department access requirements and be adjacent to fuel modification. Further, the Interior roadways are also not expected to result in significant vehicle ignitions. Therefore, even if ignition were to occur within the Modified Project it is highly unlikely it would be sustained or spread beyond the Modified Project site due to the hardened landscapes, hardscape, and adjacent fuel modifications areas. Additional analysis of the Modified Project's potential impacts compared to the 2017 Approved Project is provided in Section 8.

5.1.3 Machinery

The use of equipment in WUI areas is another common source of modern-day human-caused ignitions. This is due to heated machinery, sparks, hot fluids, or exhaust igniting vegetation. Potential ignitions due to equipment use can occur during construction activities or ongoing operational risk.

5.1.3.1 Construction Activities

Construction activities associated with the Modified Project would introduce potential ignition sources to the Modified Project sire. However, the Modified Project would comply with County Fire requirements for activities in hazardous fire areas and the CFC. Spark arrestors would be required on all equipment with a solid or liquid fuel motor used on the Modified Project Site. The Modified Project would also comply with Section 326.12.1 of the Fire Code which prohibits the use or operation of any tractor, construction equipment, engine, machinery, or any steam, oil, or gasoline-operated stationery or mobile equipment, from which a spark or fire may originate unless such equipment is provided with a qualified device or spark arrester installed in or attached to the exhaust pipe which will prevent the escape of fire or sparks. Further construction activities would comply with Chapter 33 of the CFC Fire Safety During Construction and Demolition. Per Section 3304 the Modified Project would take precautions against ignitions such as but not limited to prohibiting smoking except in approved areas, preventing the accumulation of and removing combustible debris, implementing fire watch personnel where required by the fire code official, having approved water supply onsite, and maintaining vehicle access for firefighting to all construction and demolition area. Additionally, the Modified project would prepare a Construction Fire Protection Plan (CFPP) that will address fire safety practices to reduce the possibility of fire during construction activities. However, due to the existing conditions and the that the Modified Project is located in a VHFHSZ, there is a potential for a significant fire hazard due to construction activities. As such, additional construction Design Features would be implemented by the Modified Project to lower the potential fire hazard below the level of significance. This would require that prior to combustible being brought on-site utilities, access roads, and fuel modification zones would be first established. The design features, CFPP, and regulatory requirements would reduce the risk of wildfire ignition and spread from the Modified Project during construction activities. Additional analysis of the Modified Project's potential impacts compared to the 2017 Approved Project is provided in Section 8.



5.1.3.2 Operational Activities

Operational activities associated with maintenance or use of the Modified Project site also have the potential to introduce ignitions to the area. The operational activities would also be required to comply with the CFC spark arrestor requirements, Chapter 33 Fire Safety During Construction and Demolition for any post-development construction, maintenance, or renovations, and other applicable codes and requirements based on the activity type. Operational activities would also comply with County Fire requirements for activities in fire hazard areas as described above. FMZs and landscaping within the Modified Project site would require ongoing maintenance. These common area landscapes and perimeter FMZs would be managed and maintained by the HOA through a qualified contractor. The contractor would be required to meet fire safety requirements regarding equipment, the timing of maintenance, and fire suppression capabilities. This type of maintenance program is far safer and more controlled than if each homeowner provided their own maintenance of FMZ areas. Additionally, maintaining the FMZs and landscaping accordingly would allow them to continue their function purpose of reducing potential ignition and fire spread both from fire onsite or offsite in origin. Further, even if the equipment were to cause a fire it is unlikely it would spread offsite due to the adjacent FMZs and ignition resistant landscape. A robust wildfire education program would provide residents and occupants with ongoing education regarding wildfire, as described in Section 7.2. The education program would be implemented by the HOA and have a layered approach to wildfire awareness that includes both passive and active features. The educational program would cover a wide range of information such as residential evacuation planning, defensible space guidelines, how to maintain fire protection features, activities in a fire risk area, and more, all provided in easy-to-understand, graphically based materials. This would education regarding safe activities in wildfire risk areas, including the appropriate use of machinery, during red flag warning days, restrictions on the use of machinery in the Modified Project area would be implemented. This requirement, in conjunction with the Modified Project Design and regulation compliance, will significantly reduce potential ignitions both in the Modified Project area and limit the potential impact on the surrounding area. Additional analysis of the Modified Project's potential impacts compared to the 2017 Approved Project is provided in Section 8.

5.1.4 Project Features Addressing Fire Risk Associated with Increasing Human Activities in the WUI

5.1.4.1 Vegetation Management

The fuel conditions immediately adjacent to the Modified Project will also be addressed through FMZs. The existing hazardous fuel, mostly shrub fuels, on the Modified Project site and within FMZ areas would be converted into hardscape and or modified to reduce fuel densities that are managed and maintained. In an FMZ, combustible vegetation would be removed and/or modified and partially or totally replaced with more appropriately spaced drought-tolerant, fire-resistant plants including an irrigated zone. This would provide a managed area where fire spread is not facilitated toward the Modified Project or away from the Modified Project into wildland areas by redistributing the fire risk on a landscape and altering the interaction between fire, fuels, and weather (Cochrane et al., 2012). FMZs would also reduce the likelihood of canopy fires, lower ember cast, and have a shadow effect on the untreated landscape by reducing the probability of burning and the potential fire size (Cochrane et al., 2012). As such, the Modified Project would lower ignition potential in the area by reducing and altering the available fuel scape to a less flammable managed condition not conducive to fire spread and increasing the probability of fire suppression if ignition occurs (Fox et al., 2018). Further, Modified Project benefits from Newhall's historic grazing program which maintains adjacent grassland and addresses larger scale landscape fuel conditions. As a result, the risk of a structure being destroyed, whether from a fire from within the development or outside the development, is significantly lower when defensible space is implemented. Studies have also indicated that treatments in close

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proximity to residential buildings provide greater protection (Syphard et al., 2014). Accordingly, the Modified Project will provide an ERZ which is a 5-foot wide non-combustible zone around all structures to address the potential for ember-caused ignitions next to structures.

The Modified Project FMZs and fuels management will serve to create defensible space around the structures. Defensible space adjacent to structures also functions to limit the spread of fire from the built environment into off-site vegetation (Warziniack et al., 2019). The FMZ areas and historic grazing areas function as fuel breaks which are crucial in reducing fire risk and facilitating effective fire prevention (Wang et al., 2021) The irrigated zone acts as a green barrier that uses specific vegetation growth, such as high-internal moisture, fire-resistive species, to reduce fire spread (Wang et al., 2021). The high internal moisture and spacing between plant groups make it more difficult for ignition to occur and fires to spread from plant to plant. This affects fire behavior by reducing flame lengths, slowing spread rates, and lowering fire intensity. If a fire from a structure or vehicle spread to the irrigated zone, the fire-resistive species in this zone would be less likely to ignite and reduce the likelihood of the fire spreading off-site (Wang et al., 2021). The use of irrigated areas to reduce wildfire impacts can achieve wildfire mitigation and offer wildfire protection in fire-prone areas beyond the Modified Project site (Wang et al., 2021). Further fuel treatments also have an ecological benefit by reducing the potential fire severity which can result in high post-fire litter cover, higher herbaceous plant cover, higher biodiversity, and lower levels of invasive pests, benefiting adjacent open space areas (Safford et al., 2009b). The benefits of defensible space and FMZs are not solely limited to the built environment. Positioning the low plant density, irrigated zone directly adjacent to the development pad, and implementing defensible space provides a significant buffer between structures and open space areas. These techniques aid in preventing ignitions in the built environment but also across the larger landscape.

However, long-term protection of the development and the surrounding area is dependent on the maintenance of fuel modification as even fire-safe designs can degrade over time. To alleviate this concern, the Modified Project will conduct annual assessments of the FMZs and the Modified Project HOA will be responsible for the long-term funding of fire protection features. During this maintenance, dead and dying material and undesirable plants will be removed. Thinning will also be conducted as necessary to maintain plant spacing and fuel densities. This will keep the FMZs and landscaped areas in a highly fire-resistive condition free of accumulated flammable debris and plants.

These features will further reduce the potential for wildfire in open space areas and potential impacts on surrounding communities. Additional analysis of the Modified Project's potential impacts compared to the 2017 Approved Project is provided in Section 8.

5.1.4.2 Ignition Resistant Construction

With the incorporation of ignition-resistant construction, the likelihood of structural ignition occurring within the Modified Project area is minimized. Ignition-resistant construction is critical in preventing building ignitions from windblown embers. The Modified Project will comply with Chapter 7A of the Los Angeles County Building Code (Title 26, Chapter 7A), "Construction Methods for Exterior Wildfire Exposure" so that the buildings are resistant to ignitions from direct flames, heat, and embers. The Modified Project, based on its location and ember potential, is required to include the latest ignition and ember resistant construction materials and methods for roof assemblies, walls, vents, windows, and appendages, as mandated by the County Fire and the County's Fire and Building Codes (e.g., Chapter 7A). The structure design is crucial against wind-driven fires and newer homes are more likely to survive. Dual paned windows were significant in protecting against thermal exposure. (Syphard et al., 2017). This lowers the threat of onsite fires impacting offsite areas as the structures themselves are very unlikely to act as fuel



which will minimize the potential for home-to-home ignitions, reducing the likelihood of an onsite fire spreading within the community or toward open space. Additionally, the adjacent fuel modification will aid in isolating onsite structure fires or accidental ignitions to the Modified Project area should they occur.

Structure design, such as the Modified Project's, is crucial in protecting an area against wind-driven fires. The Modified Project provides features that not only prevent fire intrusion but prevent structures fires from escaping into offsite areas. This allows the Modified Project to not only protect the immediate area but the surrounding environment.

5.2 Site Specific Assessment of Offsite Ignition Risk

The following section summarizes the assessment of the constructed and inhabited Project resulting in an increased likelihood of wildfire ignitions that impact existing land uses in the Project's proximity. This assessment has been conducted as part of the Project's proactive approach to fire safety.

To date, there is no single recognized method for analyzing off-site ignition risk impacts from a proposed master planned community. The following evaluates the potential off-site ignition and spread related impacts for a new master planned community in a fire hazard severity zone.

As explained in this FPP, the changes to the Modified Project from the 2017 Approved Project are not expected to increase the risk of offsite wildfire impacts. As with the 2017 Approved Project, the Modified Project site is generally surrounded by development and not entirely adjacent to undeveloped, high fuel areas. As described in Section 2.2.3, there is significant development near the Entrada Planning Area, including I-5 to the east, Six Flags Magic Mountain theme park and State Route 126 (SR-126) to the north, Mission Village to the west, and the existing Westridge community to the south, along with secondary road infrastructure to the south, east, and north. Land uses surrounding the VCC Planning Area include commercial and residential development as well as vacant land with limited vegetative cover. Existing mixed-use development is located immediately north of the VCC Planning Area and commercial development and lack of extensive vegetative cover immediately adjacent to the Modified Project site reduces the risk of both encroaching fires and offsite fire spread, including offsite spread from windblown embers.

5.2.1 Entrada South and Valencia Commerce Center Offsite Wildfire Risk Potential

The Dudek Fire Protection Planning Team developed this assessment method of evaluating potential offsite fire risks utilizing best practices, extensive research, publicly available and project-specific fire environment data, and years of professional experience to quantify and weight the various fire protection measures. The approach is comprised of two main sections which are each divided into fire risk categories or "modules."

1. Potential Wildfire Hazard and Offsite Risks

The Wildfire Hazard and Offsite Risk section of this evaluation considers the relative wildfire hazard and risk to offsite communities.

a. Project Surroundings

The Project Surroundings module accounts for the inherent nature of the land surrounding a proposed project which may have characteristics that influence the vulnerability of the adjacent lands/communities that may be a risk from

a fire originating at the proposed Project site. The current land uses, and management practices may have an impact as well. Assessing these factors can help to determine the likelihood and potential fire behavior of a wildland fire if it were to ignite from within a proposed Project and spread to its surroundings compared to the existing conditions without the proposed Project. Features and characteristics within the surroundings module include but are not limited to topography, climate, fire history, and State Fire Hazard Severity Zone designations.

b. Project Site

The inherent nature of a Project's site may have characteristics that affect wildland fire behavior. Assessing and mitigating these factors can help to reduce potential ignitions and ultimately wildland fire behavior. The project site module includes features that account for the project site's specific fire environment, development design characteristics and their conformance with applicable wildfire risk mitigation regulations, project size, and FHSZ classification.

c. Potential Indirect Project Related Risks

This module includes features that are indirect to the project's design and wildfire risk reduction approach. Specifically, the approach features project uses and activities that may influence the potential for offsite ignitions including homesite activities, open space recreation, and increased use of offsite roadways.

2. Project Specific Features to Mitigate Wildfire Risk Potential

As noted above, the changes to the Modified Project from the 2017 Approved Project are not expected to increase the risk of offsite wildfire impacts. This Project Specific Features to Mitigate Wildfire Risk section assesses key features associated with development in the WUI that have influence in determining the risk of offsite ignitions. Project features include design characteristics and regulatory requirements that have been similarly recognized at the state and local level as they are featured in multiple regulatory documents (California Fire Code, LA County Fire Code, California Building Code, and California Public Resources Code).

a. Project WUI Mitigation Strategies

This module incudes WUI mitigation strategies that reduce wildfire risk. WUI mitigation strategies help to reduce the potential of a fire igniting within the Project site's landscaping or spreading outwardly through the landscaping if the structure were to ignite. Important evaluation topics include whether or not the project has an approved FPP, code compliant landscape plans, and code compliant defensible space surrounding development areas, in addition to robust fire response features including adequate water supply and fire department access.

b. Vegetation

The vegetation module accounts for the characteristics of perimeter FMZs. FMZs have been a proven method for mitigating wildfire risks associated with offsite wildfires encroaching upon master planned communities, and they also function to prevent or minimize the passage of fire or airborne embers originating from the Project area itself into offsite areas. The effectiveness of FMZs for mitigating offsite wildfires and airborne embers is accounted for in this module through the width of the FMZ and the characteristics of the vegetation within the FMZ (i.e., natural or landscaped vegetation).



c. Structures

The structures module includes building construction features that influence structural ignitability. While construction in compliance with Chapter 7A of the CBC has been proven extremely effective in reducing the potential for structures to ignite from wildfires, these requirements also reduce the likelihood of structure fires igniting from non-wildfire sources, therefor limiting the potential for onsite structure fires to transition into offsite areas. Buildings constructed to exterior wildfire exposure standards can help to reduce the potential of a fire originating within the structure from escaping its confines. In addition, if a structure were to ignite, these construction methods could reduce the potential of a fire from passing to adjacent structures or even becoming a conflagration with multiple structures involved. Specific building construction features assessed in this module include the type of roofing, vents, windows, and others.

5.2.1.1 Project Specific Assessment of Offsite Wildfire Risk Potential

This section provides a project specific assessment corresponding to each module within their respective section.

- 1. Potential Wildfire Hazard and Offsite Risks
 - a. Project Site Module

As discussed above, while the Project Site is occasionally subject to strong Santa Ana wind events, the location of planned development areas in relationship to surrounding open spaces and development areas limits the potential for onsite fires to be driven offsite by Santa Ana winds. For example, the Entrada South planning area is surrounded on all sides by development including Magic Mountain Parkway to the north, The Old Road and Interstate-5 to the East, the Westridge Community to the south, and the Mission Village Project to the west which is currently being developed. The VCC planning area is similarly surrounded by areas of development including industrial areas, the Hasley Canyon Community, Highway 126, and Interstate-5. These adjacent areas of development function as fuel breaks and limit potential for wildfire to spread away from the proposed Project.

Generally, the risk of wildfire spreading offsite is dependent on its severity. For example, low severity fires burning within the proposed Project's undeveloped areas with natural fuels would most likely be extinguished quickly due to slow rates of spread and rapid emergency response from nearby fire stations. Wildfire severity of fires burning within the proposed Project is likely to be driven by climate as previously mentioned, in addition to topography and fuels/vegetation.

Topography:

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up-slope and slower spread down-slope. Terrain that forms a funneling effect, such as chimneys, chutes, or saddles on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. The Entrada Planning Area is located south of the Santa Clara River on rugged terrain dominated by steep slopes which have the potential to increase wildfire severity, whereas the VCC Planning Area is situated in relatively flat to rolling areas.

Fuels/Vegetation:

The Project Site's vegetative fuels are primarily annual grassland, scrub and chaparral habitat, and riparian forest. Man-made land cover types, such as agriculture and disturbed land were also previously mapped on the Entrada and VCC Planning Areas. As described in section 2.2.4.1. Variations in vegetative cover type and species

composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability. The native shrublands that compose the coastal scrub community on the Modified Project sites are a high potential hazard based on such criteria. However, post-development vegetation composition proximate to the Entrada South and VCC footprints would be significantly different than current conditions. Following build-out, irrigated landscape vegetation associated with fuel modification zones (FMZ) A and B are expected to cover the immediate area surrounding of the Project Site. Consistent with requirements, native and naturalized vegetation occurring within FMZ Zone C is not expected to be irrigated, although overall fuel volumes will be reduced by removing dead and dying plants, non-natives, highly flammable species, and thinning the remaining plants so they would not readily facilitate the spread of fire on an ongoing basis. High hazard plant communities will be reduced in size given extensive development of the VCC and Entrada South planning areas.

b. Potential Indirect Project Related Risks Module

The Modified Project will not result in increased use of roadways compared to the 2017 Approved Project. Roadside fuel modification zones will be implemented to mitigate the potential for wildfires originating from roadways. In addition to onsite roadside fuels reduction, other offsite roadside fuel modification has occurred surrounding the proposed Project including two CAL Fire Projects within the Project area, in addition to treatments associated from the adjacent Mission Village Project.

The proposed Project will include approximately 144 acres of open space with trails for recreational use. Human activity within open space leads to increased risk of ignitions in these areas. However, as previously described, the Entrada South and VCC planning areas are surrounded by areas of development including community areas, industrial parks, and major roadways. These fuel breaks reduce the risks of wildfires originating in onsite open spaces from spreading offsite. Additionally, development surrounding the Project's open spaces also increases the likelihood of early wildfire detection, as many people will always be present. Early detection allows firefighting agencies to respond quickly, enabling them to contain and suppress wildfires before they grow in size and intensity. Detecting wildfires in their initial stages increases the chances of successful containment and minimizes the resources required to extinguish them. Early wildfire detection also enables the identification and suppression of smaller fires or spot fires that may ignite from embers or sparks carried by the wind. By preventing these secondary fires, the overall spread of the wildfire can be minimized.

Homesite activities result in multiple introduced ignition sources. Activates that could start onsite fires include cooking, outdoor recreational fires, mechanical equipment use, or playing with fire. However, the Project includes the following design features that limit the potential for urban wildfires spreading offsite.

- High density clustered development which limits natural vegetation between structures
- Highly ignition resistant construction to reduce structure fires and urban conflagrations.
- Large onsite and offsite population to report illegal or risky activities that may result in a wildfire.
- Code compliant and routinely maintained perimeter FMZs which will not include plants listed on LA County Fire Department's Prohibited Plant List.
- Ignition resistant landscaping, much of which will be irrigated.



Module Assessment Results:

The Modified Project will not increase population compared to the 2017 Approved Project; in fact, the Modified Project entails a slight reduction in residential units. In addition, the Modified Project's design features, and multi-layered mitigation approach reduce these offsite fire risks:

- Roadside fuels reduction will be implemented to mitigate risks from increased vehicle traffic on the Project's roadways.
- Project open spaces are surrounded by development which prevents wildfires from burning into offsite vegetation.
- Early wildfire detection and response.
- Offsite ignitions from homesite activities are substantially mitigated through a clustered development footprint, ignition resistant construction, and ignition resistant landscaping and FMZs.
 - c. Surroundings Module

While much of the surrounding region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steep-walled canyons, is south of the Modified Project Site. Local climate, topography, and fire adapted vegetation communities make surrounding undeveloped regions highly conducive to wildfire spread. According to available data from CAL FIRE's FRAP (CAL FIRE 2020)¹⁸, 180 wildland fires have burned in a 5-mile vicinity of the Modified Project Area since the beginning of the historical fire data records.

Major community areas surrounding the Project include Castaic Junction, Val Verde, Stevenson Ranch, Valencia, Westridge, and others. The susceptibility of communities from wildfire threats is highly variable and largely dependent on various community characteristics as described throughout this FPP.

These communities feature a high-density master planned design. Housing density directly influences susceptibility to fire because in higher density developments, there is one interface (the community perimeter) with the wildlands whereas lower density development creates more structural exposure to wildlands, less or no ongoing landscape maintenance (an intermix rather than interface), and consequently more difficulty for limited fire resources to protect well-spaced homes. The intermix includes housing amongst the unmaintained fuels whereas the proposed project converts all fuels within the footprint and provides a wide, managed fuel modification zone separating homes from unmaintained fuel and creating a condition that makes defense easier (Syphard et al. 2013). Syphard and Keeley found that "The WUI, where housing density is low to intermediate is an apparent influence in most ignition maps," enforcing the conclusion that lower density housing poses a higher ignition risk than higher density communities. Other studies have also concluded that higher density master planned developments are far more fire safe compared to lower density intermix development (Caggiano et al. 2020, Syphard et al. 2012, Kramer et al. 2018, Alexandre et al. 2016). Therefore existing master planned communities within the region are well suited to withstand impacts from wildfires, as evidenced by Stevenson Ranch (a master-planned community located proximate to the Modified Project) withstanding the direct impact of a large 2003 fire with no structural damage (Murphy, 2003).

¹⁸ Based on polygon GIS data from CAL FIRE's FRAP, which includes data from CAL FIRE, USDA Forest Service Region 5, BLM, NPS, Contract Counties and other agencies. The data set is a comprehensive fire perimeter GIS layer for public and private lands throughout the state and covers fires 10 acres and greater between 1878–2020.

Module Assessment Results:

Surrounding undeveloped areas are prone to wildfires due to the local climate, topography, and fire-prone vegetation. However, developed areas surrounding the Modified Project are largely comprised of roadways, amusement parks, commercial areas, and master planned communities. Existing master planned communities in the region are well-suited to withstand wildfire impacts, and have demonstrated success in withstanding direct wildfire events, based on their design and density (Murphy, 2003).

- 2. Project Specific Features to Mitigate Wildfire Risk Potential
 - a. WUI Mitigation Strategies Module

As noted above, the changes to the Modified Project from the 2017 Approved Project are not expected to increase the risk of offsite wildfire impacts. Further, the Modified Project will employ a range of WUI mitigation strategies known to reduce the risk of damages from wildfires. These strategies prevent fires from entering into development areas, while also limiting the capacity for onsite fires to spread into offsite areas. These strategies are described in detail throughout this FPP and include compliant defensible space and fuel modification zones, adequate fire access and capacity for rapid emergency response from nearby fire stations, and mitigation measures to prevent ignitions during the construction period. In addition, all Project related electrical distribution lines will be undergrounded, removing utility lines as a potential ignition source.

The Project site is designed to not only be hardened against fire but designed to prevent fires from occurring and quickly suppress fires when they do occur. The Modified Project takes a multi-scaled approach to fire protection through wildfire education, ignition prevention, fuels management, increased response capacity, and ignition-resistant construction. The dual benefit of creating a development that can prevent a fire is that it offers protection to the surrounding communities and the environment. The requirements and recommendations outlined in the FPP have been designed specifically for the proposed construction in VHFHSZ and can significantly reduce the potential threat to offsite areas.

Module Assessment Results:

The Modified Project incorporates multiple WUI mitigation strategies that have been well proven to decrease the risk of damages from wildfires. As described, these mitigation measures are determined to have a dual benefit of mitigating offsite wildfire risk.

b. Vegetation Module

Post-development vegetation composition proximate to the Entrada South and VCC footprints is expected to be significantly different than current conditions. The Entrada South and Valencia Commerce Center Projects incorporate fuel modification zones that adhere to code regulations, strategically developed to mitigate the spread of wildfires towards and away from the Project Site. The FMZ widths outside the lot lines would be 100- to 200-horizontal feet depending on County Fire direction and geographic constraints, ranging from 2.0 to 5.0 times the modeled flame lengths based on the fuel type represented adjacent to the Development Footprint and meeting the industry guidelines for acceptable defensible space. A fuel modification plan will be submitted to the LA County Fire Department and will have preliminary approval prior to any subdivision of land or permit issuance. In order to ensure that fuel modification is appropriately maintained, the Modified Project would require the Modified Project HOA or equivalent organization to maintain the FMZs in perpetuity.



Following build-out, irrigated landscape vegetation associated with fuel modification zones (FMZ) A and B will cover the immediate area surrounding of the Project Site. Consistent with requirements, native and naturalized vegetation occurring within FMZ Zone C will be reduced by removing dead and dying plants, non-natives, highly flammable species, and thinning the remaining plants so they would not readily facilitate the spread of fire on an ongoing basis. High hazard plant communities will be reduced in size given extensive development of the VCC and Entrada South planning areas.

An assessment of previous regional wildfire ignitions highlights a strong spatial relationship with major roadways, with the majority of wildfire ignitions occurring along Interstate-5 (NIFC, 2022). In addition to fuel modification along lot lines, the Project would also conduct roadside fuel modification, removing all flammable vegetation or other combustible growth on each side of the roadway for a minimum of 10 feet (Title 32 Section 325.10). The minimum clearance of 10 feet may be increased if the fire code official determines additional clearance is required to provide reasonable fire safety.

Module Assessment Results:

Extensive vegetation management at the Project Site achieved through perimeter FMZs, roadside fuels reduction, and ignition resistant landscaping, will result in a low offsite wildfire risk caused by fires or airborne embers associated with the Project. FMZs have been a proven method for mitigating wildfire risks associated with offsite wildfires encroaching upon master planned communities, and they also function to prevent or minimize the passage of fire or airborne embers originating from the Project area itself into offsite areas.

c. Structures Module

As described in detail in section 3.5, the Entrada South and Valencia Commerce Center Project will include structural requirements mandated by the following state and local building codes which provide specific measures for developments in WUI areas.

- California Building Code, Chapter 7A
- Los Angeles County Building Code, Chapter 7A
- Los Angeles County Residential Code, Section R327
- Los Angeles County Referenced Standards Code, Chapter 12-7A

Module Assessment Results:

Structures at the Project Site will be constructed in accordance with fire safety requirements outlined in applicable state and local codes, which create a well-tested and high degree of ignition resistance, as described in detail in section 3.5 and throughout this FPP. In particular, as detailed above, properly designed master-planned communities built to current code standards have a proven track record of being highly resistant to wildfire damage, which also translates into a low risk of causing or contributing to offsite fire or airborne ember impacts on surrounding communities. Therefore, it is determined that these requirements result in a low offsite wildfire and airborne ember risk from the Project and structures within the Project Site.



Overall Potential Offsite Risk Assessment Results:

As noted above, the changes to the Modified Project are not expected to increase the risk of offsite wildfires or airborne embers compared to the 2017 Approved Project. While regional characteristics including climate, shrub dominated vegetation, and variable topography result in significant wildfire hazard, the multi-layered mitigation approached implemented by the Modified Project, as well as features of adjacent communities, result in an overall low offsite wildfire risk. Specifically, the Dudek wildfire protection planning team's analysis indicates that the overall offsite risk based on the fire environment is considered to be low. When the fire protection and prevention features that are required for the Modified Project site are applied, the risk of fire ignitions and airborne embers is considered to be reduced to an even lower level. The resulting potential for off-site ignitions is well within the range of acceptance and is supported by the lack of documented wildfire ignitions from a fire hardened, master planned community. As described in detail throughout this FPP, the Project is well prepared to withstand impacts from wildfires encroaching onto the Project. These design features and other mitigations addressing wildfire protection also serve to reduce the risk of wildfires and airborne embers originating from the Project and spreading offsite. See Section 8 for discussion of the Modified Project's potential wildfire impacts.

6 Emergency Response and Service

The following sections analyze the Entrada South and VCC Modified Project in terms of current County Fire Service capabilities and resources to provide Fire Protection and Emergency Services. The analysis that follows examines the ability of the existing County fire stations to adequately serve the Modified Project. Although it is anticipated the planned new permanent or temporary fire station or temporary fire station¹⁹ (Station 46) within the Mission Village community will be operational by the time Entrada South begins operations, to be conservative, this analysis assumes this station will not be operational by the time Entrada South begins operations. Response times were evaluated using Modified Project build-out conditions. It was assumed that phased construction would include access roads to the newly constructed buildings and that the shortest access route to those structures would be utilized.

6.1 Fire Facilities

The Modified Project is located within the County Fire's jurisdictional response area. Regionally, County Fire provides fire, emergency medical, and rescue services from 173 stations. The Department serves over 4 million residents throughout 59 cities and all unincorporated portions of Los Angeles County. The Modified Project Site lies within the North Operations Bureau, Division 3. Fire Stations 76, 124, 126, 143, and 156 would provide an initial response; however, all 22 Stations within the County Fire's Division 3 are available to service the Modified Project, if needed. These five existing stations were analyzed herein due to their proximity to the Modified Project Site. Figure 9 illustrates the locations of these stations and Table 6 provides a summary of the County fire and medical delivery system for Fire Stations 76, 124, 126, 143 And 156. For informational purposes, the planned new fire station in Mission Village (Station 46) is also described in this analysis.

The first due engine is typically the closest engine to an incident and would be the initial response unit. It is common for multiple engines to respond to emergency calls, based on availability and proximity.

Fire Station	Address	Staffing	Apparatus
76	27223 Henry Mayo Drive Valencia, California 91355	3 person engine crew	Paramedic engine and brush patrol
124	25870 Hemingway Ave. Stevenson Ranch, California 91381	3 person engine crew; 2 person paramedic squad	Paramedic engine and paramedic squad
126	26320 Citrus Street Santa Clarita, California 91355	3 person engine crew; 4 person Quint ¹ crew; battalion chief	Paramedic Engine; Quint ¹ , BC command vehicle, incident command post, and RAC ² 126
143	28580 Hasley Canyon Rd. Castaic, California 91355	3 person engine crew	Paramedic engine
156	24525 Copperhill Drive Santa Clarita, California 91354	4 person engine crew	Paramedic engine; a water tender

Table 6. Closest Fire Stations to the Modified Project Site

¹⁹ To be conservative, this analysis does not assume that Station 46 will be operational by the time Entrada South begins operations.

Fire Station	Address	Staffing	Apparatus
46 ³	Mission Village	3 person engine crew; 4 person Ouint ¹ crew	Paramedic engine; Quint ¹ ;

Table 6. Closest Fire Stations to the Modified Project Site

Notes

¹ A quintuple combination pumper or "quint" is a fire-service apparatus that serves the dual purpose of an engine and a ladder truck.

² RAC= Rapid Air Cushion

³ Memorandum of Understanding Regarding Fire Stations for the Newhall Ranch Specific Plan

The closest existing fire station to the Entrada Planning Area is Station 126 located at 26320 Citrus Street, which includes a paramedic engine staffed with a captain, a firefighter specialist, and a firefighter/paramedic 24-hours per day/seven days per week. Station 76, located at 27223 Henry Mayo Drive, is the next closest station and staffs a minimum of eight firefighters and a battalion chief 24-hours per day/seven days per week and houses a 4-person paramedic engine, a 4 person Quint, a Rapid Air Cushion vehicle, and a command vehicle. The stations are approximately 3.3 and 3.4 miles from the furthest unit on site, respectively. Once built, Station 46 in Mission Village will provide an initial response to Entrada South (anticipated to be staffed with a 3-person paramedic engine, a 4-person quint, and a battalion chief); however, to be conservative, this report assumes that Station 46 will not be available when Entrada South begins operations.

The VCC Planning Area would be served by Stations 76 and 143, as well as other regional stations. Station 76 would provide an initial response with Station 143 providing a secondary response. Station 43 is located at 28580 Hasley Canyon Road and houses a 3-person paramedic engine. Station 124 located at 25870 Hemingway Avenue, and Station 156 located at 24525 Copperhill Drive could provide an effective firefighting force for both Planning Areas. Station 124 houses a 3-person paramedic engine and a 2-person paramedic squad, whereas Station 156 staffs a 4-person paramedic engine.



FIGURE 9

Fire Station Locations

Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects



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6.2 Estimated Calls and Demand for Service from the Modified Project

Emergency call volumes related to typical projects, such as new residential and commercial developments, can be reliably estimated based on the historical per-capita call volume from a particular fire jurisdiction. County Fire documented 403,924 incidents for 2021²⁰ generated by a County-wide service area total population of approximately 4,100,000 persons²¹. The County's per capita annual call volume is approximately 89 calls per 1,000 persons. The resulting per capita call volume is 0.099.

Based on the proposed development plans for Entrada South, the Modified Project's estimated population within Entrada South is calculated to generate up to 495 calls per year (1.4 calls per day). The estimated incident call volume at buildout from Entrada South is based on a conservative estimate of the maximum potential number of persons on site at any given time (considered a "worst-case" scenario). As previously described, the Modified Project's development of Entrada South includes up to 1,574 residential units with an average unit occupancy of 3.15 people per dwelling unit, which calculates to a total population of 4,958 people $(3.15 \times 1,574 \text{ DU} = 4,958)^{22}$. The Entrada South development also includes 730,000 square feet of non-residential development, including retail and office space with 2,500 workers and potentially an elementary school with an estimated population of 50 staff and up to 200 students. This analysis uses total population estimates during daylight hours. Therefore, the worstcase condition is estimated to be a nighttime event, which would preclude the school and office/retail populations but would include all residents at home. Conversely, a daytime event would include the school and office/retail populations, but a large percentage of residents would not be on site. Using Los Angeles County fire agencies' estimate of 99 annual calls per 1,000 population, the Entrada South development's estimated 5,000 people would generate on a "worst case" basis up to 495 calls per year or 1.4 calls per day. The type of call would be expected to be primarily medical-related, with approximately 77 percent of all calls involving medical emergencies (LACoFD 2022 Statistical Summary); therefore, the vast majority of calls do not relate to fire hazards.

For the VCC Planning Area, the combined industrial and commercial service population is based on a conservative total of 10,200 occupants.⁷ The onsite population for each building and areas of use within the building will vary based on occupancy classification and use. The number may likely be up to two-thirds lower than the estimate (10,200 workers) provided, due to employee shift work, estimated transient population, and operating hours of individual businesses. Based on this information, the total maximum estimated population of the VCC Planning Area is projected to be 3,465 persons (total occupant load for all buildings). Based on this population estimate and using the County's per capita call volume of 0.099, the service population of 3,465 for the VCC Planning Area people would generate up to 343 calls per year (0.9 calls per day) on a worst-case basis.

Accordingly, the total call volume anticipated to be generated by the Modified Project (combined Entrada South and VCC Planning Areas) is 838 calls per year or 2.3 calls per day on a worst case basis.

As presented in Table 7, using 2020 call volume data (Lamas, pers. Comm. 2022), Engines 76, 124, 126, 143, and 156, the five closest fire stations, ran calls in 2020 averaging 3, 7,7, 2, and 4 calls per day, respectively. Both the Quint 126 and Squad 124 with larger response jurisdictions ran 3 and 9 calls per day.

²⁰ https//www.fire.lacounty.gov/lacofd-releases-2021-statistics-for-incidents.

²¹ Los Angeles County Fire Department Strategic Plan 2022.

²² Resident and worker population estimates for the Modified Project were obtained from the Project Team.
Response Jurisdiction	Engine 76	Engine 124	Squad 124	Engine 126	Quint 126	Engine 143	Engine 156
Fire	126	159	44	189	103	79	110
Medical Aid (EMS)	604	1,730	2,916	1,716	611	395	888
Other	264	655	212	544	244	196	374
Annual Total Response	994	2,544	3,172	2,449	958	670	1,372
Total Calls Per Day	3	7	9	7	3	2	4

Table 7. County Fire 2020 Call Volume Totals for Closest Fire Stations

Source: County Fire Planning Division, January 2022

Note:

Engine numbers correspond to Fire Stations. Fire Stations may have more than one engine or apparatus (see Station 126) that responds to calls so for consistency with the provided call data, each Fire Station's apparatus is referenced rather than referring generally to Fire Station numbers.

The available firefighting and emergency medical resources in the vicinity of the Modified Project Site include an assortment of fire apparatus and equipment considered fully capable of responding to the type of fires and emergency medical calls potentially occurring within and adjacent to the Entrada South and VCC Planning Areas.

As Shown above, the level of service demand for the Modified Project raises overall call volume by a relatively small amount of 2.3 calls per day on a worst-case basis. As noted above, the vast majority of these calls are not related to fire hazards.

Further, it is noted that when Fire Station 46 becomes available, it would respond to an additional 2.3 calls per day, further lowering the demand on the existing fire stations, even assuming the conservative assumptions noted above about the population and calls per capita data used in this estimate.²³

6.3 Emergency Response Travel Time Coverage

The Modified Project would be substantially similar to the 2017 Approved Project with respect to demand for fire protection services. The slight changes in land uses for the Modified Project compared to the 2017 Approved Project would not substantially change the response times by County Fire. Nevertheless, to provide additional information about response times, the FPP considered total response times based on the full buildout of the Modified Project.

Land use in the Santa Clarita Valley varies greatly from urbanized and suburban clusters to vast rural areas. County Fire's response time goals by land-use type are:²⁴

- 5 minutes or less for urban areas
- 8 minutes or less for suburban areas
- 12 minutes or less for rural areas

The Modified Project is located in a suburban area, which corresponds to County Fire's 8-minute response time target for suburban areas. Emergency response time target thresholds include travel time along with dispatch and turnout time, which can add an additional two minutes to travel time.

²³ The Mission Village Fire Station 46 may be staggered first as a temporary station and then followed by construction of the permanent station.

²⁴ Loretta Bagwell, LACoFD Planning Analyst, Planning Division (retired), pers. comm. 2020b; see also One Valley One Vision Program EIR, p. 3.15-2.

Entrada South – As indicated in Table 9, response to the Entrada Planning Area from the closest existing County fire stations (Stations 76 or 126) conforms to the response time goals. Both Station 76 at 27223 Henry Mayo Drive and Station 126 at 26320 Citrus Street could provide an initial response to the Entrada South site. Travel time for each of these stations to the Entrada South site was modeled using Network Analyst within the ESRI ArcGIS platform. Modeling results are presented in Figures 10 through 13. Modeling estimated response times using two methodologies: (1) using posted speed limits along the most direct route from the station to the site and 2) using an average 35 mph speed. Modeling included response to the project boundary (or entrance point) as well as the most remote developed portions of the Entrada South site as a conservative metric. Note, this conservatively assumes that Commerce Center Drive is not available for responses by assuming the absence of a bridge across the Santa Clara River for Commerce Center Drive.

- Station 126 When measured to the Entrada South's boundary, Station 126 can respond in under 5 minutes and several other stations can respond in under 8 minutes. When measured to the farthest developed portion of the Entrada Planning Area ,total response time (travel time + 2 minutes for dispatch and turnout) to Entrada South from Station 126 is modeled at 6 minutes, 41 seconds at posted speed limits and 7 minutes 47 seconds at average speed of 35 mph. Thus, Station 126 can respond to the project boundary/entrance in under 5 minutes and to 100% of the developed areas of Entrada South in under 8 minutes total response time, consistent with the County Fire's 8-minute response target for suburban areas.
- Station 76 Moreover, when measured to the farthest developed portion of the Entrada Planning Area, Station 76 total response times were modeled responding to in under 8 minutes using the posted speed limits methodology, which conforms with the County Fire 8-minute response target. Similarly, Station 76 can respond to 95% of the Entrada South site (all but southwest corner where only a portion of the area would be developed) in under 8 minutes using an average speed of 35 mph methodology, which substantially conforms to the County Fire 8-minute response target.
- Station 46 (Informational) Lastly, although not necessary for this analysis, it is noted that the future Mission Village station (Station 46) will provide additional coverage once it becomes operational, responding to the project boundary/entrance in under 5 minutes and all developed portions of the project in under 8 minutes, although Station 46 is conservatively assumed not to be available for purposes of this analysis.²⁵

VCC – The VCC response calculations are based on the ISO average response speed of 35 mph formula. If modeled at posted speed limits, the response times would be reduced by up to one minute. As shown in Table 8, response to the VCC Planning Area from the closest existing County fire stations (Stations 76 or 143) conforms to the response time goals.

- Station 76 When measured to the Project's entrance, Stations 76 can respond in under 5 minutes and several stations can respond within 8 minutes. Further, based on the proximity of Fire Station 76 (1.7 miles), response to the most remote developed portion of VCC is accomplished within 5.5 minutes total response time, which conforms with County Fire's 8-minute response target for suburban areas.
- Station 143 Fire Station 143 is the next closest station and, when measured to the Project's entrance, Stations 143 can respond in under 5 minutes. Station 143 can respond to the entire developed area of the VCC Planning Area with a total response time of 7.2 minutes, which conforms with County Fire's 8-minute response target.

²⁵ Fire Station 46 will be sized, staffed, and equipped based on County Fire specifications and as approved by County Fire. The station would be staffed 24/7 with career firefighters who would provide an initial response. The total response time from the new station (Station 46) approved for development in the Mission Village community to the most remote (distant) lot within the Entrada South Planning Area is calculated at 5 minutes 22 seconds.



Based on these calculations, the Modified Project's development within the Entrada Planning Area is consistent with the County's 8-minute response time goal for suburban land uses from existing fire stations.

Table 8. Entrada South and VCC Emergency Response Analysis (Closest Two Existing Stations Bolded)

	Entrada South				Valencia Commerce Center			
County Fire Station No.	Maximu m Travel Distanc e	Travel Time (posted speed / 35 mph	Total Response Time to Entrada South (most remote building) (posted speed / 35 mph)	Total Response Time Entrada South (Project Entrance – posted speed / 35 mph)	Max Travel Distanc e	Travel Time (35 mph)	Total Respons e Time to VCC (most remote structur e)	Total Response Time Valencia Commerce Center (Project Entrance – posted speed / 35 mph)
76	3.4 miles	5.2 min/ 6.4 min	7.3 min/8.4 min	5.2 min/6.5 min	1.7 miles	3.5 minutes	5.5 minutes	3.1 min/3.3 min
124	4.1 miles	7.6 minutes	9.6 minutes	5.8/7.4 min	7.0 miles	12.5 minutes	14.5 minutes	8.6 min/ 12.2 min
126	3.3 miles	4.7 min/ 5.8 min	6.7 min/7.8 min	4.7 min/5.9 min	5.7	10.3 minutes	12.34 minutes	7.7 min/ 10.5 min
143	5.4 miles	9.9 minutes	11.9 minutes	8.0 min/8.4 min	2.7 miles	5.2 minutes	7.2 minutes	4.3 min/5.0 min
156	4.0 miles	7.5 minutes	9.5 minutes	6.5 min/7.0 min	5.01 miles	9.2 minutes	11.2 minutes	6.5 min/8.2 min
46	1.6 miles	3.4 minutes	5.4 minutes	2.9 min/3.1 min	5.0 miles	9.2 minutes	11.2 minutes	5.0 min/5.8 min

Notes:

¹ Assumes travel distance and time to the furthest developed point within the Modified Project Site from the fire station.

² The modeling conservatively assumes that the planned bridge along Commerce Center Drive is not constructed, and therefore, Commerce Center Drive is not available for emergency response, which results in a longer response distance and additional travel time.

² Emergency response time target thresholds include travel time along with dispatch and turnout time, which can add an additional two minutes to travel time.

³ Entrada South response from Stations 126 and 76 were modeled using Network Analyst, a geographic information system application using likely response routes and either averaged 35 mph speeds or posted speed limits.

⁴ The modeling and calculations presented conservatively assume that Station 46 would not be available by the time Entrada South becomes operational.

⁵ Response time to project entrance includes fastest time to closest Project entrance. Where more than one entrance is available, the entrance located further from the station is not included.





SOURCE: Eagle Aerial Solutions 2018; Hunsaker 2019



2,000

FIGURE 10

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SOURCE: Eagle Aerial Solutions 2018; Hunsaker 2019

2,000



FIGURE 11 Modeled Response Times from Fire Station 126 (Posted Speed Limits)

Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

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SOURCE: Eagle Aerial Solutions 2018; Hunsaker 2019



1,000 2,000

FIGURE 12 Modeled Response Times from Fire Station 76 (Avg 35 mph) Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK





SOURCE: Eagle Aerial Solutions 2018; Hunsaker 2019



Modeled Response Times from Fire Station 76 (Posted Speed Limits) Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects INTENTIONALLY LEFT BLANK

7 Wildland Fire Evacuation Plan and Education Program

Early evacuation for any type of wildfire emergency at the Modified Project Site is the preferred method of providing for resident safety, consistent with the County Fire's current approach within Los Angeles County. With early, evacuation, evacuations often take place over a staggered period of time and are adjusted as authorities watch fire events. Under this strategy, the goal is to focus on evacuating strategic areas depending on the risk (Chen and Zhan 2008). This allows for evacuations to flow more smoothly and reduce the likelihood of significant congestion. Staged evacuations have also increased in practice with many cities and judication implementing staged evacuation tools such as Zonehaven. Staged evacuation is also generally more effective in areas where population density is high, such as in the Santa Clarita Valley (Chen and Zhan 2008). Given that the Modified Project is surrounded by exiting development and infrastructure and located in a relatively high-density area it is more likely that if evacuation were to occur it would occur in a stagged manner. However, it is also important to note that stagged evacuation is not always possible and there is always a potential for a stagged evacuation to evolve into a simultaneous evacuation. County Fire and the Los Angeles County Sheriff Department (LASD) have extensive experience with evacuating large masses of people during wildfire events under both types of scenarios. During the Woolsey fire in 2017 LASD and other law enforcement were able to successfully coordinate the mass evacuation of over 250,000 people (County of Los Angeles, 2019). For perspective, the Modified Project's estimated population is 4,958 people. The Modified Project is within the Los Angeles County Operational Area Emergency Response Plan (OAERP) (County of Los Angeles, 2012). The OAERP addresses the coordinated response to an emergency within the County. The Modified Project is created with wildfire in mind and this includes the potential for an evacuation. The Modified Project is located in major traffic corridors, such as the I-5, Old Road, Magic Mountain Parkway, and State Route 126, that would allow for evacuations to occur in multiple directions. Additionally, the Modified Project would provide multiple areas for ingress and egress as well as improved firefighter access.

The Modified Project is consistent with the EIR for One Valley One Vision (OVOV), the Santa Clarita Area Plan. The Regional Traffic Analysis of the OVOV EIR analyzed the traffic impacts related to the built-out region. The Modified Project would not conflict with the regional traffic analysis in the OVOV EIR which determined the built-out region would not significantly impact vertical roadways or intersections. The Modified Project is also consistent with the policies identified in OVOV and includes a reduced population and fewer vehicles than the previously approved project. Further, within OVOV evacuation impacts are identified as being mitigated by detour roes implemented throughout the Santa Clarita Valley, alternative evacuation routes through the City of Santa Clarita, the opening of the Cross Valley Connector, and the requiring of two means of ingress and egress for all development projects. The 2017 Approved project EIR determent that the regional impacts regarding vehicle miles traveled (VMT) was less than significant. When compared to the 2017 Approved Project EIR the VMT for the Modified Project is further reduced. The Modified Project also complies with mitigation measure PH 7 which requires that there be secondary access to the Project Site. As an additional project Design Feature, the Modified Project also includes a project-specific evacuation plan further described below and under a separate cover (Dudek 2022).

As such, the Modified Project's HOA would formally adopt, practice, and implement a "Ready, Set, Go!" approach to evacuation. The "Ready, Set, Go!" concept is widely known and encouraged by the State of California and County Fire. Pre-planning for emergencies, including wildfire emergencies, focuses on being prepared, having a well-defined plan, minimizing the potential for errors, maintaining the Modified Project Site's fire protection systems,

and implementing a conservative (evacuate as early as possible) approach to evacuation and Modified Project Area activities during periods of fire weather extremes. Additionally, the ignition-resistant rating of the structures, incorporation of expensive fuel modification, and urbanized landscape would allow for emergency managers to direct residents to take temporary refuge within their protected residences.

"Ready! Set! Go!" is the County Fire adaptation of the State "Ready, Set, Go!" wildfire evacuation preparedness program. The goal of the program is to aid residents of the County to prepare to leave their homes as early and with confidence that they have done everything reasonably possible to protect their homes from wildfire. The "Ready!" aspect of the campaign is centered around preparing your home for wildfire through defensible space implementation and home hardening. The "Set!" component educates residents on how to create a wildfire action plan. Wildfire action plans are prepared in advance of a wildfire and include information for the household such as important phone numbers, what to take, evacuation preparation, emergency supply kits, and pre-evacuation steps to take. Finally, the "Go!" aspect of the campaign is about the steps to take when evacuating from a wildfire. The goal is for residents to leave as early as possible during a wildfire. Within the "Go!" campaign there is also information on what to do if you become trapped, whether on foot, in a car, or at home.

Support for the "Ready, Set, Go!" model has been provided by the preparation of a Wildland Fire Evacuation Plan (WFEP) for the Project Site, which is available under separate cover (Dudek, 2022). The WFEP is based on standard evacuation planning used by the Los Angeles County Office of Emergency Services. The WFEP provides Project residents and occupants with potential egress route information and instructions for following the "Ready, Set, Go!" model. The WFEP provides Project Area-specific procedures for wildfire evacuations, and would be provided to the Entrada South and VCC residents and commercial tenants, and posted on the community website. The WFEP would be reviewed by residents at least annually through organized meetings and educational outreach by the HOA, Community Services District, or other means. Evacuation information would be disseminated to residents through a variety of means such as bi-annual mailers, online, workshops, and more detailed below. Among the important concepts that would be included in evacuation, education is the Modified Project Area's fire environment, mitigation strategies, roles and responsibilities, homeowner education materials, preparedness checklist, route planning, and specific procedures for early relocation and contingency planning for situations where evacuation is considered unsafe.

As described above and consistent with the State-certified EIR, the Modified Project EIR would not result in any new impacts or increase impacts to an adopted emergency response plan or emergency evacuation plan.

7.1 Wildfire Education Project Design Feature

As part of the Project, the Modified Project residents and occupants would be provided ongoing education regarding wildfire, the WFEP, and this FPP's requirements. This educational information would support the fire safety and evacuation features/plans designed for this community. Informational handouts, community website pages, mailers, fire-safe council participation, inspections, and seasonal reminders are some methods that would be used to disseminate wildfire and relocation awareness information. County Fire would review and approve all wildfire educational material/programs before printing and distribution.

The Newhall Ranch Wildfire Education Program's goal is to provide targeted outreach to residents and other site occupants living in a fire risk area in order to foster a community that has fire adaptive capacity. The educational program would cover a wide range of information such as residential evacuation planning, defensible space guidelines, how to maintain fire protection features, activities in a fire risk area, and more, all provided in

easy-to-understand, graphically based materials. The educational program will be based on a layered approach to wildfire awareness that includes both passive and active features. The program will be ongoing in order to maintain high wildfire awareness even as the community grows and evolves. Program features are as follows:

- Bi-annual email and mailers: Residents and occupants will be provided with bi-annual emails and mailers in May and in August. They will include information such as reminders about annual defensible space inspections, maintaining the ERZ, how to prepare for wildfire season, evacuation information, and how to prevent wildfires. There will also be links to various resources on where to get trusted information such as County Fire, 211 LA County, and Ready LA County.
- 2. Website: There will be a dedicated community website with more detailed information and resources about wildfire awareness and prevention. The website will serve as a centralized resource for the fire education program and include information from the FPP. The website will also have fire watch and red flag warning alerts, as well as information on restrictions during fire weather conditions. Residents will also be able to use the website to sign up for an annual residential defensible space inspection from the HOA Fire Committee.
- 3. Community workshops and webinars: Two times a year there will be either in-person or virtual community workshops. The goal of the workshops will be to cover various fire topics more in-depth. For example, this could include having a County Fire representative come to meet the community, a workshop on how to make a go-bag, a workshop on how to make a residential evacuation plan, or how to maintain the home ignition zone.
- 4. New resident packet: All residents and new residents in the future will also be presented with a wildfire awareness and safety package upon purchase or rental of a home. This will also be given to businesses as part of their employee training program. Within the package will be a memory stick with the evacuation plan, a list of fire protection features, information on the regional fire hazard, prohibited activities in fire risk areas, how to build a go-bag, and a list of agencies and resources for receiving trusted information.
- 5. Emergency alert campaign: Residents and businesses will be encouraged to sign up for Alert LA County. Alert LA County is the mass notification system for emergency alerts, weather alerts, health notifications, building alerts, and other updates from County, State, and Federal agencies. The campaign will occur annually and encourage residents to sign up for Alert La County. Reminders will also be sent out in the bi-annual mailers and emails, on the community website, in the workshops, and in the new resident package.
- 6. Fire watch groups: Within the community, there will also be volunteer fire watch groups. These will be residents or businesses who volunteer to participate in a fire watch group for the community. During red flag warning days, this group will be responsible for reminding businesses and residents of fire-safe practices and restrictions. During red flag warning days, the fire watch group will also maintain vigilance of potential fires and will be trained on procedures for alerting County Fire in the event of a fire.
- 7. HOA fire safety committee: The fire safety committee will be responsible for overseeing the maintenance of community-wide fire protection features. Residents will be able to report fire hazards or hazardous fuel conditions to the HOA committee for remediation. The committee will be responsible for the coordination of the 3rd party FMZ inspections and the volunteer residential defensible space inspections. The committee will also be responsible for organizing and coordinating an annual education workshop on how to maintain the ERZ. The committee will also be responsible for the creation and distribution of the educational program for the Modified Project. The committee will serve as a communication link between County Fire and the community.



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8 Analysis of the Modified Project's Potential Wildfire Impacts

- 8.1 Appendix G EIR Questions
- 8.1.1 Threshold: Due to Slope, Prevailing Winds, and Other Factors, Would the Modified Project Exacerbate Wildfire Risks and Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire?

As described in Section 2 Existing Setting: Project Study Area, Risk Factors, and Fire History, the existing topography and climate may present conditions that facilitate the spread of wildfire. Additionally, development in fire-prone environments can potentially introduce factors that could exacerbate wildfire risk. Accordingly, the Modified Project has the potential to result in a new significant impact related to this threshold compared to the 2017 Approved Project as analyzed in the State-certified EIR.

The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety and found that while the Project provided sufficient access, water supply, siting of homes and buildings, and vegetation management, the potential for wildland fire hazards would still exist and require mitigation. However, after regulatory compliance and incorporation of Mitigation Measure PH-14, the State-certified EIR determined that the 2017 Approved Project would have a less than significant impact related to wildfires.²⁶ Further, the State-certified EIR also determined that the Project would have a less than significant impact with mitigation on adopted emergency response plans or emergency evacuation plans based on the location of fire stations, a system of improved roads, with the implementation of Mitigation Measures PH-7.²⁷

The Modified Project does not include modifications from the 2017 Approved Project that would substantially increase fire risks compared to the analysis of wildfires presented in the State-certified EIR. However, to better gauge how particular activities may impact the environment on and offsite, the following analysis considers onsite and offsite wildfire risks during construction and operations.

8.1.1.1 Construction Impacts

As discussed in Section 1.3, the Modified Project's construction activities will be substantially similar to the 2017 Approved Project's construction activities and the Modified Project does not include construction-related modifications from the 2017 Approved Project that would substantially increase fire risks compared to the analysis of wildfire impacts presented in the State-certified EIR. As with the 2017 Approved Project, construction activities associated with the Modified Project would introduce potential ignition sources related to construction activities,

²⁶ See Final State-certified EIR, p. 4.17-60 – 4.17-61.

²⁷ See Final State-certified EIR, p. 4.17-60.

construction equipment, and construction-related vehicle use, and other factors described in Section 5, resulting in the potential for significant wildfire impacts during construction.

As with the 2017 Approved Project, the Modified Project would comply with Mitigation Measure PH-14 to reduce wildfire risks as well as comply with County Fire requirements for activities in hazardous fire areas and the California Fire Code (CFC), which ensures a variety of construction measures to reduce fire risk, requiring spark arrestors on all equipment with a solid or liquid fuel motor used on the Modified Project Site. Further, as with the 2017 Approved Project, the Modified Project would comply with Section 326.12.1 of the County Fire Code, which prohibits the use or operation of any tractor, construction equipment, engine, machinery, or any steam, oil, or gasoline-operated stationery or mobile equipment, from which a spark or fire may originate unless such equipment is provided with a qualified device or spark arrester installed in or attached to the exhaust pipe which will prevent the escape of fire or sparks. Construction activities would also comply with Chapter 33 of the CFC Fire Safety During Construction and Demolition, including Section 3304 thereof, which obligates the Modified Project to satisfy various standards that limit ignitions, such as but not limited, to prohibiting smoking except in approved areas, preventing the accumulation of and removing combustible debris, implementing fire watch personnel (where recommended by the County Fire Code official), providing onsite water supplies, and maintaining vehicle access for firefighting to all construction and demolition area.

The State-certified EIR analyzed the potential for off-site wildfire risks. As with the 2017 Approved Project, construction of the Modified Project would introduce new ignition sources that have the potential to increase fire off-site either by spreading directly from the Modified Project Site or through airborne embers. However, the State-certified EIR determined that such impacts were less than significant with Mitigation Measure PH-14 and regulatory compliance.²⁸ As noted above, the changes to the Modified Project from the 2017 Approved Project are not expected to increase the risk of offsite wildfire impacts. As with the 2017 Approved Project, the Modified Project site is generally surrounded by development and not entirely adjacent to undeveloped, high fuel areas. As described in Section 2.2.3, there is significant development near the Entrada Planning Area, including I-5 to the east, Six Flags Magic Mountain theme park and State Route 126 (SR-126) to the north, Mission Village to the west, and the existing Westridge community to the south, along with secondary road infrastructure to the south, east, and north. Land uses surrounding the VCC Planning Area include commercial and residential development as well as vacant land with limited vegetative cover. Existing mixed-use development is located, immediately north of the VCC Planning Area and commercial development is north, northwest, and west of the VCC Planning Area, along with SR-126 to the south. The surrounding development and lack of extensive vegetative cover immediately adjacent to the Modified Project site reduces the risk of both encroaching fires and offsite fire spread, including offsite spread from windblown embers.

In addition to Mitigation Measure PH-14 and the regulatory compliance identified in the State-certified EIR, the Modified Project includes features that would enhance wildfire safety. Specifically, potential impacts from the Modified Project caused by construction, both onsite and offsite, would provide an additional benefit by implementing **PDF-1** and **PDF-2**. First, pursuant to **PDF-1**, prior to any construction activities, a detailed Construction Fire Prevention Plan (CFPP) would be implemented for the Project and submitted to the County of Los Angeles for review and approval. The CFPP will designate fire safety measures to reduce the possibility of fires during construction activities, including fire watch during hot works and heavy machinery activities (e.g., welding), spark arresters on all equipment, water supply via hose lines attached to hydrants, or a water tender pursuant to County Fire requirements, red flag period restrictions, and mandatory on-site fire. The CFPP would also require employees

²⁸ See Final State-certified EIR, p. 4.17-63.

to be presented with basic prevention fire training, which would consist of the Modified Project FPP requirements, review of Occupation Safety and Health Administration (OSHA) Fire Protection and Prevention, proper response and notification of a fire, and the use of fire extinguishing equipment.

Second, **PDF-2** requires that prior to bringing lumber or combustible materials related to building construction onto the Modified Project Site, site improvements within the active development area must be in place, including utilities, operable fire hydrants, and an approved, temporary roadway surface and fuel modification zones. Combustible materials would only be utilized onsite prior to stated site improvements as needed for providing the improvements themselves (e.g., wood forms for cast-in-place concrete). These same features that reduce the risk of a fire beginning on the Modified Project site during construction also reduce the risk of fire spreading offsite. FMZs implemented under **PDF-2** would reduce the risk that a fire that began on the Modified Project Site during construction requirements imposed by applicable regulations and the CFPP, as well as the fire-watch and employee education aspects of the CFPP, would minimize the risk of airborne embers originating on the Modified Project Site migrating offsite.

The State-certified EIR determined that wildfire impacts associated with the construction of uses within the Entrada and VCC Planning Areas would result in less than significant impacts with mitigation.²⁹ In addition to Mitigation Measure PH-14 and the regulatory compliance identified in the State-certified EIR, **PDF-1** and **PDF-2** would further enhance the reduction of potential for wildfire impacts during construction. Accordingly, as with the 2017 Approved Project, potential wildfire impacts due to onsite construction **would be less than significant**. The Modified Project would not result in any new significant wildfire impacts related to construction activities.

8.1.1.2 Operational Impacts

As described above, the existing topography and climate may present conditions that facilitate the spread of wildfire. Additionally, development in fire-prone environments can potentially introduce factors that could exacerbate wildfire risk. Accordingly, the Modified Project has the potential to result in a significant impact related to this threshold. The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety and found that while the Project provided sufficient access, water supply, siting of homes and buildings, and vegetation management, the potential for wildland fire hazards would still exist and require mitigation. The State-certified EIR ultimately determined that impacts from the 2017 Approved Project would be less than significant with regulatory compliance and the implementation of Mitigation Measures PH-7 and PH-14.

As discussed in Section 1.3, the Modified Project does not include land use or other operational modifications from the 2017 Approved Project that would substantially increase onsite or offsite fire risks compared to the analysis of wildfires impacts presented in the State-certified EIR. The Modified Project would not increase development or bring more people to the WUI compared to the 2017 Approved Project. The Modified Protect includes 151 fewer residential units compared to the 2017 Approved Project. However, as with the 2017 Approved Project, the Modified Project has the potential to contribute to wildfire impacts as described in Section 5.

As with the 2017 Approved Project, the Modified Project would comply with applicable regulations and Mitigation Measure 4-14. Even though the State-certified EIR determined that wildfire impacts would be less than significant with mitigation and regulatory compliance, the Modified Project includes additional Project Design Features (PDFs) to further reduce wildfire risks, both on-site and off-site. To start, **PDF-3** and **PDF-4** aid in addressing wildfire

²⁹ See Final State-certified EIR, p. 4.17-60 – 4.17-61.

exposure to Modified Project residents and structures by ensuring active maintenance of FMZs. **PDF-3** would require that all vegetation management with the FMZs and common must be completed annually under the responsibility of the Modified Project HOA or equivalent entity. Likewise, individual property owners would be responsible for maintaining the Ember Resistant Zone (ERZ) and any fuel modification within their property. Maintenance activities would include but not be limited to removing dead and dying material, removing undesirable plant species, and conducting thinning activities to maintain adequate spacing requirements. **PDF-4** compliments **PDF-3** by requiring that every year a third-party inspector hired by the Modified Project HOA or equivalent entity will conduct an annual inspection of the FMZs (including ERZs) and evaluate the FMZs for compliance with regulations and that they are operating accordingly. **PDF-3** and **PDF-4** would also help address potential offsite impacts by ensuring that the FMZs and defensible space features are in regulatory compliance and provide lasting protection to off-site areas through ongoing maintenance and management. Accordingly, **PDF-4** would prevent on-site and off-site impacts associated with the operational function of the FMZs from degrading over time.

PDF-5 benefits the Modified Project by addressing the risk of human-caused ignitions related to the Modified Projection increasing human activity in the area during operation by ensuring that residents are educated about wildfire risks and safety. The Wildfire Education Program described in Section 7 Wildland Fire Evacuation and Education Program and required by **PDF-5**, provides a project-specific approach for raising wildfire awareness and preparedness for living in a fire-prone environment. Residents and occupants would not only be more aware of the risk in the area but also be provided with tools such as how to maintain the ERZ, how to prepare for wildfire season, and how to make a residential evacuation plan. Active features of the Wildfire Education Program are targeted at preventing human-caused ignitions. Further to directly limit the potential for accidental ignitions during red flag warning days residents and occupants would be prohibited from carrying out ignition risk activities when the weather is conducive for wildfire.

The Modified Project's reduction of onsite or offsite wildfire spread or exacerbate wildfire risk is demonstrated by the fire behavior modeling analysis presented above and throughout the FPP. The location and direction of the various fire scenarios analyzed for Entrada South and VCC are presented in Figure 8a, BehavePlus Fire Behavior Analysis for Entrada Planning Area, and Figure 8b, BehavePlus Fire Behavior Analysis for VCC Planning Area. The results of the wildfire behavior modeling for three different fire scenarios near the Entrada South Planning Area and the VCC Planning Area under existing conditions are presented in Table 2 and Table 3.

For the Entrada South Planning Area wildfire in non-treated coastal scrub with varying wind speeds represents the most extreme conditions with expected flame lengths to reach up to approximately 46 feet with 52 mph gusts (offshore winds) and 15 feet with 14 mph wind speeds (onshore winds). Spread rates for coastal scrub fuel beds range from less than 1 mph (onshore winds) to 7.2 mph (offshore winds). Spotting distances, where airborne embers can ignite new fires downwind of the initial fire, would range from 0.5 miles to 2.5 miles.

For the VCC Planning Area maximum flame lengths were anticipated to be in untreated, surface fuels, including grasslands and coastal scrub, could reach up to 39.7 to 45.7 feet in height, respectively, with spread rates between 7.1 and 17.7 mph under extreme weather conditions, represented by Santa Ana winds blowing at gusts of 52 mph. Additionally, modeling fire behavior based on the existing conditions demonstrated that the riparian understory could burn aggressively due to the presence of large amounts of biomass from dense stands of shrubby willows and potentially transition to a crown fire. Embers could be generated from both surfaces and tree crown fires, resulting in the ignition of receptive fuel beds 1.6 to 2.6 miles downwind.

The modeling results for the post-development conditions of the Entrada South Planning Area and the VCC Planning area were significantly different as presented in Table 4 and Table 5. The built-out conditions of the Entrada South



Planning Area, including the FMZs, resulted in a reduction of the existing condition fire behavior to less than 10.6 feet tall at the outer edges and less than 3 feet in Zone A near the structures of the development due to the higher fuel moisture content. Spotting distance of embers would also be reduced from a maximum of 2.5 miles under pre-Project conditions down to a maximum distance of 0.9 miles under post-development conditions.

For the VCC Planning Area the post-development conditions, inclusive of the FMZs, reduced the 46-foot-tall flames predicted during pre-Project conditions under extreme weather conditions to 10.6 feet tall at the outer edges of Zone B and up to 3 feet by the time the inner portions (i.e., irrigated Zone A) of the fuel modification zone are reached. Spotting distance of embers would also be reduced from a maximum of 2.6 miles under pre-Project conditions down to a maximum distance of 1.5 miles under post-development conditions. Additionally, the Project would be required to comply with all provisions in the Los Angeles County Code regulating development in a Very High FHSZ. With the conversion of the undeveloped landscape to ignition-resistant development and landscaping, wildfires may still encroach upon and drop embers on the Modified Project Site, but would not be expected to burn through the Project Site due to the lack of available fuels and the typical ember decay rate. Further, in the event of a fire starting on the Modified Project Site, the fire would not be anticipated to result in a wildfire that would spread to off-site wildlands due to the buffer created by the proposed fuel modification zones.

As such the Modified Project's FMZs would provide protection to both on-site structures and off-site areas. Additionally, per **PDF-2**, the FMZs would be implemented prior to construction and therefore not only provide protection during the Modified Project's operation but construction phase as well.

Additionally, a Wildland Fire Evacuation Plan (WFEP), per **PDF—6** has been prepared for the Modified Project and would be provided to the Entrada South and VCC residents and commercial tenants and posted on the community website. The WFEP would aid in making residents and occupants more aware of evacuation procedures increasing their likelihood of leaving quickly during an evacuation event. With mitigation in place, the impact associated with increased human activity during operation would be significantly lowered.

Although it is not being analyzed under this significance determination, it is also worth noting that the Modified Project, along with the larger region, benefits from reduced fire ignitions and fire behavior resulting from the ongoing Newhall grazing activities. As described in Section 4.3, the livestock grazing program utilizes practices implemented in the greater Newhall Ranch area over the last several decades and continues these practices as part of the holistic land management approach. The modeling that includes the ongoing livestock grazing demonstrates substantially reduced fire behavior in terms of flame lengths, fire spread rates, heat output, and overall intensity. Thus, the ongoing livestock grazing program provides additional environmental benefits with respect to wildfire protection but is not necessary for the purpose of this FPP's evaluation.

The following analysis also considers how common human-based ignition sources in the region are related to powerlines, vehicles, construction, operation, and human activities in wildland areas have the potential to increase wildfire risks (Keeley & Syphard, 2018). Each of these sources, with the exception of construction (see above), is discussed below.

Operation and Human Activities. Operational activities and human activities related to project use have the
potential to be ignition sources. Like the 2017 Approved Project, however, the Modified Project will be built
according to the strictest wildfire standards and will incorporate numerous design features that reduce the
potential for operation and human activities to cause wildfire onsite. Structures in the Modified Project area
would comply with Chapter 7A ignition resistant construction requirements and the Los Angeles County

Building Code (Title 26, Chapter 7A), "Construction Methods for Exterior Wildfire Exposure" as described in Section 3.5 Structural Ignition Resistance Regulations. Homes and structures would also be equipped with National Fire Protection Association (NFPA) Standards 13, 13R, and 13D, which contain structure fires to the point of origin, can extinguish a fire prior to the responding firefighters' arrival, and dampen the likelihood of ember production (NFPA, 2021). Additionally, the Modified Project, as with the 2017 Approved Project, would be required to comply with all provisions in the Los Angeles County Code regulating development in a VHFHSZ. With the conversion of the undeveloped landscape to ignition-resistant development and landscaping, wildfires may still encroach upon and drop embers on the Modified Project Site but would be unlikely to burn through the site due to the lack of available fuels and the typical ember decay rate, as substantiated by the BehavePlus Fire Behavior Analysis described above.

- Like the 2017 Approved Project, the Modified Project also includes fuel modification and vegetation management components to form buffers between project residents and encroaching wildfires. The Modified Project provides 100- to 200- feet of fuel modification zones divided into the ERZ, Zones Athrough D as described in Section 3.2 Defensible Space and Vegetation Management Regulatory Requirements. These zones function by redistributing fire risk on a landscape through the alteration of the interaction between fire, fuels, and weather (Cochrane et al., 2012). The Modified Project's fuel modification would function as fuel breaks to reduce fire risk and facilitate effective fire prevention (Wang et al., 2021). The FMZs would create a buffer between developed areas and natural areas created by the fuel modification zones, fires that ignite in a developed area or adjacent wildlands would not easily spread through the fuel modification zones (Warziniack et al., 2019). Critically, based on the fire behavior modeling conducted in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions, indicates that the fuel modification zones (Zones A and B) would reduce flame lengths and slow fire spread rates to a level that would be manageable by fire crews, thereby mitigating risks of encroaching fires onto the Modified Project site as well as the potential spread of flames from the Modified Project site to surrounding areas. Additionally, the ERZ would keep fire or embers from igniting materials that can spread to structures (Price et al., 2021).
- Powerlines. In southern California, powerline-related fires are common and have resulted in destructive fires (Keeley & Syphard, 2018). The Modified Project does not increase powerline impacts compared to the 2017 Approved Project. For the Modified Project, as with the 2017 Approved Project, however, this risk is addressed because Project-related powerlines would be buried underground.
- Vehicles. With respect to vehicle ignitions, the Modified Project would not increase vehicle trips compared to the 2017 Approved Project as analyzed in the State-certified EIR. State Certified EIR and therefore would not raise the potential for vehicle-based ignitions. In fact, the Modified Project reduces trips compared to the 2017 Approved Project analyzed in the State-certified EIR, as described in the Transportation section of the Supplemental Environmental Impact Report. As with the 2017 Approved Project, new roads would be provided with roadside fuel modification, removing flammable vegetation and/or combustible growth on each side of the roadway with a minimum width of 10 feet. Roads would also be adjacent to on-site FMZs and ignition-resistant construction. On-site roads would comply with County Fire access requirements and standards as described in Section 3.4 of this FPP.
- Introducing New Development in the WUI As with the 2017 Approved Project, the Modified Project will introduce new development and people to the WUI. Although the Modified Project includes fewer residential units than were analyzed in the State-Certified EIR, the Modified Project still has the potential to result in an onsite wildfire that could then spread offsite. As discussed, common human-based ignition sources in the region are related to powerlines, vehicles, construction, operation, and human activities in wildland

areas (Keeley & Syphard, 2018). Section 8.1.1.1.3 explains how operational onsite wildfire risk is reduced due to compliance with all applicable building requirements, fire-resistant construction, required fuel modification, and Mitigation Measure PH-14. In addition, PDF-3 and PDF-4 would ensure active maintenance of FMZs providing additional protection to the Modified Project. PDF-3 would require that all vegetation management with the FMZs and common must be completed annually under the responsibility of the Modified Project HOA or equivalent entity. Likewise, individual property owners would be responsible for maintaining the Ember Resistant Zone (ERZ) and any fuel modification within their property. Maintenance activities would include but not be limited to removing dead and dying material, removing undesirable plant species, and conducting thinning activities to maintain adequate spacing requirements. PDF-4 compliments PDF-3 by requiring that every year a third-party inspector hired by the Modified Project HOA or equivalent entity will conduct an annual inspection of the FMZs (including ERZs) and evaluate the FMZs for compliance with regulations and that they are operating accordingly. PDF-3 and PDF-4 would also benefit the Modified Project by addressing potential offsite impacts by ensuring that the FMZs and defensible space features are in regulatory compliance and provide lasting protection to off-site areas through ongoing maintenance and management. By addressing the risk of fire ignition and spread onsite. these design features provide additional benefits to the project as they relate to preventing fires from spreading offsite. As described above, with the conversion of the landscape to ignition-resistant development, fires are unlikely to burn through the Site due to the lack of available fuels, and wildfires starting on the Modified Project Site would not be anticipated to increase from existing levels due to the ignition-resistant landscapes, perimeter fuel modification zones which are designed to protect the Modified Project. This would thereby minimize the likelihood that an on-site fire escapes into wildland areas, despite the presence of new people and development. In effect, the Modified Project's fire-hardened landscape and 100- to 200-foot wide FMZs will act as a barrier to wildfire spreading off-site. Accordingly, the implementation of PDFs described in this Fire Protection Plan would provide increased benefits to the Modified Project by enhancing how the Modified Project addressed the impacts of bringing development into the WUI in comparison to the 2017 Approved Project.

Embers Like the 2017 Approved Project, embers caused by sparks, fires, and other human activity on the Modified Project also have the potential to migrate off-site and cause wildfires in adjacent, undeveloped areas. On-site ember would most likely originate from a structure fire. However, the same requirements that project structures and residents of the Modified Project (i.e., fire-hardened structures, FMZs, etc.) also reduce the likelihood of a structure fire occurring and embers migrating off the Modified Project Site. As described above, PDF-3 and PDF-4 ensure that the FMZs and defensible space features are in regulatory compliance and provide lasting protection to off-site areas through ongoing maintenance and management which enhances the benefits of FMZs. Further, FMZs have been shown to lower ember cast and have a shadow effect on the untreated landscape by reducing the probability of burning and the potential fire size (Cochrane et al., 2012). Because on-site fires are unlikely to occur and, even if so, would likely be low-intensity fires due to a lack of fuel sources, the Modified Project is unlikely to produce embers that would fly across the fuel modification zones to surrounding areas.

The State-certified EIR determined that wildfire impacts would be less than significant with mitigation. The Modified Project does not include features that would increase such fire risk and, in fact, reduces the number of residences being constructed and includes PDFs that would further reduce wildfire risks. The Modified Project would not result in new significant impacts with respect to wildfire risks as compared to the analysis presented in the State-certified EIR and the impact is **less than significant**.

8.1.2 Threshold: Would the Modified Project Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines, or Other Utilities) that May Exacerbate Fire Risk or that May Result In Temporary or Ongoing Impacts to the Environment?

In Section 4.17 Hazards, Hazardous Materials, and Public Safety the State-certified EIR analyzed wildfire impacts. The State-certified EIR found that the development of the Project sites would potentially reduce the likelihood of wildfire in the area and that the access, water supply, and fuel modification features of the Project would minimize the potential for wildfire impacts. And as previously described the combination of regulatory compliance and the incorporation of Mitigation Measure PH-14 from the 2017 Approved Project determined that the associated wildfire impact would be less than significant. The Modified Project does not include modifications from the 2017 Approved Project associated with the installation or maintenance of associated infrastructure that would exacerbate wildlife risk or result in temporary or ongoing impacts as compared to the analysis of the wildfire impacts presented in the State-certified EIR. However, to better determine how the Modified Project may impact the environment the following analysis considers the wildfire risk associated with the installation or maintenance of associated infrastructure.

The Modified Project would involve the development of 1,574 dwelling units, 730,000 square feet of non-residential development, a public park and potential school site, a spineflower preserve, trails and infrastructure within the Entrada Planning Area, and 3.4 million square feet of industrial/commercial space on approximately 164 acres, approximately 144 acres of open space, and approximately 13.7 acres of public facilities within the VCC Planning Area. The Modified Project would implement the development facilitated by the approved Newhall Ranch Resource Management and Development Plan, and Spineflower Conservation Plan within the Entrada and VCC Planning Areas. The Modified Project would involve the installation and maintenance of associated infrastructure, including fuel breaks (e.g., fuel modification zones), roads and trails, service utilities (e.g., water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications services), water drainage, and water quality improvements (e.g., stormwater basins), as discussed in further detail below.

8.1.2.1 Construction Requirements

A system of roads and trails, fuel modification zones, water quality improvements, and service utilities would be installed as part of the Project construction. As discussed in Threshold 5.13.2 the Project would require substantially similar construction-related activities as to the 2017 Approved Project and construction activities associated with the Modified Project would introduce potential ignition sources. As with 2017 Approved Project and described above the Modified Project would comply with Mitigation Measure PH-14 to reduce wildfire risk, the CFC, and the County Fire Code. As described in Threshold 5.13.2 Modified Project would include **PDF-1** and **PDF-2** which would enhance regulatory compliance and further reduce the potential for potential construction-related ignitions. Further, as noted in Threshold 5.13.2 the State-certified EIR analyzed off-site wildfire risk and determined while the construction of the Approved Project would introduce construction-based ignitions the impact would be less than significant with regulatory compliance and the implementation of Mitigation Measure PH-17. Implementation of the regulatory standards, Mitigation Measure PH-14, **PDF-1** and **PDF-2** would reduce the risk of wildfire ignition and



spread on the Modified Project Site. As such, the Modified Project is consistent with the determination of the State-certified EIR and does not include a substantial change that would increase wildfire risk associated with construction-based ignition sources thereby construction activities would not exacerbate wildfire risk and the impact would be **less than significant**.

8.1.2.2 Fuel Breaks / Vegetation Management

As previously discussed, the Modified Project Site is located in a Very High FHSZ, and implementation of a Fuel Modification Plan is required. The State-certified EIR determined that the impacts from the Approved Project would be less than significant with regulatory compliance, including vegetation management, and the implementation of mitigation measures. The Modified Project does not include a substantial change to the fuel vegetation management activities that would exacerbate wildfire risk when compared to the Approved Project. A preliminary Fuel Modification Plan has been prepared for the Modified Project consistent with the County Fire's Fuel Modification Plan Guidelines (County Fire 1998, 2019). In accordance with County Fire Code provisions, the Fuel Modification Plan would be submitted for approval to the County Fire and would include the vegetation management activities described below.

As described in Threshold 5.13.2 the Modified Project includes fuel modification zones that consist of Zones A and B would be required around all habitable structures within the Planning Areas. The Modified Project includes design features to ensure the FMZs retain their functionality throughout the life of the Modified Project. **PDF-3** and **PDF-4** include provisions so that vegetation management provides last protection both to the Modified Project and off-site areas. In accordance with County Fire Code provisions, the Fuel Modification Plan would be reviewed and approved by the Forestry Division of the County Fire for consistency with defensible space and fire safety guidelines. As such, the impacts associated with the installation of fuel breaks and vegetation management would not exacerbate wildfire risk nor include a substantial change beyond what was analyzed in the state-certified EIR. Therefore, as discussed above the Modified Project would not include a substantially different change regarding fuel breaks and vegetation management compared to the 2017 Approved Project. The Modified Project would not result in any new significant impacts related to fuel breaks and vegetation management compared to the Sate-certified EIR and the impact is **less than significant**.

8.1.2.3 Roads and Trails

As with the 2017 Approved Project, the Modified Project would involve the extension of existing roadways and the installation of an interior circulation network and trail networks. The roadway network on the Modified Project Site would be integrated into the broader roadway network throughout the west side of the Santa Clarita Valley. The presence of vehicles and human activity along newly installed roads would introduce new potential ignition sources to the Project area. As required under the Los Angeles County Fire Code, fire engine apparatus roads would be maintained with a minimum 20-foot-wide roadway that is clear to the sky, and all flammable vegetation or other combustible growth would be removed for a minimum of 10 feet on each side of the roadway (Title 32 Section 325.10). Additionally, roads would include roadside fuel modification, be adjacent to FMZs, and ignition resistant constructs further making it unlikely that a vehicle-based ignition would occur or spread to off-site or on-site areas as discussed in Threshold 5.13-2. Adherence to these regulatory requirements would reduce the risk of fire ignition along roadways and ensure ease of accessibility for ingress and egress of fire apparatus. However, the Modified Project does not include a substantially different change to the road system nor does it result in a substantially different fire risk than was analyzed in the State-certified EIR. Further, the State-certified EIR determined wildfire impacts to be less than significant. Therefore, as the Modified Project would not result in any

new significant impacts related to roads or trails installation than compared to the State-certified EIR the impact is less than significant.

8.1.2.4 Utilities

As part of the Modified Project, utility service lines, including those for water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications services, would be extended from their current locations to the Project structures. However, the Modified Project would not increase or substantially change utility installation and maintenance requirements compared to the 2017 Approved Project. As further discussed in Section 5.XX, Utilities and Services Systems, of the SEIR, the Modified Project would not increase the need to relocate or construct utilities as compared to the 2017 Approved Project. As discussed in Threshold 5.13-2 the Modified Project would bury powerlines, effectively eliminating a significant ignition source for the area. As utility installation and maintenance often require demolition and construction-related activities, all activities of this nature would be required to adhere to the regulations for fire prevention and PDF-1 and PDF-2 as described above and in Threshold 5.13.2. All maintenance activities would be conducted according to regulatory requirements and occur adjacent to the Modified Project's fuel modification zones which would occur prior to the start of construction and throughout the life of the Project, per PDF-2, PDF-3, and PDF-4. Consequently, new infrastructure would not exacerbate fire risk provided that fuel modification zones and other vegetation management activities are implemented and enforced according to County Fire requirements. As such, the installation of Modified Project roads, service utilities, fuel modification zones, drainage, and water quality improvements, and other associated infrastructure would not exacerbate wildfire risks and the Modified Project would adhere to appropriate fire prevention, access, and vegetation management activities discussed throughout the FPP and described in Threshold 5.13-2.

Given that the activities involved with the installation or maintenance of associated infrastructure would require ground disturbance and the use of heavy machinery associated with trenching, grading, site work, and other construction and maintenance activities, the installation of related infrastructure could potentially result in temporary or ongoing impacts to the environment. However, the installation and maintenance of roads, fuel modification zones, service utilities, and drainage and water quality improvements are part of the Project analyzed herein. As such, any potential temporary or ongoing environmental impacts related to these components of the Modified Project were already accounted for in the 2017 Approved Project, and any modifications would be analyzed in the SEIR for the Modified Project. The Modified Project would not include a substantially different change regarding utilities that were analyzed in the State-certified EIR. The Modified Project would not result in any new significant impacts related to utility installation.

Additionally, the Modified Project would enhance environmental areas for wetlands and related biological resources within the Entrada South and VCC Planning Areas. For instance, the Modified Project would include enhancing and restoring various drainage channels and waterways. Although such areas may be temporarily impacted during construction, as analyzed in the State-certified EIR for the Approved Project, they would be revegetated after construction based on the Modified Project design. This would ultimately reduce permanent impacts on certain vegetation communities and jurisdictional stream habitats, as discussed in further detail in Section 5.2, Biological Resources, of this SEIR. This environmentally beneficial modification would result in increased open space, restored drainage areas and habitat for species compared to the 2017 Approved Project.

In summary, the Modified Project falls within the disturbance footprint analyzed for the 2017 Approved Project and would be consistent with the general scope and intensity of development that was studied in the State-certified EIR for the Approved Project. The Modified Project's impacts on the environment related to installation and

maintenance of associated infrastructure would remain substantially similar to those identified for the 2017 Approved Project, and any new potential impacts have been appropriately mitigated throughout the SEIR. The Modified Project's impacts related to exacerbating wildfire risk due to the installation of associated infrastructure would be appropriately addressed with adherence to all regulatory requirements, and fire safety practices outlined in the FPP and enhanced with the implementation of the PDFs. Therefore, as the Modified Project does not include any substantially different changes to the installation and maintenance of associated infrastructure compared to the State-certified EIR, the Modified Project would not result in any new significant impacts compared to the 2017 Approved Project as analyzed in the State-certified EIR.

8.1.3 Threshold 5.13-4: Would the Modified Project Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes?

As discussed in the State-certified EIR for the 2017 Approved Project it was concluded that potential impacts from landslide hazards associated with the construction of the 2017 Approved Project would be reduced to less than significant through the implementation of mitigation measures similar to SP-4.1-15 through SP-4.1-24, the State-certified EIR required Mitigation Measure VCC-GEO-3, and compliance with Los Angeles County's Building Code and the 2019 California Building Code, which is based on International Building Code standards. The Modified Project would occur in the same disturbance footprint and does not include features that constitute a substantial change as related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes compared to the State-certified EIR. However, the following discussion is included to assess how the Modified Project activities may impact as related to exposing people or structures to significant risk resulting from post-fire slope instability or drainage changes.

In addition to the Modified Project's location in a fire-prone area of Southern California, the Modified Project Site and surrounding area are topographically diverse, with slope gradients ranging from moderate to steep. The Entrada Planning Area is located south of the Santa Clara River on rugged terrain dominated by several steep north-south-trending slopes, with elevations ranging from approximately 1,000 feet amsl to approximately 1,438 feet amsl. The Entrada Planning Area contains portions of four drainage channels: Magic Mountain Canyon and three unnamed drainages. All four tributaries exit the Entrada Planning Area is located north of the Santa Clara River in relatively flat areas along Castaic Creek and within the lower elevations of Hasley Canyon, with site elevations ranging from approximately 1,470 feet amsl. The VCC Planning Area is dissected by two south–north-trending tributaries to the Santa Clara River: Castaic Creek and Hasley Creek. Both tributaries exit the VCC Planning Area through natural drainages before eventually discharging into the Santa Clara River.

Slope failures, mudflows, and landslides are common in areas where steep hillsides and embankments are present, and such conditions would be exacerbated in a post-fire environment where the vegetative cover has been removed. Vegetation plays a vital role in maintaining existing drainage patterns and the stability of soils. Plant roots stabilize the soil, and leaves, stems, and branches intercept and slow water, allowing it to more effectively percolate into the soil. Removal of surface vegetation reduces the ability of the soil surface to absorb rainwater and can allow for increased runoff that may include large amounts of debris and mudflows. If hydrophobic conditions exist post-fire, the rate of surface water runoff is increased since water percolation into the soil is reduced (Moench and

DUDEK

Fusaro 2012). The potential for surface runoff and debris flows, therefore, increases significantly for areas recently burned by large wildfires (Moench and Fusaro 2012). Given the Project's location in fire-prone Southern California, Modified Project occupants and structures could be exposed to downslope or downstream flooding or landslides as a result of post-fire conditions. As discussed above and shown in Figure 5.13-2, the 2017 Rye Fire (6,048 acres) is the most recent fire to have burned in the Project area. Based on field surveys conducted by Dudek in 2019 (see Appendix 5.13), because the vegetation communities in the Project area are composed of native species that have adapted to periodic fires and thus can rapidly regenerate after a fire, vegetation has regenerated since the 2017 Rye Fire, thereby aiding in stabilizing surrounding slopes.

In addition, vegetation removal as a result of vegetation management, such as that proposed for the Modified Project, could result in changes to drainage patterns and slope stabilization. Caution must be used to avoid causing erosion, ground (including slope) instability, or water runoff due to vegetation removal, vegetation management, maintenance, landscaping, or irrigation. This would be accomplished through HOA landscape plan reviews, landscape contractor monitoring of irrigation components, adherence to fuel modification plan, and annual (or more often as required by County Fire) landscape and fuel modification zone inspection and maintenance conducted by the Project HOA detailed in **PDF 3** and **PDF 4**. The FMZs would also function to reduce fire behavior and intensity as determined by the fire behavior modeling. As described in Threshold 5.13-2 the multi-layer fire protection approach of the Modified Project significantly reduces the wildfire risk and the likelihood of fire to the Modified Project and the area. As a result, if were to occur it is unlikely it would result in extreme fire severity and post-fire slope instability due to the lack of available fuels and fire protection measures.

Further, the fuel modification and vegetation management plans for the Modified Project would not be substantially different from the 2017 Approved Project which was analyzed by the State-certified EIR as discussed above and in Threshold 5.13-2. The State-certified EIR determined that the vegetation management for the Approved Project was a key component in reducing the wildfire-related impacts below the level of significance.

Apart from post-fire slope instability, the potential for landslides, runoff, flooding, or drainage changes and water quality improvements has been analyzed in the SEIR and the State-certified EIR for the Approved Project. As discussed in Section 5.5, Hydrology and Water Quality - Hydrology, of the SEIR, and in the Geology and Soils assessment presented in the Initial Study, the Modified Project would not result in new or increased impacts related to landslides, flooding, runoff, changes in drainage patterns, or slope stabilization compared to the 2017 Approved Project. According to the Geology and Geologic Hazards, Update prepared for the Modified Project, several potential landslide areas have been identified within the Modified Project Site as requiring supplemental subsurface investigations. ES/VCC-GEO-3, as identified in the Initial Study for the Modified Project, requires that a Corrective Grading Plan delineating these areas be prepared and submitted to the County of Los Angeles Department of Public Works, as required for regulatory compliance (Section 3.3.3.1 of the Manual for Preparation of Geotechnical Reports [County of Los Angeles 2013]). ES/VCC-GEO- requires mitigation of all areas subject to liquefaction and that landslides either be removed, stabilized, or buildings setback accordingly, ES/VCC-GEO-3 also requires that grading and engineering design requirements address the removal of unstable soil, stabilization of potential landslides area, and compaction of engineered fill to meet County requirements. The Initial Study for the Modified Project determined that with the implementation of Mitigation Measures ES/VCC-GEO-3 impact on landslides would be less than significant and that no supplemental analysis is required. With the implementation of these corrective grading measures and the adopted mitigation measures included in the 2017 Approved Project EIR, impacts associated with potential landslides would be reduced to less than significant and the Modified Project would not introduce any new impacts. As such, the Modified Project would not cause any new significant impacts related to landslides and the impact is less than significant.



The Modified Project would not increase impacts related to soil erosion or loss of topsoil compared to the 2017 Approved Project as identified in the Initial Study. The 2017 Approved Project EIR concluded that the effects of substantial soil erosion or loss of topsoil may include the undermining of structures and slopes, alterations of surface drainage patterns, steepening of slopes, and loss of setback areas and safety zones. Absent mitigation, such impacts would be significant. Although compliance with current regulatory requirements would reduce any adverse geological impacts, corrective grading measures (ES/VCC-GEO-3) would be designed to remove unstable soils, stabilize potential landslide areas, and compact engineered fill to meet County grading and soil compaction requirements. As such, the Modified Project does not result in a substantial change from the State-certified EIR and would not cause any new significant impacts related to soil erosion or loss of topsoil therefore the impact **is less than significant.**

As evaluated in the State-certified EIR for the Approved Project, hydrology impacts related to flooding/flood hazards and stormwater conveyance within the Modified Project Site would be less than significant. The State-certified EIR also determined that impacts related to drainage patterns, long-term erosion, channel stability, and downstream deposition would be less than significant with mitigation. Therefore, as the Modified Project does not result in a substantial change to the impacts analyzed in the State-certified ERI the impact is **less than significant**.

In summary, development areas within Entrada South and VCC would be stabilized during construction through the use of drainage improvements and bank stabilization. The Modified Project also falls within the disturbance footprint analyzed for the 2017 Approved Project and would be consistent with the general scope and intensity of development that was studied in the State-certified EIR for the Approved Project. Therefore, with adherence to regulatory requirements and applicable mitigation measures outlined in the State-certified EIR, and additional mitigation measures identified for the Modified Project (ES/VCC-GEO-3), the Modified Project would not expose people or structures to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes nor introduce any substantially different impact as compared to the State-certified EIR. Further, because the Modified Project would not result in any new significant impacts related to downslope or downstream flooding or landslides as a result of runoff compared to the 2017 Approved Project the impact is **less than significant**.

8.1.4 Threshold 5.13-5: Would the Project Expose People or Structures Either Directly or Indirectly, to a Significant Risk of Loss, Injury, or Death Involving Wildland Fire?

and

Threshold 5.4-7: Would the Modified Project Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury, or Death Involving Fires, Because the Project is Located:

As previously described, the State-certified EIR determined that the 2017 Approved Project's wildfire impacts were less than significant. The State-certified EIR also determined that the Approved Project provided sufficient access, water supply, siting of homes and buildings, and vegetation management for the Approved Project's location in a



VHFSZ. Further, the Approved Project analysis found that compliance with all applicable regulations and implementation of Mitigation Measures PH-7 and PH-14 would further reduce any potential impact below the level of significance. The Modified Project does not include substantial modifications from the 2017 Approved Project that would result in a significant increase in the risk of wildfire. However, to better gauge how the Modified Project development may directly or indirectly expose people to wildfire risk the following analysis has been included.

8.1.4.1 Within a High Fire Hazard Area with Inadequate Access?

The access requirements were analyzed as part of the State-certified EIR and it was determined that the Approved Project would provide sufficient access. Further, as evaluated in the Initial Study, the Modified Project does not include any modifications to the 2017 Approved Project that would impair implementation of, or physically interfering with, an adopted emergency response plan or emergency evacuation plan, as described in response to Question 9(f) of the Initial Study:³⁰

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The State-certified EIR found that impacts to public safety related to emergency response were not significant for the Entrada and VCC Planning Areas. The Modified Project does not include any modifications to the 2017 Approved Project that would increase interference with an adopted emergency response plan or emergency evacuation plan. The Modified Project includes the same mix of uses as the 2017 Approved Project, with only changes to the residential and non-residential allocations for Entrada South that do not have the potential to impair an adopted emergency response plan or emergency evacuation plan. Like the 2017 Approved Project, Modified Project development in the Entrada and VCC Planning Areas would address fire and emergency access needs through the implementation of Mitigation Measure RMDP/SCP-PH-7, which requires compliance with Los Angeles County Code, Title 21, Chapter 21.24 regarding secondary evacuation access. Further, the Modified Project's circulation system would be designed and constructed in accordance with all applicable Los Angeles County Fire Department (LACFD) requirements. Therefore, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts for this topic area; no additional analysis in the Supplemental EIR is required.

Additionally, PDF-HM-1, set forth in Section 17, Transportation, of this Initial Study, provides additional benefits for the Modified Project. PDF-HM-1 would require the submission of a detailed Construction Traffic Management Plan which would include provisions for adequate emergency access to all residences and businesses during construction activities. PDF-HM-1 is beneficial and is not relied upon to reach the conclusion that no additional analysis in the Supplemental EIR is required.

Further, the Initial Study determined in response to Question 17(d) that the Modified Project would not have the potential to cause new significant impacts related to emergency access:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

³⁰ Initial Study, Entrada South and Valencia Commerce Center Project, October 7, 2021, p. 73.

Similarly, the Initial Study in response to Question 20(a) determined that the Modified Project would not have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Modified Project would not increase impacts related to emergency response or evacuation as compared to the 2017 Approved Project. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

This Fire Protection Plan further considers whether the Modified Project would expose people, either directly or indirectly, to a significant risk of loss, injury, or death involving fire or wildland fire related to access or evacuation because the Modified Project Site is located within a Very High FHSZ, as mapped by CAL FIRE and the County.

The Modified Project Site would be regionally accessible from I-5 and SR-126. A new network of roads would be implemented that would connect the Project Site to the existing road system. Further, as discussed in Threshold 5.13.2, the Modified Project does not include a substantial change to its access plan and road network and does not increase vehicle trips compared to the 2017 Approved Project. The Modified Project Site access, including road widths and connectivity, would be consistent with the County's roadway standards (Title 21), County Fire requirements, secondary access requirements, with the analysis of the 2017 Approved Project. and the California Fire Code (Section 503). The Modified Project Site's primary routes would be accessed through a series of internal neighborhood roadways that would connect with the primary ingress/egress roads (e.g., Magic Mountain Parkway, Commerce Center Drive, and The Old Road) that intersect off-site primary and major transportation routes. There would be multiple primary ingress/egress routes in each Planning Area, as described below.

Entrada South Primary Ingress/Egress Routes:

- Eastern Primary Route: Magic Mountain Parkway, or The Old Road or I-5 to the north or south.
- Southern Primary Route: Westridge Parkway to Valencia Boulevard then east to The Old Road or I-5.

Valencia Commerce Center Primary Ingress/Egress Routes:

- Southern Primary Route: Commerce Center Drive to SR-126 to the east or west.
- Northern Primary Route: Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- Western Primary Route: Franklin Parkway to Wolcott Way to SR-126 to the east or west.
- Eastern Secondary Routes: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.

In accordance with the County roadway standards, County Fire requirements, and the California Fire Code, interior the Modified Project roads would be constructed to allow for traffic flow through the Modified Project Site and for fire department access serving all proposed residential and commercial structures. Further, in accordance with **PDF-2**, access roads would be completed and paved prior to the issuance of building permits and prior to beginning any potentially combustible construction activities. A map depicting all proposed new roads would be submitted to the County Fire for review and approval, as well as to assist the County Fire with updating its response maps.



Stantec, the transportation consultant for the Modified Project, determined that the Modified Project is consistent with the EIR for the Santa Clarita Valley Area Plan (One Valley One Vision (OVOV)) which established area-wide circulation and transportation framework and took into account emergency access and evacuation that could occur during wildfires and other emergencies.³¹ As describe in Stantec's memo (Appendix G), OVOV provides "[policies to ensure that the circulation system is safe, such as provision of emergency access and maintenance of evacuation routes, [which] are consistent with provisions of the Safety Element."³² The OVOV EIR determined that the circulation framework, emergency access and evacuation planning for the OVOV area would result in less than significant impacts, as follows:

[OVOV] policies are designed to maintain adequate emergency access throughout the County's [OVOV] Planning Area. They would promote mobility to allow for acceptable response times by emergency vehicles, and ensure emergency access to various types of properties. Additionally, the County would maintain a current evacuation plan. Since the proposed [OVOV] Area Plan would provide the framework to ensure adequate emergency access, impacts would be less than significant."³³

Further, the OVOV EIR analyzed the impact of wildland fires on emergency access and evacuation related to buildout of the OVOV area.³⁴ The OVOV EIR concluded that OVOV's plans and policies would ensure that the buildout of the OVOV area would be consistent with existing and future LA County evacuation plans and procedures, ensuring safe egress and evacuation during emergencies, including emergencies caused by fires or wildfires.³⁵

As such, the Modified Project is consistent with the land use plan and buildout contemplated by OVOV. The Modified Project is largely surrounded by existing development, roadways and infrastructure. Emergency access and evacuation associated with the Modified Project would be consistent with the area-wide circulation, access and evacuation framework established by the County's evacuation plans and OVOV, reducing the risk of loss, injury, or death involving fires or wildfires during an evacuation or related to access.

Accordingly, the Modified Project's planned community interior road network and the existing regional road system that it interconnects with would provide multi-directional primary and secondary emergency evacuation routes which would adhere to the County's access requirements detailed in Title 21 Section 24.020. Because the roadways are all designed to meet or exceed County requirements in Title 21 and Title 32 of the County Municipal Code and Section 503 of the CFC regarding unobstructed travel lane widths, shoulders, vehicle turnouts, adequate parking, turning radius, grade maximums, signals at intersections, and roadside fuel modification zones, potential conflicts that could reduce the roadway efficiency are minimized, allowing for smoother evacuations.

Per the Initial Study and the State-certified EIR the Modified Project does not constitute a substantial change that would results in a impact to emergency operations or evacuation; to further ensure the Modified Project would not impair emergency operations or evacuation planning a Wildland Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Project has been prepared based on County Emergency Operations Procedures, which closely follow the County of Los Angeles Operational Area Emergency Operations Plan, including its Evacuation Annex per **PDF-6**. Thus, with the implementation of Mitigation Measures PH-7, **RR-WF-1** through **RR-WF-5** and other requirements outlined above, the Modified Project would provide adequate access and PDF-6 would provide additional

³¹ Stantec, Los Angeles County and the Santa Clarita Area Plan (One Valley One Vision) Circulation, Evacuation and Emergency Access Summary, May 2022.

³² *Id.;* OVOV, Circulation Element, p. 72.

³³ OVOV Draft EIR, Chapter 3.2, Circulation and Transportation, p. 3.2-66.

³⁴ OVOV Draft EIR, Chapter 3.11, Hazards and Hazardous Materials, pp. 3.11-28 to 3.11-29.

³⁵ *Id.* at 3.11-30.

benefits through the preparation of a Wildland Fire Evacuation Plan. Therefore, the Modified Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving fires or wildfires due to inadequate access. Further The Modified Project would not result in any new significant impacts related to access compared to the 2017 Approved Project. Therefore, the impact is **less than significant**.

8.1.4.2 Within an Area with Inadequate Water and Pressure to Meet Fire Flow Standards?

The State-certified EIR determined that the fire flow and water supply for the Approved Project was sufficient. The Modified Project is consistent with the 2017 Approved Project's fire flows and waters supply and does not include a substantial change to the water requirements that would result in an increased fire risk. The Modified Project would be required to comply with County Code Title 20, Section 20.16.060 for fire flow and fire hydrant requirements within a Very High FHSZ and with county Title 32 Section 507 for fire flow and hydrant requirements. The minimum fire flow and fire hydrant requirements for the Modified Project would be determined by the fire chief or fire marshal and be based upon 20 p.s.i. residual operating pressure, The minimum fire flow may be adjusted as determined by the Fire Chief or Fire Marshal based on location conditions, congestion, and construction buildings. Building permits for the Modified Project includes a sufficient water supply for fire protection. The Modified Project would be consistent with the types of water supply such as reservoirs, pressure tanks, elevated tanks, water mains, or other fixed systems capable of providing required fire flow per Title 32 Section 507.2 and any water tanks or associated structures would be installed and maintained in accordance with NFPA 22 and County Fire Requirements.

Within the internal roadways of each Planning Area, additional 12-inch-diameter water supply lines would provide the main water supply to commercial and domestic service to each structure and common landscape areas. These internal waterlines would also supply sufficient fire flows and pressure to meet the demands for required on-site fire hydrants and interior fire sprinkler systems for all structures.

In addition, County Fire helicopters can obtain water for dropping on wildland fires from Castaic Lake, north of the VCC Planning Area, or from numerous ponds that are located throughout the golf course immediately south of the Entrada Planning Area.

The Modified Project would also include fire hydrants located along fire access roadways. The location of hydrants would be determined by the Fire Chief or Fire Marshal and be based on current fire code requirements to meet operational needs. Fire hydrants would be no more than 600 feet apart for single-family residential and no more than 300 feet apart for multi-family residential, commercial, and instructions. All Modified Project fire hydrants will be consistent with applicable County Design Standards and County Fire Code. Prior to the issuance of build permits the location and number of a fire hydrant for the Modified Project would be approved by County Fire.

Additionally, all structures in the Modified Project would include automatic fire sprinklers in accordance with County Fire and the National Fire Protection Association (NFPA) standards for 13, 13R, and 13D automatic sprinklers. Automatic fire sprinklers are crucial in preventing off-site or indirect impacts as ember generated by a structure fire can be blown into native fuels. Automatic sprinklers have been shown to isolate fires to the point of origin, limit fire ability to spread throughout the structure, and even extinguish a fire prior to the arrival of first responders and overall have a high success rate of controlling or suppression of structure fires (NFPA, 2021).



With adherence to the County Code, the Modified Project would meet all water and water pressure requirements to meet fire flow standards. Further, the Modified Project would not result in new or increased impacts related to water supply or pressure compared to the 2017 Approved Project which determined water supply to be sufficient. Therefore, the Modified Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving fires due to inadequate water and pressure to meet fire flow standards nor would it result in a substantial change as compared to the State-certified EIR determination; as such impacts would be **less than significant**.

8.1.4.3 Within Proximity to Land Uses That Have the Potential for Dangerous Fire Hazards?

As with the 2017 Approved Project the Modified Project Site is located within proximity to open space areas that have the potential to present a dangerous fire hazard. Los Padres National Forest is located north of the Modified Project Site and Angeles National Forest lies north and east of the Modified Project Site. More specifically, the Modified Project Site is located in the Santa Clara River Valley between the Santa Susana Mountains to the south and the Topatopa Mountains to the north. Typically, steep terrain results in faster fire spread up-slope and slower spread down-slope. Terrain that forms a funneling effect, such as chimneys, chutes, or saddles, on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind. However, per the State-certified EIR the project design, adherence to regulatory requirements, and incorporation of applicable mitigation measures were determined to reduce the wildfire risk to a less than significant impact.

As demonstrated in the fire behavior modeling results discussed above (in response to Threshold 5.13-2), wildfires may occur in wildland areas that surround the Modified Project Site, but would not be significantly increased in frequency, duration, or size with the development of the Modified Project. The Modified Project would result in the conversion of fuels to maintained development and landscaping, with designated County Fire review of all landscaping, fuel modification areas, and ignition-resistant structures. As such, the Modified Project Site would be largely converted from readily ignitable fuels to ignition-resistant landscaping and structures that, consistent with state and County standards, provide defensible space, access for firefighters and early evacuations, water, and fire flow, and other fire protection features, as described above and throughout the FPP. Additionally, the Modified Project would implement PDF 1 through PDF 6, which as discussed in Threshold 5.13.2, enhance the Modified Project wildfire hazard reduction features and regulatory compliance. Further, the Modified Project is consistent with the analysis and determination of the 2017 Approved Project. Therefore, although the Modified Project Site is located within a Very High FHSZ and is located in proximity to open space areas that have the potential for a dangerous fire hazard, due to the fire safety features that would be implemented as part of the Modified Project, the Modified Project would not result in increased impacts which were already analyzed in the 2017 Approved Project. Therefore as the Modified Project would not directly or indirectly result in exposing people or structures to a significant risk of loss, injury, or death involving fires due to location nor result in a substantial change to the determination established in the State-certified EIR the impacts would be less than significant.

As described above, the Modified Project is within a VHFSZ. However, as compared to the 2017 Approved Project, the Modified Project would not result in a significant increase in wildfire risk. The Modified Project provides adequate access to the site, and with adherence to regulatory requirements and enhanced fire protection provided by **PDF-1** through **PDF-6** would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving fires due to inadequate access. The Modified Project would also adhere to all

regulatory requirements for fire flow and water supply and would improve result in an improvement of water supply for the area as described above. Further, though the Modified Project is adjacent to open space areas adherence to regulatory requirements, implementation of **PDF 1** through **PDF 6**, and application of the FPP the Modified Project would result in a reduced fire hazard for the area as described above and in Threshold 5.13.2. Therefore, per the analysis above and throughout the wildfire analysis of this document the Modified Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving fires, because the of where the project is located and the impact is **less than significant**.

8.1.5 Threshold 5.4-8: Does the Proposed Use Constitute a Potentially Dangerous Fire Hazard?

The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety. The State-certified EIR found that while the Approved Project provided sufficient access, water supply, siting of homes and buildings, and vegetation management, the potential for wildland fire hazards would still exist and require mitigation. However, after regulatory compliance and incorporation of Mitigation Measures PH-14 and PH-7, the 2017 Approved Project would have a less than significant impact. The Modified Project does not include substantial modifications from the Approved Project that would increase fire risk as compared to the analysis for the Approved Project.

The Modified Project is within an SRA VHFHZS as determined by CAL FIRE and the County. As described in Section 2 Study Area Characteristics and Findings the Modified Project is located within a regional area that is prone to wildfires due to climate, topographic conditions, and vegetation. Per Section 2.2.5 Historic Wildland Fires as recently as 2017 fires have occurred within the Modified Project's planning areas. The existing conditions of the Modified Project constitute a fire hazard that could potentially be exacerbated. However, as described in Threshold 5.13.2 the Modified Project includes multiple layered safeguards to reduce the potential for human-caused ignitions below the level of significance and the Modified Project is not substantially different from the 2017 Approved Project which the State-certified EIR determined did not constitute a significant fire hazard. Further, once the Entrada South and VCC Planning Areas are developed, the fire spread patterns on the Modified Project Site would be altered, since the Modified Project would result in substantial fuel breaks, significantly interrupting the continuous fuels across the Modified Project Site. The proposed 100- to 200-foot fuel modification zone widths, described in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions, would be approximately twice as wide as the longest calculated directly adjacent flame lengths during offshore wind conditions, and approximately six times wider than the calculated flame lengths for a fire during onshore wind conditions. The Modified Project's vegetation management plan not only provides protection to the Modified Project but to the surrounding area per Section 3.2 Defensible Space and Vegetation Management Regulatory Requirements. Additionally, per PDF-2 the vegetation management would be implemented prior to the issuance of the building permit and prior to bringing combustibles on-site, thus providing a benefit to the Modified Project and the area during the construction phase as well. PDF-3 and PDF-4 would also enhance the protection of the FMZs throughout the lifetime of the Modified Project through annual vegetation management maintenance and inspection to ensure the functionality of the FMZs. Thus, projected flame lengths would be reduced to levels that would be manageable by firefighting resources. Additionally, the Modified Project would be required to comply with all provisions in the Los Angeles County Code regulating development in a Very High FHSZ. These include requirements such as ignition-resistant building materials and systems, implementation and ongoing maintenance of fuel modification zones, fire flow and fire hydrant requirements (Title 20, Section 20.16.060), and road width and length restrictions.



In summary, the development of the Modified Project is consistent with the 2017 Approved Project which was determined that have a less than significant impact on wildfire. Any additional impacts associated with the Modified Project with respect to wildfire hazards have been analyzed herein and addressed. Additionally, per the analysis in Threshold 5.13-2 and in Threshold 5.13-4 and in the EIR the Modified Project with adherence to regulatory requirements, enhanced by the implementation of **PDF 1** through **PDF-6**, would not exacerbate wildfire risk nor constitutes a fire hazard. The Modified Project is consistent with the determination of the State-Certified EIR and with the analysis presented in the thresholds above. Per the analysis above, and discussed herein the Modified Project does not constitute a potentially dangerous fire hazard and does not result in a new significant impact compared to the State-certified EIR therefore the impact is **less than significant**.

8.1.6 Threshold XX: Would the Project Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, or Result in the Need for New or Physically Altered Governmental 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?

As with the 2017 Approved Project, the Modified Project would not involve the construction of new or physically altered government facilities. However, the need for new or expanded public services (such as fire protection facilities) is typically associated with a population increase. The State-certified EIR determined that the Project would have a less than significant impact with mitigation on adopted emergency response plans or emergency evacuation plans based on the location of fire stations, road improvements, and implementation of Mitigation Measure PH-7. The Modified Project would involve the development of new residential, industrial/commercial, recreational, and open space uses within the Entrada South and VCC Planning Areas however, the development is consistent with the development footprint of the 2017 Approved Project. As with the Approved Project, the development of the Modified Project would result in an increase in population in the area. However, as compared to the Approved Project the Modified Project would result in a decrease in VMT. The following analysis evaluates whether Modified Project development, and the resulting anticipated increase in population, would hinder the ability of County Fire to maintain acceptable service ratios, response times, or other performance objectives.

The Modified Project Site is located within the County Fire jurisdictional response area, within the North Operations Bureau, Division 3. As shown in Table 9 in Section 6 Emergency Response and Service, the closest County Fire stations to the Project Site are Stations 76, 124, 126, 143, 156, and 46 which would provide an initial response in the event of a call for service.³⁶ Typically the closest engine to an incident would be the initial response unit. However, it is common for multiple engines to respond to emergency calls based on availability and proximity. The closest existing fire stations to the Entrada Planning Area are Station 76 (27223 Henry Mayo Drive), located approximately 3.4 miles away, and Station 126 (26320 Citrus Street), located approximately 3.3 miles away. The

³⁶ Once built, Station 46 in Mission Village will provide initial response to Entrada South; that station will be staffed with a threeperson paramedic engine, a four-person quint, and a battalion chief.

closest existing fire stations to the VCC Planning Area are Stations 76 and 143 (28580 Hasley Canyon Road), located approximately 1.7 and 2.7 miles away, respectively.

For purposes of this analysis, Fire Stations 76, 126, and 143 are considered the first response in the event of a call for service to the Project Site. However, since the County Fire employs a regional approach to providing fire protection and emergency medical services, other nearby stations could provide additional support if additional resources were needed. As shown above, the level of service demand for the Modified Project raises overall call volume by a relatively small amount of 2.3 calls per day on a worst-case basis, and the vast majority of these calls are not related to fire hazards Further, it is noted that when Fire Station 46 becomes available, it would respond to an additional 2.3 calls per day, further lowering the demand on the existing fire stations.

The Modified Project would be substantially similar to the 2017 Approved Project with respect to demand for fire protection services. The slight changes in land uses for the Modified Project compared to the 2017 Approved Project would not substantially change the response times by County Fire. Nevertheless, to provide additional information about response times, the FPP considered total response times based on the full buildout of the Modified Project.

Land use in the Santa Clarita Valley varies greatly from urbanized and suburban clusters to vast rural areas. County Fire's response time targets by land-use type are as follows:³⁷

- 5 minutes or less for urban areas
- 8 minutes or less for suburban areas
- 12 minutes or less for rural areas

The Modified Project is located in a suburban area. Emergency response time target thresholds include travel time along with dispatch and turnout time, which can add an additional 2 minutes to travel time. As indicated in Table 9, total response time to the Entrada Planning Area from Station 126 to the project boundary would be under 5 minutes. Total response times from Stations 126 to all developed areas within the Entrada Planning Area would be under 8 minutes based on both modeling methodologies, consistent with County Fire's 8-minute response time for suburban areas. Total response times from Stations 76 to all developed areas within the Entrada Planning Area would be under 8 minutes based on the posted speed methodology and to 95% of the Entrada Planning area using the 35 mph methodology, consistent with County Fire's 8-minute response time for suburban areas. Based on these calculations and modeling, the Project's development in the Entrada Planning Area would meet the County's response time standard for suburban areas from existing fire stations.

It is noted that Fire Station 46 would be completed by Newhall Land and be operational prior to the Modified Project contributing to the demand for fire services. However, to be conservative, the analysis assumes that Station 46 will not be operational prior to the operation of Entrada South.

As indicated in Table 9, Station 76 and Station 143 would be capable of responding to the VCC Planning Area project boundary and under 5 minutes. Station 76 would be capable of responding within 5 minutes 30 seconds, and Station 143 would be capable of responding within 7 minutes 14 seconds, to the farthest developed areas of VCC. Based on these response times, existing fires stations would be capable of responding to the VCC Planning Area within the County's 8-minute response time standard for suburban areas.

³⁷ Bagwell, pers. comm. 2020b; see *also* OVOV, One Valley One Vision Draft Program EIR, p. 3.15-2.
The Modified Project would not result in any additional impacts associated with providing new or physically altered government facilities such as a new fire station. Further, the Modified Project would contribute to the funding of necessary fire apparatus and equipment through payment of the Fire Facility Fee, which funds the purchase of station sites, the construction of new stations and facility improvements, and the funding of capital equipment. Thus, compared to the 2017 Approved Project, the Modified Project would not result in new significant impacts related to the provision of new or physically altered governmental facilities or result in the need for new or physically altered governmental facilities other than those previously analyzed.

8.1.7 Cumulative Impacts

While the State-certified found the Approved Project to have less than significant impacts regarding wildfire it determined that the impacts related to wildland interface fires were cumulatively significant. This was based on the fire history in the region, and the potential for loss of structures, air quality, and traffic impacts to the residents of the project and cumulative projects. However, the State-certified EIR also determined that if the other projects were to implement mitigation measures such as SP-4.18-2 (fire flow capacities), SP-4.18-3 (comply with all applicable building and fire codes and hazard reduction programs), SP-4.18-4 (developer fees or fire station construction), PH-7 (secondary evacuation access) and PH-14 (Wildfire Fuel Modification Plan) then the impact would be mitigatable. However, the mitigation measures listed above are now required by the County Fire Code Title 32. Therefore, all projects that were previously analyzed are now required to include these features as a part of the project design, features which the State-certified EIR would be able to reduce wildfire impacts to less than significant.

The cumulative context considered for Project wildfire impacts is Los Angeles County, and more specifically, the Santa Clara River Valley. As discussed in Section 2, CAL FIRE has mapped areas of fire hazards in the state based on fuels, terrain, weather, and other relevant factors. As described above, the Modified Project Site is located in a Very High FHSZ. The Modified Project, combined with other projects in the region, would increase the population and/or activities and potential ignition sources in the Santa Clara River Valley, which may increase the potential of a wildfire and increase the number of people and structures exposed to the risk of loss, injury, or death from wildfires. Individual projects located within Los Angeles County are required to comply with applicable County fire and building codes, which have been increasingly strengthened as a result of severe wildfires that have occurred in the last two decades. The fire and building codes include fire prevention and protection features that reduce the likelihood of a fire igniting in a specific project and spreading to off-site vegetated areas. These codes also protect projects from wildfires that may occur in the area through the implementation of brush management and fuel management zones, ensuring adequate water supply, preparation of fire protection plans, and other measures.

Suggestions that placing new residential projects in the County's wildland-urban interface will increase the risk of fire ignition are not consistent with available research. According to the available evidence, no large fires in Southern California since 1990 were determined to have been started within a nearby master-planned, ignition-resistant subdivision or neighborhood. Syphard and Keeley (2015) summarized all wildfire ignitions included in the CAL FIRE FRAP database dating back over 100 years. They found that in San Diego County (similar to the Los Angeles County fire environment), equipment-caused fires were by far the most numerous, and these also accounted for most of the area burned; power-line fires were a close second. Ignitions classified as equipment-caused frequently resulted from exhaust or sparks from power saws or other equipment with gas or electric motors, such as lawnmowers, trimmers, or tractors (Syphard and Keeley 2015). These ignition sources are typically associated with lower-density housing, not higher-density housing such as that contemplated by the Modified Project. In addition, electrical transmission lines would be undergrounded in the Project area, mitigating the risk from electrical transmission line vegetation ignitions.

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Data indicate that lower-density housing poses a greater ignition risk. In the Southern California study, ignitions were more likely to occur close to roads and structures, and at intermediate structure densities (Syphard and Keeley 2015). This is likely because lower-density housing creates a wildland-urban intermix rather than an interface. The intermix places housing among unmaintained fuels, whereas higher-density housing, such as the Modified Project, converts all fuels within the footprint and provides a wide, managed fuel modification zone separating homes from unmaintained fuel. Syphard and Keeley (2015) determined that "[t]he WUI [wildland-urban interface], where housing density is low to intermediate, is an apparent influence in most ignition maps." This further enforces the notion that lower-density housing is a larger ignition issue than higher-density communities. A different study found that the "development of low-density, exurban housing may also lead to more homes being destroyed by fire" (Syphard et al. 2013). Neither of these studies considered the fire hazard and risk reduction associated with HOAmanaged fire modification zones and ignition-resistant structures. In addition, another study found that frequent fires and lower-density housing growth may lead to the expansion of highly flammable exotic grasses that can further increase the probability of ignitions (Keeley et al. 2012). This is not the case with the Project, where the landscapes would be managed and maintained to remove exotic fuels that may become established over time. The Fire Protection Plan plant palette restrictions, combined with HOA maintenance, would minimize the establishment and expansion of exotic plants, including grasses. Based on the research of the relevant literature and extensive conversations with active and retired fire operations and prevention officers, there is no substantial evidence that new residential neighborhoods built to the requirements of Los Angeles County's Fire and Building Codes increase the risk of wildfire ignition. Rather, the data indicate that roadways, electrical distribution lines, and lower-density residential projects (that do not have HOA-enforced restrictions and annual inspections) are the primary causes of increased wildfire ignition. The Modified Project would provide roadside fuel modification throughout the Project Site, and electrical lines would be subterranean.

Furthermore, other cumulatively considerable projects would be required to comply with the County's vegetation clearance requirements, as outlined in the County Municipal Code. The Los Angeles County Fire and Building Codes, along with project-specific needs assessments and fire prevention plan requirements, ensure that every project approved for construction includes adequate emergency access. Roads for all proposed projects are required to meet minimum widths, have an all-weather surface, and be capable of supporting the imposed loads of responding emergency apparatus. Therefore, because all projects are required to comply with these requirements, cumulative impacts related to wildfire hazards and emergency response and access would not result in new significant impacts.

Additionally, cumulative growth through 2030 (i.e., the Project build-out year) within County Fire's service area has the potential to increase the demand for fire protection and emergency medical services. The LACoFD employs a regional approach to providing fire protection and emergency medical services, wherein emergency response units are dispatched as needed to an incident anywhere in the County Fire's service territory based on distance and availability, without regard to jurisdictional or municipal boundaries.

As with the 2017 Approved Project, the Modified Project and all other future development projects in the service area would be subject to discretionary review by the County Fire and would be required to comply with the County Fire Code and other relevant County Code requirements and other applicable local codes (e.g., City of Santa Clarita Fire Code) and regulations related to fire safety, building construction, access, fire flow, and fuel modification. Payment of the Fire Facility Fee, which funds the purchase of station sites, the construction of new stations and facility improvements, and the funding of capital equipment, by the Project Applicant, would mitigate the Modified Project's contribution to cumulative impacts. Similarly, applicants for all future development projects in the area would be expected to pay the appropriate Fire Facility Fee. With the payment of such fees, no new significant cumulative impacts would result from the Modified Project.

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9 Project-Specific Design Features

9.1 Project Design Feature 1: Construction Fire Prevention Plan

Prior to any construction activities, a detailed Construction Fire Prevention Plan (CFPP) shall be implemented for the Project and submitted to the County of Los Angeles for review and approval prior to the issuance of the grading permit. The CFPP shall designate fire safety measures to reduce the possibility of fires during construction activities, including fire watch during hot works and heavy machinery activities (e.g., welding), spark arresters on all equipment, water supply via hose lines attached to hydrants, or a water tender pursuant to County Fire requirements, red flag period restrictions, and mandatory on-site fire resources as detailed in the CFPP in Appendix F. Employees would be presented with basic prevention fire training upon employment and the on-site safety officer and/or supervisor/foreman shall maintain documentation of training. Training shall consist of the Modified Project FPP requirements, review of Occupation Safety and Health Administration (OSHA) Fire Protection and Prevention, proper response and notification of a fire, and the use of fire extinguishing equipment. A site safety officer shall be responsible for the implementation of the CFPP, ensuring fire control equipment are maintained in good working conditions, monitoring combustibles onsite, conducting fire safety surveys, posting fire rules in an area visible to employees, stopping work activities that pose a fire hazard or are not in compliance with the CFPP, and reporting all fire ignited on-site to County Fire. County Fire shall review site fire safety conditions prior to the commencement of construction activities.

9.2 Project Design Feature 1: Pre-Construction Requirements

The applicant shall submit site improvement plans to County Fire prior to the issuance of the building permits. Prior to bringing lumber or combustible materials related to residential and nonresidential building construction onto the Modified Project Site, site improvements within the active development area shall be in place, including utilities, operable fire hydrants, and an approved, temporary roadway surface and fuel modification zones shall be established. Combustible materials may be utilized onsite prior to stated site improvements as needed for providing the improvements (e.g., wood forms for cast-in-place concrete) or for infrastructure constriction prior to utilities being installed (e.g. operable fire hydrants). County Fire shall review site fire safety conditions prior to the commencement of building activities.

9.3 Project Design Feature 3: Annual Fuel Modification Maintenance

All vegetation management with the FMZs and common areas shall be completed annually by May 1 of each year. Vegetation management may be completed more often for fire safety if determined necessary by County Fire. The Modified Project HOA or equivalent entity shall be responsible for the annual maintenance of all vegetation management within the Fuel Modification Zones (FMZs) in the common areas ensuring compliance with LACoFD fuel modification guidelines. Property owners will be responsible for maintaining the Ember Resistant Zone (ERZ)



and any fuel modification within their property. The annual maintenance would be managed and maintained by the Modified Project HOA through a qualified contractor that shall be required to meet fire safety requirements regarding equipment, the timing of maintenance, and fire suppression capabilities. Maintenance activities would include but not be limited to removing dead and dying material, removing undesirable plant species, and conducting thinning activities to maintain adequate spacing requirements. The Modified Project HOA or similar entity shall be responsible for ensuring the long-term funding and ongoing compliance with all provisions of the FPP including, vegetation planting, fuel modification of the perimeter areas, vegetation management on all common areas including roadsides, and open space areas under their control (if not considered Entrada Spineflower Preserve). The Modified Project HOA shall be responsible for the implementation of the annual FMZ maintenance subject to ongoing enforcement by County Fire. The HOA or and County Fire would enforce the vegetation management requirements detailed in the FPP and such requirements would be made a part of deed encumbrances and CC&Rs for each lot, as appropriate. Documentation, as part of the inspection report per PDF-4, on maintenance activities detailing the FMZS, maintenance operation, and consistency with current County brush clearance requirements shall be submitted to County Fire Bush Clearance Program.

9.4 Project Design Feature 4: Annual Fuel Modification Inspection

By June 1 of each year, a third-party inspector shall be hired by the Modified Project HOA or equivalent entity to conduct an annual inspection of the Fuel Modification Zones (FMZs), including the Ember Resistant Zone (ERZ) and FMZs that are within private property. The inspector would evaluate the FMZs for compliance with regulations and that they are operating accordingly. The inspector shall notify the HOA of any non-compliant FMZs, recommend measures for remediation, and a timeframe for reinspection. The Modified Project HOA shall be responsible for the long-term funding of the inspections. The HOA or and County Fire would enforce the vegetation management inspection requirements detailed in the FPP and such requirements would be made a part of deed encumbrances and CC&Rs for each lot, as appropriate. An inspection report shall be submitted to County Fire each year documenting inspection results and compliance with County FMZ requirements.

9.5 Project Design Feature 5: Wildfire Education Program

Within one year of occupancy permits being granted for Entrada South or VCC the Wildfire Education Program shall be established. The Modified Project residents and occupants shall be provided with ongoing education regarding wildfire, the FPP, and the Wildfire Evacuation Plan. The education program would support fire safety, evacuation practices, and fire safety features designed for the community. The Newhall Ranch Wildfire Education Program would provide target outreach to residents and occupants living in a fire risk area and would be a layered approach to maintaining high wildfire risk awareness that includes active and passive features. Contents of the educational program would be reviewed and approved by County Fire before printing and distribution. The Modified Project HOA or similar entity shall be responsible for the ongoing funding and maintenance of the wildfire education program. The HOA or similar entity shall enforce and maintain the education program requirements such requirements would be made a part of CC&Rs for the Modified Project. The educational program shall consist of the following:

1. **Bi-annual email and mailers**: Residents and occupants will be provided with bi-annual emails and mailers in May and in August. Mailers would be sent to each property address and property owners would receive digital

copies. Property owners would be highly encouraged to share this information with tenants should they choose to rent their property. The mailers and emails would include information such as reminders about annual defensible space inspections, maintaining the Ember Resistant Zone (ERZ), how to prepare for wildfire season, evacuation information, and how to prevent wildfires. There would also be links to various resources on where to get trusted information such as County Fire, 211 LA County, and Ready LA County.

- 2. Website: There shall be a dedicated community website with more detailed information and resources about wildfire awareness and prevention. The website would serve as a centralized resource for the fire education program and include information from the FPP. The website will also have fire watch and red flag warning alerts, as well as information on restrictions during fire weather conditions. Residents will also be able to use the website to sign up for an annual residential defensible space inspection from the HOA Fire Committee.
- 3. **Community workshops and webinars**: Two times a year there shall be either in-person or virtual community workshops. The goal of the workshops would be to cover various fire topics more in-depth. For example, this could include having a County Fire representative come to meet the community, a workshop on how to make a go-bag, a workshop on how to make a residential evacuation plan, or how to maintain the home ignition zone.
- 4. New resident packet: All residents and new residents in the future shall also be presented with a wildfire awareness and safety package upon purchase or rental of a home. This would also be given to businesses as part of their employee training program. Within the package will be a memory stick with the evacuation plan, a list of fire protection features, information on the regional fire hazard, prohibited activities in fire risk areas, how to build a go-bag, and a list of agencies and resources for receiving trusted information.
- 5. Emergency alert campaign: Residents and businesses would be encouraged to sign up for Alert LA County. Alert LA County is the mass notification system for emergency alerts, weather alerts, health notifications, building alerts, and other updates from County, State, and Federal agencies alerts, health notifications. The campaign shall occur annually and encourage residents to sign up for Alert La County. Reminders would also be sent out in the bi-annual mailers and emails, on the community website, in the workshops, and in the new resident package.
- 6. Fire watch groups: Within the community, there shall also be volunteer fire watch groups. These would be residents or businesses who volunteer to participate in a fire watch group for the community. During red flag warning days, this group would be responsible for reminding businesses and residents of fire-safe practices and restrictions. During red flag warning days, the fire watch group would also maintain vigilance of potential fires and would be trained on procedures for alerting County Fire in the event of a fire.
- 7. HOA fire safety committee: The fire safety committee shall be responsible for overseeing the maintenance of community-wide fire protection features. Residents would be able to report fire hazards or hazardous fuel conditions to the HOA committee for remediation. The committee will be responsible for the coordination of the 3rd party Fuel Modification Zone (FMZ) inspections and the volunteer residential defensible space inspections. The committee shall also be responsible for organizing and coordinating an annual education workshop on how to maintain the ERZ. The committee shall also be responsible for the creation and distribution of the educational program for the Modified Project. The committee would serve as a communication link between County Fire and the community.



9.6 Project Design Feature 6: Wildland Fire Evacuation Plan

Prior The Modified Project shall formally adopt, practice, and implement a "Ready!, Set!, Go!" approach to evacuation through the creation of a Wildland Fire Evacuation Plan (WFEP) for the Modified Project. The WFEP would be based on standard evacuation planning used by the Los Angeles County Office of Emergency Services and provide residents and occupants with potential egress route information and procedures. The WFEP would be provided to the Entrada South and VCC residents and commercial tenants and posted on the community website. The WFEP would be reviewed by residents at least annually through organized meetings and educational outreach by the HOA, Community Services District, or other means. Every ten years the WFEP will be reviewed and updated by the HOA or similar entity based on current land use, evacuation polies, and regulations. The WFEP will be available for review and input from County Fire and County sheriff.

10 Conclusion

The State-certified EIR for the 2017 Approved Project found that after regulatory compliance and incorporation of mitigation measures, the 2017 Approved Project's wildfire impacts would be less than significant.³⁸ The State-certified EIR also determined that the Project would have a less than significant impact on adopted emergency response plans or emergency evacuation plans based on the location of fire stations, a system of improved roads, and fire flows for the 2017 Approved Project.³⁹ The Modified Project is not anticipated to increase or exacerbate the wildfire risks analyzed in the State-certified EIR. Moreover, the requirements and recommendations set forth in this FPP meet fire safety, building design elements, infrastructure, fuel management/modification, and landscaping recommendations of the applicable codes defined in Section 3 Fire Safety Requirements - Regulatory Requirements and Recommended Design Features and summarized in Tables 10 and 11 below. The recommendations provided in this FPP also have been designed specifically for the proposed construction of structures within a VHFHSZ area. The goal of the fire protection features, both required and those offered above and beyond the Codes, provided for the Modified Project is to provide the structures with the ability to survive a wildland fire with little intervention from firefighting forces. The fire protection system provided for the Project site includes a redundant layering of code-compliant, fire-resistant construction materials, and methods that have been shown through post-fire damage assessments to reduce the risk of structural ignition. When properly implemented on an ongoing basis, the fire protection strategies proposed in this FPP, summarized in Tables 9 and Table 10, should significantly reduce the potential fire threat to the community, its structures, and the surrounding area. Additionally, the Modified Project should assist LACoFD in responding to emergencies through improved fire access, increased water capacity, and enhanced firefighting resources. Given the Modified Project's adherence to code and regulations and the inclusion of project-designed code exceeding features, the Modified Project is not expected to pose or be impacted significantly by wildfire.

Study Limitations

Note fire is a dynamic and somewhat unpredictable occurrence. As such the FPP does not guarantee that a fire will not occur or will not result in injury, loss of life, or loss of property. There are no warranties, expressed or implied, regarding the suitability or effectiveness of the recommendations and requirements in this FPP, under all circumstances. The Modified Project's developers, contractors, engineers, and architects are responsible for the proper implementation of the concepts and requirements set forth in the FPP. It will be extremely important for all homeowners, property managers, and occupants to comply with the recommendations and requirements described and required by the FPP on their property. Homeowners and property managers are also responsible for maintaining their structures and lots, including fuel modification and landscape, as required by this FPP, County Fire, and as required by the County Fire Code. It is recommended that the homeowners or other occupants who may reside within the Modified Project adopt a conservative approach to fire safety. The approach must include maintaining the landscape and structural components according to the appropriate standards and embracing a "Ready, Set, Go" stance on evacuation. The HOA or similar entity would be responsible for ongoing education and maintenance of the common areas, and County Fire would enforce the vegetation management requirements detailed in this FPP. Such requirements would be made a part of deed encumbrances and CC&Rs for each lot, as appropriate. Alternative methods of compliance with this FPP can be submitted to the fire authority for consideration.

³⁸ See Final State-certified EIR, p. 4.17-60 – 4.17-61.

³⁹ See Final State-certified EIR, p. 4.17-60.

Table 9. Primary Code Required Fire Safety Features

Feature No.	Description
1	Proximity to Fire Stations. The Modified Project is within County Fire's response time goals for initial response. The overall call volume has a less than significant impact on the existing response capacity. Response capacity would be further enhanced by a Fire Station in the Mission Village community that will provide a fast response throughout the Modified Project Area and Los Angeles County Fire includes several fire stations that are within a reasonable response timeframe. (Section 6 Emergency Response and Service)
2	Ignition Resistant Construction. All structures within the Modified Project are will be constructed of ignition-resistant construction materials consistent with wildfire protection building construction requirements contained in the Los Angeles Building Code including Los Angles Building Code Title 26 Chapter 7A, Los Angeles County Residential Code Section R327, and Los Angeles County Reference Standards Code Chapter 12-7A. These requirements include ignition resistance construction and are a key component in preventing structural ignition (Section 3.5 Structural Ignition Resistance Regulatory Requirements).
3	Automatic Interior Fire Sprinklers. Per County Fire Code all structures of any occupancy type within the Modified Project will be equipped with an NFPA 13, 13R, and 13D automatic sprinkler system. Automatic sprinklers prevent ember generation by structure fires, isolate fires to the point of origin, and limit fires from spreading within the building. (Section 3.6.3 Automatic Fire Sprinkler System)
4	Fuel Modification Zones. Per State Fire Code Section 4906 defensible space shall be maintained around all within and structures in all unincorporated land designated as SRA. Consistent with PRC 4290, SRA Fire Safe Regulations, California Code of Regulation Title 14 Division 1.4 Chapter 7 Subchapter 2 Section 1270, and Los Angeles County Fire Code Title 32 Section 4908.1 the Modified Project will provide 100- to 200- horizontal feet wide FMZs, depending on County Fire direction and geographic constraints feet from the exterior of structures toward the undeveloped wildland areas. The FMZs reduce fire intensity and flame lengths from fires in wildland areas advancing towards structures or vice versa. (Section 3.2 Defensible space and Vegetation Management Regulatory Requirements)
5	Roadside Fuel Modification Zones. The internal roadways will be maintained with a minimum of 20 feet total width of vegetation clearance that is clear to the sky to allow for fire apparatus access and prevent vehicle-based ignitions. All flammable vegetation or other combustible growth shall be removed on each side of the roadway for a minimum of 10 feet per County Fire Code Title 32 Section 325.10. (Section 3.3.1 Roadway Fuel Modification Zones)
6	Fire Apparatus Access. All Modified Project access will be consistent with County Roadway Standards defined in Title 21 and the 2020 CFC Section 503. Typical interior roads will have a minimum width of 24 feet width of unobstructed access. Private or public streets that provide fire apparatus access to buildings three stories or more in height shall be improved to 30 feet unobstructed width. All interior residential streets will be designed to accommodate a minimum of 75,000-lb. fire apparatus load. Fire apparatus access roads shall not exceed 15 percent in grades. Dead-end roads and cul-de-sacs will comply with Title 21 to ensure fire apparatus access. (Section 3.4 Fire Apparatus Access Regulations)
7	Water Availability. Water capacity and delivery will provide for a reliable water source for operations and during emergencies requiring extended fire flow. Water supply will be consistent with County Title 20, Section 20.16.060 for fire flow and fire hydrant requirements within a VHFHSZ. (Section 3.6.1 Water Supply and Section 3.6.1 Hydrants)

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Feature No.	Description
8	Ember Resistant Zone Although not currently required by law, the Modified Project will also include an Ember Resistant Zone (ERZ) within Zone A, consistent with PRC 4291 to include more intense fuels reduction within the immediate vicinity of structures. ⁴⁰ The ERZ is from the 5 feet of a structure and includes the area under and around all attached decks. The ERZ forces on preventing structure ignition via ember showers by reducing/eliminating all combustible within this zone. (Section 3.2 Defensible space and Vegetation Management Regulatory Requirements)

Table 9. Primary Code Required Fire Safety Features

Table 10. Fire Safety Project Design Features

Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
1	Construction Fire Protection Plan. Prior to any construction activities, a detailed Construction Fire Prevention Plan (CFPP) shall be implemented for the Project and submitted to the County of Los Angeles for review and approval. The CFPP shall designate fire safety measures to reduce the possibility of fires during construction activities, including fire watch during hot works and heavy machinery activities (e.g., welding), spark arresters on all equipment, water supply via hose lines attached to hydrants, or a water tender pursuant to County Fire requirements, red flag period restrictions, and mandatory on-site fire resources as detailed in the CFPP in Appendix XX. Employees would be presented with basic prevention fire training upon employment and the on-site safety officer and/or supervisor/foreman shall maintain documentation of training. Training shall consist of the Modified Project FPP requirements, review of Occupation Safety and Health Administration (OSHA) Fire Protection and Prevention, proper response and notification of a fire, and the use of fire extinguishing equipment. A site safety office	Prior to and during construction	Applicant Contractor	County Fire

⁴⁰ Assembly Bill 3074, passed into law in 2020, which requires a third zone for defensible space and amends PRC 4291. The amendment requires the Board of Forestry and Fire Protection to develop the regulation for the new ember-resistant zone (ERZ) within 0 to 5 feet of a structure by January 1, 2023. CAL FIRE currently recommends the implementation of an ERZ. In anticipation of the ERZ requirements becoming codified in PRC 4291, the ERZ has been included in the defensible space requirements for the Modified Project. The above listed requirements are based on the current recommendations for creating an ERZ detailed on CAL FIRE Defensible Space website (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/). These requirements will be reviewed and updated once the Board of Forestry and Fire Protection updates the regulations for the ERZ in PRC 4291.FIRE Defensible Space website (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/). These requirements will be reviewed and updated once the Board of Forestry and Fire Protection updates the regulations for the ERZ in PRC 4291.FIRE Defensible Space website (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/). These requirements will be reviewed and updated once the Board of Forestry and Fire Protection updates the regulations for the ERZ in PRC 4291.FIRE Defensible Space website (https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/). These requirements will be reviewed and updated once the Board of Forestry and Fire Protection updates the regulations for the ERZ in PRC 4291.

Table 10. Fire Safety Project Design Features

Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	shall be responsible for the implementation of the CFPP, ensuring fire control equipment is maintained in good working conditions, monitoring combustibles onsite, conducting fire safety surveys, posting fire rules in an area visible to employees, stopping work activities that pose a fire hazard or are not in compliance with the CFPP, and reporting all fire ignited on-site to County Fire. (Section9: <i>Project-Specific Recommend Mitigation Measures</i>)			
2	Pre-Construction Requirement. Prior to bringing lumber or combustible materials related to building construction onto the Modified Project Site, site improvements within the active development area shall be in place, including utilities, operable fire hydrants, and an approved, temporary roadway surface and fuel modification zones shall be established. Combustible materials may be utilized onsite prior to stated site improvements as needed for providing the improvements (e.g., wood forms for cast-in- place concrete). County Fire will approve site improvement prior to the issuance of the building permits. (Section9: Project-Specific Recommend Mitigation Measures)	Prior to issuance of a building permit	Applicant Contractor	County Fire
3	Annual Fuel Modification Maintenance. All vegetation management with the FMZs and common areas shall be completed annually by May 1 of each year. Vegetation management may be completed more often for fire safety if determined necessary by County Fire. The Modified Project HOA or equivalent entity shall be responsible for the annual maintenance of all vegetation management within the Fuel Modification Zones (FMZs) in the common areas ensuring compliance with County fuel modification guidelines. Property owners will be responsible for maintaining the Ember Resistant Zone (ERZ) and any fuel modification within their property. The annual maintenance would be managed and maintained by the Modified Project HOA through a qualified contractor that shall be required to meet fire safety requirements regarding equipment, the timing of	During Operation, Annually by May 1st	HOA	County Fire

Table 10.	Fire Safet	y Project l	Design	Features
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Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	maintenance, and fire suppression capabilities. Maintenance activities would include but not be limited to removing dead and dying material, removing undesirable plant species, and conducting thinning activities to maintain adequate spacing requirements. The Modified Project HOA or similar entity shall be responsible for ensuring the long-term funding and ongoing compliance with all provisions of the FPP including, vegetation planting, fuel modification of the perimeter areas, vegetation management on all common areas including roadsides, and open space areas under their control (if not considered Entrada Spineflower Preserve). The Modified Project HOA shall be responsible for the implementation of the mitigation measure and County Fire shall be responsible for FMZ maintenance meets County requirements. (Section9: Project-Specific Recommend Mitigation Measures)			
4	Fuel Modification Zone 3rd Party Inspections. By June 1 of each year, a third- party inspector shall be hired by the Modified Project HOA or equivalent entity to conduct an annual inspection of the Fuel Modification Zones (FMZs), including the Ember Resistant Zone (ERZ) and FMZs that are within private property. The inspector would evaluate the FMZs for compliance with regulations and that they are operating accordingly. The inspector shall notify the HOA of any non- compliant FMZs, recommend measures for remediation, and a timeframe for reinspection. The Modified Project HOA shall be responsible for the long-term funding of the inspections. An inspection report shall be submitted to County Fire each year documenting inspection results to ensure compliance with County FMZ requirements. (Section9: Project-Specific Recommend Mitigation Measures)	During Operation, Annually by June 1st	HOA	County Fire
5	HOA Wildfire Education Program. The Modified Project residents and occupants shall be provided with ongoing education regarding wildfire, the FPP, and the Wildfire Evacuation Plan. The education program		HOA	County Fire

Table 10.	Fire Safet	y Project	Design	Features

Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	 would support fire safety, evacuation practices, and fire safety features designed for the community. The Newhall Ranch Wildfire Education Program would provide target outreach to residents and occupants living in a fire risk area and would be a layered approach to maintaining high wildfire risk awareness that includes active and passive features. Contents of the educational program would be reviewed and approved by County Fire before printing and distribution. The Modified Project HOA or similar entity shall be responsible for the ongoing funding and maintenance of the wildfire education program. The educational program shall consist of the following: 1. Bi-annual email and mailers: Residents and occupants will be provided with bi- annual emails and mailers in May and in August. Mailers would be sent to each property address and property owners would receive digital copies. Property owners would be highly encouraged to share this information with tenants should they choose to rent their property. The mailers and emails would include information such as reminders about annual defensible space inspections, maintaining the Ember Resistant Zone (ERZ), how to prepare for wildfire season, evacuation information, and how to prevent wildfires. 			
	There would also be links to various resources on where to get trusted information such as County Fire, 211 LA County, and Ready LA County.			
	2. Website: There shall be a dedicated community website with more detailed information and resources about wildfire awareness and prevention. The website would serve as a centralized resource for the fire education program and include information from the FPP. The website will also have fire watch and red flag warning alerts, as well as information on restrictions during fire weather conditions. Residents will also			

Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
Feature No.	 Description be able to use the website to sign up for an annual residential defensible space inspection from the HOA Fire Committee. Community workshops and webinars: Two times a year there shall be either in-person or virtual community workshops. The goal of the workshops would be to cover various fire topics more in-depth. For example, this could include having a County Fire representative come to meet the community, a workshop on how to make a go-bag, a workshop on how to make a residential evacuation plan, or how to maintain the home ignition zone. New resident packet: All residents and new residents in the future shall also be presented with a wildfire awareness and safety package upon purchase or rental of a home. This would also be given to businesses as part of their employee training program. Within the package will be a memory stick with the evacuation plan, a list of fire protection features, information on the regional fire hazard, prohibited activities in fire risk areas, how to build a go-bag, and a list of agencies and resources for receiving trusted information. Emergency alert campaign: Residents and businesses would be encouraged to sign up for Alert LA County. Alert LA County is the mass notification system for emergency alerts, weather alerts, health notifications, building alerts, and other updates from County, State, and Federal agencies. The campaign shall 	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	 Federal agencies. The campaign shall occur annually and encourage residents to sign up for Alert La County. Reminders would also be sent out in the bi-annual mailers and emails, on the community website, in the workshops, and in the new resident package. 6. Fire watch groups: Within the community, there shall also be volunteer fire watch groups. These would be residents or businesses who 			

Feature No	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	 volunteer to participate in a fire watch group for the community. During red flag warning days, this group would be responsible for reminding businesses and residents of fire-safe practices and restrictions. During red flag warning days, the fire watch group would also maintain vigilance of potential fires and would be trained on procedures for alerting County Fire in the event of a fire. 7. HOA fire safety committee: The fire safety committee shall be responsible for overseeing the maintenance of community-wide fire protection features. Residents would be able to report fire hazards or hazardous fuel conditions to the HOA committee for remediation. The committee will be responsible for the coordination of the 3rd party Fuel Modification Zone (FMZ) inspections and the volunteer residential defensible space inspections. The committee shall also be responsible for the creation and coordinating an annual education workshop on how to maintain the ERZ. The committee shall also be responsible for the creation and distribution of the educational program for the Modified Project. The committee would serve as a communication link between County Fire and the community. 			
	(Section 7 Wildland Fire Evacuation and Education Program)	-		
6	Community Evacuation Plan. The Modified Project shall formally adopt, practice, and implement a "Ready!, Set!, Go!" approach to evacuation through the creation of a Wildland Fire Evacuation Plan (WFEP) for the Modified Project. The WFEP would be based on standard evacuation planning used by the Los Angeles County Office of Emergency Services and provide residents and occupants with potential egress route information and procedures. The WFEP	During Operation	HOA	County Fire and County Sheriff



Table 10. Fire Safety Project Design Features

Feature No.	Description	Implementation Timing	Responsible Party for Implementing	Responsible Party for Monitoring
	would be provided to the Entrada South and VCC residents and commercial tenants and posted on the community website. The WFEP would be reviewed by residents at least annually through organized meetings and educational outreach by the HOA, Community Services District, or other means. The WFEP will be included in the CC&Rs for all property owners. (Section9: Project-Specific Recommend Mitigation Measures)			

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECT / FIRE PROTECTION PLAN

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Appendix A Representative Photographs

Appendix A Representative Photographs





Photograph 2

Photographs #1 and #2 (facing to the east) show the typical fuel types (sagebrush scrub and riparian) and fuel loading along the eastern edge of the Valencia Commerce Center (VCC) site. Both photographs illustrate the flat to gentle sloped terrain. These fuel types (sagebrush scrub- fuel model Sh5 and Southern cottonwood-willow riparian- fuel model Sh4) were modeled in BehavePlus Fire Scenario #1-VCC (See Appendix C, Fire Behavior Analysis).





Photograph 4

Photographs #3 and #4 (facing to the south) show fuel types (grassland and riparian) and fuel loading along the southern edge of the VCC site. Both photographs illustrate the flat to moderately sloped terrain. These fuel types (sagebrush scrub, fuel model Gr4 and riparian, fuel model Sh4) were modeled in BehavePlus Fire Scenario #2-VCC.



Photograph 6

Photographs #5 (facing north and looking downslope to northern border of site) and #6 (facing to the northwest and looking upslope from project site boundary) show fuel type (Sagebrush scrub, fuel model Sh5) and fuel loading along the northern edge of the VCC site. Both photographs illustrate the sagebrush-covered steep hillsides. This fuel type (Sagebrush scrub) was modeled in BehavePlus Fire Scenario #3-VCC.





Photograph 8

Photographs #7 and #8 were taken facing to the west on ridgetop where light industrial/business park is proposed. Vegetative areas on either side of the river wash will be developed VCC site.





Photograph 10

Photographs #9 and #10 (facing to the north) show the typical fuel types (sagebrush scrub and grassland) and fuel loading in the Entrada Spineflower Preserve. Both photographs illustrate the rolling hills in the northern portion of the Entrada South site. These fuel types (sagebrush scrub, fuel model Sh5 and grasslands, fuel model Gr4) were modeled in BehavePlus Fire Scenario #1-Entrada South.





Photograph 12

Photographs #11 (looking south along eastern edge of site) and #12 (looking south along eastern edge of site) show the fuel type (sagebrush scrub) and fuel loading along eastern border. Both photographs illustrate the undulating, steep terrain. This fuel type (sagebrush scrub, fuel model Sh5) was modeled in BehavePlus Fire Scenario #2-Entrada South.





Photograph 14

Photographs #13 and #14 (looking south) show the fuel type (sagebrush scrub) and steep terrain that is offsite along southern border of the Entrada South site. This fuel type (sagebrush scrub, fuel model Sh5) was modeled in BehavePlus Fire Scenario #3-Entrada South.






SOURCE: AERIAL- ESRI MAPPING SERVICE 2023; FIRE DATA-CALFIRE 2022



APPENDIX B Fire History Map Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

Appendix C BehavePlus Fire Behavior Analysis

1 Fire Behavior Modeling History

Fire behavior modeling has been used by researchers for approximately 50+ years to predict how a fire will move through a given landscape (Linn 2003). The models have had varied complexities and applications throughout the years. One model has become the most widely used for predicting fire behavior on a given landscape. That model, known as "BEHAVE", was developed by the U. S. Government (USDA Forest Service, Rocky Mountain Research Station) and has been in use since 1984. Since that time, it has undergone continued research, improvements, and refinement. The version, BehavePlus, V5.05, includes updates incorporating years of research and testing. Numerous studies have been completed testing the validity of the fire behavior models' ability to predict fire behavior given site specific inputs. One of the most successful ways the model has been improved has been through post-wildfire modeling (Brown 1972, Lawson 1972, Sneeuwjagt and Frandsen 1977, Andrews 1980, Brown 1982, Rothermel and Rinehart 1983, Bushey 1985, McAlpine and Xanthopoulos 1989, Grabner, et. al. 1994, Marsden-Smedley and Catchpole 1995, Grabner 1996, Alexander 1998, Grabner et al. 2001, Arca et al. 2005). In this type of study, BehavePlus is used to model fire behavior based on pre-fire conditions in an area that recently burned. Real-world fire behavior, documented during the wildfire, can then be compared to the prediction results of BehavePlus and refinements to the fuel models incorporated, retested, and so on.

Fire behavior modeling includes a high level of analysis and information detail to arrive at reasonably accurate representations of how wildfire would move through available fuels on a given site. Fire behavior calculations are based on site specific fuel characteristics supported by fire science research that analyzes heat transfer related to specific fire behavior. Predicting wildland fire behavior is not an exact science. As such, the minute-by-minute movement of a fire will probably never be predictable, especially when considering the variable state of weather and the fact that weather conditions are typically estimated from forecasts made many hours before a fire. Nevertheless, field-tested and experienced judgment in assessing the fire environment, coupled with a systematic method of calculating fire behavior yields surprisingly accurate results. To be used effectively, the basic assumptions and limitations of fire behavior modeling applications must be understood.

- 1. First, it must be realized that the fire model describes fire behavior only in the flaming front. The primary driving force in the predictive calculations is the dead fuels less than 0.25 inches in diameter. These are the fine fuels that carry fire. Fuels greater than 1 inch have little effect, while fuels greater than 3 inches have no effect on fire behavior.
- 2. Second, the model bases calculations and descriptions on a wildfire spreading through surface fuels that are within 6 feet of the ground and contiguous to the ground. Surface fuels are often classified as grass, brush, litter, or slash.
- 3. Third, the software assumes that weather and topography are uniform. However, because wildfires almost always burn under non-uniform conditions, creating their own weather, length of projection period and choice of fuel model must be carefully considered to obtain useful predictions.
- 4. Fourth, fire behavior computer modeling systems are not intended for determining sufficient fuel modification zone/defensible space widths. However, it does provide the average length of the flames, which is a key element for determining defensible space distances for minimizing structure ignition.

Although BehavePlus has limitations, it can still provide valuable fire behavior predictions, which can be used as a tool in the decision-making process. In order to make reliable estimates of fire behavior, one must understand the relationship of fuels to the fire environment and be able to recognize the variations in these fuels. Natural fuels are made up of the various components of vegetation, both live and dead, that occur in a particular landscape. The type and quantity will depend upon soil, climate, geographic features, and fire history. The major fuel groups

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of grass, shrub, trees, and slash are defined by their constituent types and quantities of litter and duff layers, dead woody material, grasses and forbs, shrubs, regeneration, and trees. Fire behavior can be predicted largely by analyzing the characteristics of these fuels. Fire behavior is affected by seven principal fuel characteristics: fuel loading, size and shape, compactness, horizontal continuity, vertical arrangement, moisture content, and chemical properties.

2.1 Fuels

The seven fuel characteristics help define the 13 standard fire behavior fuel models (Anderson 1982) and the more recent custom fuel models developed for Southern California (Weise and Regelbrugge 1997). According to the model classifications, fuel models used for fire behavior modeling (BehavePlus) have been classified into four groups, based upon fuel loading (tons/acre), fuel height, and surface-to-volume ratio. Observation of the fuels in the field (on site) determines which fuel models should be applied in modeling efforts. The following describes the distribution of fuel models among general vegetation types for the standard 13 fuel models and the custom Southern California fuel models:

- Grasses Fuel Models 1 through 3
- Brush Fuel Models 4 through 7, SCAL 14 through 18
- Timber Fuel Models 8 through 10
- Logging slash Fuel Models 11 through 13.

In addition, the aforementioned fuel characteristics were utilized in the recent development of 40 new fire behavior fuel models (Scott and Burgan 2005) developed for use in the BehavePlus modeling system. These new models attempt to improve the accuracy of the 13 standard fuel models outside of severe fire season conditions, and to allow for the simulation of fuel treatment prescriptions. The following describes the distribution of fuel models among general vegetation types for the 40 new fuel models:

- Non-burnable Models NB1, NB2, NB3, NB8, NB9
- Grass Models GR1 through GR9
- Grass shrub Models GS1 through GS4
- Shrub Models SH1 through SH9
- Timber understory Models TU1 through TU5
- Timber litter Models TL1 through TL9
- Slash blowdown Models SB1 through SB4.

For the Entrada South and Valencia Commerce Center (VCC) project sites' BehavePlus analyses, fuel model assignments were based on observed field conditions. As is customary for this type of analysis, the terrain and fuels directly adjacent to the proposed development and fuel modification zones (FMZ) are used for determining flame lengths and fire spread. It is these fuels that would have the potential to affect the project's structures from a radiant and convective heat perspective as well as from direct flame impingement. Fuel beds, including sagebrush scrub, non-native grasslands, and Southern cottonwood-willow riparian were observed adjacent to the proposed residential and commercial developments. These fuel types can produce flying embers that may affect the project, but defenses have been built into the structures to prevent ember penetration. Table 1 provides a description of the three fuel models observed in the vicinity of the site that were subsequently used in the analysis for this project. Modeled areas include the riparian (Fuel Model Sh4) on the flat lands in the riverbed, grasslands (Gr4) and sagebrush scrub (Fuel Model Sh5), which were found on the steeper hillsides on both properties. Dudek also conducted modeling of the site for post-Fuel Modification Zones' (FMZ) recommendations for this project (Refer to Table 2 for post-FMZ fuel model descriptions). Fuel modification includes establishment of irrigated (Zone 1) and thinned zones (Zone 2) on the periphery of the project sites. For modeling the post-FMZ

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treatment condition, the fuel model assignments for sagebrush scrub, grasslands, riparian were re-classified according to the specific fuels management (e.g., irrigated vs, 50% thinned brush or cut grasses to 6 inches in height) treatment as described in the Project FPP.

Table 1. Existing Fuel Model Characteristics

Fuel Model Assignment	Vegetation Description	Location	Fuel Bed Depth (Feet)
Gr4	Non-native Grasslands	Represents grasses on hillsides surrounding the sites.	<2.0 ft.
Sh4	Southern Cottonwood-Willow Riparian	Riverbed or drainages	< 8.0 ft. = understory; 35 ft. for tree heights
Sh5	Sagebrush Scrub	Sagebrush scrub occurs hillsides on both sites.	<4.0 ft.

Table 2. Post-development Fuel Model Characteristics

Fuel Model Assignment	Vegetation Description	Location	Fuel Bed Depth (Feet)
8	Zone 1: irrigated landscapes	Perimeter Fuel Modification Zone 1	<3.0 ft.
Gr1	Zone 2: Grasses cut to 6 inches in height	Perimeter Fuel Modification Zone 2	< 0.5 ft.
Sh1	Zone 2: 50% thinning of sagebrush scrub	Perimeter Fuel Modification Zone 2	<4.0 ft.

2.2 Weather

Historical weather data for the region was processed and utilized to determine appropriate fire behavior weather input variables for the Entrada South and VCC project sites' fire behavior evaluations. To evaluate different scenarios, data for both the 50th percentile weather (on-shore winds) and the 97th percentile weather (off-shore winds) conditions were analyzed using the FireFamily Plus software¹ package. Remote Automated Weather Station (RAWS) data from the Del Valle RAWS² was evaluated from June 1 through November 30 for all available data years. Available data years for the Del Valle RAWS include 1998 to 2018. Following analysis in FireFamily Plus, fuel moisture and wind speed information data was incorporated into the BehavePlus modeling runs. Initial wind direction and wind speed values for the BehavePlus modeling runs were manually entered during the data input phase. The input wind speed and direction is roughly an average surface wind at 20 feet above the vegetation over the analysis area. Table 3 summarizes the weather and wind input variables used in the BehavePlus modeling efforts.

¹ https://www.firelab.org/project/firefamilyplus

RAWS ID # 045445; Latitude: 34º25'52" Longitude: 118º39'57"; Elevation: 1,278 ft. Del Valle Station is approximately 2.7 miles west of the VCC site and 3.9 miles northwest of the Entrada South site.

Variable	50 th Percentile Weather Condition (Onshore Winds)	97 th Percentile Weather Condition (Offshore Winds)
1h Moisture	4%	1%
10h Moisture	5%	2%
100h Moisture	10%	5%
Live Herbaceous Moisture	45%	30%
Live Woody Moisture	90%	60%
20-foot Wind Speed	14 mph ¹ (sustained winds)	19 mph ¹ (sustained winds) and
		wind gusts of 52 mph
Wind Direction	225°	45°
BehavePlus Wind Adjustment Factor	0.4	0.4

Table 3. Fuel Moisture and Wind Inputs

Note:

¹ mph = miles per hour

2.3 Slope

Slope is a measure of angle in degrees from horizontal and can be presented in units of degrees or percent. Slope is important in fire behavior analysis as it affects the exposure of fuel beds. Additionally, fire burning uphill spreads faster than those burning on flat terrain or downhill as uphill vegetation is pre-heated and dried in advance of the flaming front, resulting in faster ignition rates. For the BehavePlus analysis, slope values were measured from google earth maps at the locations of each modeling scenario, and ranged in value between flat (<5%) to 40 percent.

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3 BehavePlus Analysis

To objectively predict flame lengths, intensities, and spread rates, the BehavePlus V5.05 fire behavior modeling system (Andrews, Bevins, and Seli 2004) was used in three modeling scenarios for Entrada South and three modeling scenarios for VCC and incorporated observed fuel types representing the dominant on-site and off-site vegetation, measured slope gradients, and wind and fuel moisture values derived from RAWS data sets. Modeling scenario locations were selected to better understand different fire behavior that may be experienced on or adjacent the site. The results of fire behavior modeling analysis are presented in Tables 4 and 5 for pre-project conditions and Tables 6 and 7 for post-project conditions. Identification of modeling run (fire scenarios) locations is presented graphically in Figure 4 for Entrada South and Figure 5 for VCC in the Project's FPP.

Table 4: Fire Behavior Model Results - Existing Conditions for Entrada South

Fire Scenarios	Flame Length (feet)	Fireline Intensity (Btu ¹ /feet/second)	Spread Rate (mph ²)	Spotting Distance ³ (miles)	
Scenario 1:south-east-facing, 25% slope; Offshore 52 mph gusts (97th percentile)					
Valley oak/grass (Gr4)	39.9	17,131	17.9	2.3	
Sagebrush scrub (Sh5)	46.0	23,393	7.2	2.5	
Scenario 2: south-facing, 20% slope; Offshore 52 mph gusts (97th percentile)					
Sagebrush scrub (Sh5)	45.7	23,045	7.1	2.5	
Scenario 3: north-facing, 27% slope; Onshore 14 mph winds (50th percentile)					
Sagebrush scrub (Sh5)	15.0	2,059	0.83	0.5	

Notes:

1 Btu = British thermal unit(s)

2 mph = miles per hour

3 Spotting distance from a wind driven surface fire.

Table 5: Fire Behavior Model Results - Existing Conditions for Valencia Commerce Center

Fire Scenario	Flame Length (feet)	Spread Rate (mph)	Fireline Intensity (Btu/ft/s)	Spotting Distance ¹ (miles)	Surface Fire to Tree Crown Fire	
Scenario 1: flat, <5%	slope; Offsho	ore 52 mph sustaine	d gusts (97th percentile)			
Grass (Gr4)	39.7	17.7	16,929	2.3	No	
Sagebrush scrub (Sh5)	45.7	7.1	23,043	2.5	No	
Southern Cottonwood- Willow Riparian2,3 (Sh4)	24.5	4.5	5,938	1.6	Crowning 4	
Scenario 2: south-facing, 10% slope; Onshore 14 mph sustained winds (50th percentile)						
Grass (Gr4)	6.7	0.6	351	0.3	No	
Sagebrush scrub (Sh5)	14.8	0.8	1,989	0.5	No	

Table 5: Fire Behavior Model Results - Existing Conditions for Valencia Commerce Center

Fire Scenario	Flame Length (feet)	Spread Rate (mph)	Fireline Intensity (Btu/ft/s)	Spotting Distance ¹ (miles)	Surface Fire to Tree Crown Fire	
Southern Cottonwood- Willow Riparian3,4 (Sh4)	7.1	0.4	396	0.3	Crowning4	
Scenario 3: north-facing, 40% slope; Offshore 52 mph sustained gusts (97th percentile)						
Sagebrush scrub (Sh5)	46.3	7.3	23,684	2.6	No	
Note:						

1. Wind-driven surface fire.

2. Riparian overstory torching increases fire intensity. Modeling included canopy fuel over Sh4, which represents surface fuels beneath the tree canopies.

3. A surface fire in the mixed willow riparian forest would transition into the tree canopies generating flame lengths higher than the average tree height (35 feet). Viable airborne embers could be carried downwind for approximately 1.0 mile and ignite receptive fuels.

4. Crowning= fire is spreading through the overstory crowns.

Table 6: Fire Behavior Model Results - Post-Project Conditions for Entrada South

Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)	
Scenario 1: Fuel treatments, South-east-facin	ng ,manufactur	ed slopes, Offshore 5	2 mph gusts (97t	th percentile)	
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4	
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9	
Fuel modification zone 2 (Gr1)	4.0	115	0.7	0.5	
Scenario 2: Fuel Treatments, south-facing, m	anufactured sl	opes; Offshore 52 mp	h gusts (97th pe	rcentile)	
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4	
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9	
Scenario 3: Fuel Treatments, north-facing, manufactured slopes; Onshore 14 mph winds (50th percentile)					
Fuel modification zone 1 (FM8)	1.3	10	0.03	0.1	
Fuel modification zone 2 (Sh1)	0.9	4	0.03	0.1	

Table 7: Fire Behavior Model Results - Post-Project Conditions for Valencia Commerce Center

Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Scenario 1: Fuel treatments, manufactured s	Scenario 1: Fuel treatments, manufactured slopes, Offshore 52 mph gusts (97th percentile)					
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4		
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9		

Scenario	Flame Length (feet)	Fireline Intensity (BTU/feet/second)	Spread Rate (mph)	Spotting Distance (miles)		
Scenario 2: Fuel Treatments, manufactured slopes; Onshore 14 mph winds (50th percentile)						
Fuel modification zone 1 (FM8)	1.5	14	0.05	0.1		
Fuel modification zone 2 (Gr1)	2.3	33	0.3	0.1		
Scenario 3: Fuel Treatments, manufactured slopes; Offshore 52 mph gusts (97th Percentile)						
Fuel modification zone 1 (FM8)	3.0	63	0.2	0.4		
Fuel modification zone 2 (Sh1)	10.6	959	1.5	0.9		

Table 7: Fire Behavior Model Results - Post-Project Conditions for Valencia Commerce Center

It should be noted that the results presented in Tables 4 through 7 depict values based on inputs to the BehavePlus software. The fuels models used in this analysis are dynamic models that were designed by the U.S. Forest Service to more accurately represent southern California fuel beds. Changes in slope, weather, or pockets of different fuel types are not accounted for in this analysis. Model results should be used as a basis for planning only, as actual fire behavior for a given location will be affected by many factors, including unique weather patterns, small-scale topographic variations, or changing vegetation patterns.

Interpretation of Fire Behavior Modeling Results

Fire type is one of the following four types: surface (e.g., understory fire), torching (e.g., passive crown fire; surface fire with occasional torching trees), conditional crown (e.g., active crown fire possible if the fire transitions to the overstory), and crowning (e.g., active crown fire; fire spreading through the overstory crowns). Dependent on the variables: transition to crown fire and active crown fire.

The following describes the fire behavior results (Heisch and Andrews 2010) as presented in Tables 4-7:

Surface Fire:

- <u>Flame Length (feet)</u>: The flame length of a spreading surface fire within the flaming front is measured from midway in the active flaming combustion zone to the average tip of the flames.
- <u>Fireline Intensity (Btu/ft/s)</u>: Fireline intensity is the heat energy release per unit time from a one-foot wide section of the fuel bed extending from the front to the rear of the flaming zone. Fireline intensity is a function of rate of spread and heat per unit area, and is directly related to flame length. Fireline intensity and the flame length are related to the heat felt by a person standing next to the flames.
- <u>Surface Rate of Spread (mph)</u>: Surface rate of spread is the "speed" the fire travels through the surface fuels. Surface fuels include the litter, grass, brush and other dead and live vegetation within about 6 feet of the ground.

Crown Fire:

• <u>Transition to Crown Fire</u>: Indicates whether conditions for transition from surface to crown fire are likely.

The information in Table 8 pertains to interpretation of flame length and fireline intensity as it relates to fire suppression efforts for surface fires (Andrews and Rothermel 1982). Based on the post-development calculated flame lengths of under 3.0 feet tall, fire fighters should be able to conduct a direct attack on the fire within the FMZ Zone 1, but they would need retardant aircraft or dozers beyond Zone 1.

Table 8. Fire Suppression Interpretation

Flame Length (ft)	Fireline Intensity (Btu/ft/s)	Interpretations
Under 4 feet	Under 100 BTU/ft/s	Fires can generally be attacked at the head or flanks by persons using hand tools. Hand line should hold the fire.
4 to 8 feet	100-500 BTU/ft/s	Fires are too intense for direct attack on the head by persons using hand tools. Hand line cannot be relied on to hold the fire. Equipment such as dozers, pumpers, and retardant aircraft can be effective.
8 to 11 feet	500-1000 BTU/ft/s	Fires may present serious control problems – torching out, crowning, and spotting. Control efforts at the fire head will probably be ineffective.
Over 11 feet	Over 1000 BTU/ft/s	Crowning, spotting, and major fire runs are probable. Control efforts at head of fire are ineffective.

Entrada South Site (Untreated Fuels)

As presented in Table 4, wildfire behavior in non-treated sagebrush scrub, presented as a Fuel Model Sh5, represents the most extreme conditions, varying with different wind speeds. In this case, flame lengths can be expected to reach up to approximately 46.0 feet with 52 mph gusts (Offshore wind conditions) and 15.0 feet with 14 mph wind speeds (Onshore winds). Spread rates for sagebrush scrub fuel beds range from less than 1.0 mph (Onshore winds) to 7.2 mph (Offshore winds). Spotting distances, where airborne embers can ignite new fires downwind of the initial fire, range from 0.5 miles to 2.5 miles. In comparison, a grass fuel type could generate flame lengths up to 39.9 feet high with a rapid spread rate of 17.9 mph. The fire could potentially be spotting for a distance of 2.3 miles.

As presented in Table 6, Dudek conducted modeling of the Entrada South site for post-FMZ fuel recommendations for this project. Fuel modification includes establishment of irrigated and thinned zones on the periphery of the project's neighborhoods. For modeling the post-FMZ treatment condition, fuel model assignments were re-classified for the FMZ 1 (Fuel Model 8) and FMZ 2 (50% thinning zones - Fuel Model Sh1). Fuel model assignments for all other areas remained the same as those classified for the existing condition. As depicted, the fire intensity and flame lengths in untreated, Spineflower Preserve areas would remain the same. As such, the FMZ areas experience a significant reduction in flame length and intensity. The 46.0-foot (sagebrush scrub fuel bed) and 39.9-foot (grass fuel bed) tall flames predicted during pre-treatment modeling during extreme weather conditions are reduced to less than 10.6 feet tall at the outer edges and less than 3.0 feet in the FMZ 1 near the structures of the development due to the higher live and dead fuel moisture contents.

Valencia Commerce Center Site (Untreated Fuels)

Based on the fire behavior modeling results presented herein for the VCC site, the maximum flame lengths anticipated in untreated, surface fuels, including grasslands and sagebrush scrub, could reach 39.7 to 45.7 feet, respectively, in height with rates of spread between 7.1 and 17.7 mph under extreme weather conditions, represented by Santa Ana winds blowing at gusts of 52 mph. Should ignition in the Castaic Creek riverbed occur, the riparian understory would be expected to burn aggressively due to the presence of large amounts of biomass from dense stands of shrubby willows. Modeling outputs indicate a transition to crown fire is expected from a fire burning in the riparian understory, since the canopy heights to lowest branch are roughly 3 feet above ground and in most situations the canopies touch the ground. Under such conditions, expected surface flame lengths in peripheral riparian surface fuels could reach up to 24.5 feet and ignite the tree canopies with flame lengths in excess of 35 feet, and potentially up to 100 feet. Embers could be generated from both surface and crown fires resulting in ignition of receptive fuel beds 1.6 to 2.6 miles downwind.

Fires burning from the west and pushed by ocean breezes exhibit less severe fire behavior. Under typical onshore weather conditions, a grass fire could have flame lengths of 6.7 feet in height and spread rates less than 1.0 mph. A wildfire in sagebrush scrub could generate flame lengths of 14.8 and spread at less than 1.0 mph. Modeling outputs indicate flame lengths (7.1 feet) in the shrubby willow understory would transition to a crown fire with flame lengths in excess of the 35 feet. Spotting distances, where airborne embers can ignite new fires downwind of the initial fire, range from 0.3 to 0.5 mile.

As presented in Table 7, Dudek conducted modeling of the VCC site for post-FMZ fuels treatment recommendations. Fuel modification includes establishment of irrigated landscaping on the periphery of the proposed commercial development. For modeling the post-FMZ treatment condition, fuel model assignments

were re-classified for the developed Fuel Modification Zone 1 (Fuel Model 8), and Fuel Modification Zone 2 (Fuel Model SH1 for thinning sagebrush scrub and Gr1 for grasses cut to 6 inches in height). Fuel model assignments for all other areas remained the same as those classified for the existing conditions. As depicted in tables 4 and 5, the fire intensity and flame lengths in untreated, biological open space areas (i.e., sagebrush scrub and cottonwood-willow riparian areas) would remain the same. Conversely, the FMZ areas experience a significant reduction in flame length and intensity. The 46.0-foot tall flames predicted during pre-treatment modeling for the Entrada site during extreme weather conditions are reduced to 10.6 feet tall at the outer edges of the FMZ and to 3.0 feet by the time the inner portions (i.e., irrigated, Zone 1) of the FMZ are reached. During onshore weather conditions, a fire approaching from the west would be reduced from 14.8-foot tall flames to less than 2.3 feet tall in both the irrigated and thinning zones with much lower fire intensity due to the higher live and dead fuel moisture contents.

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Appendix D

Acceptable Plant List by Fuel Modification Zone

Fire Behavior Technical Report Newhall Ranch Fire Hazard Reduction – Livestock

DECEMBER 2021

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1 Introduction

1.1 Project Summary

This report provides a summary of Dudek's fire protection planning assessment and evaluation of the FivePoint small herd livestock grazing program for various locations including Valencia 61105, Entrada South, and Legacy Village (Figure 1). The primary focus is to:

- 1) understand the pre-livestock grazing program typical (climax vegetation condition) wildfire hazard presented by the fuels, terrain, and wind alignments in locations abutting existing or proposed development areas both before and after focused hazard reduction efforts are undertaken;
- 2) provide input and guidance for the small herd livestock program and develop phasing plans for the Valencia Project by priority area; and
- 3) determine whether the initial grazing efforts result in desirable fire hazard reduction through the removal of vegetative fuels, trampling and compression of fuels and conversion of grazed area landscapes to reduce the facilitation of fire ignition and spread.

In response to your request, Dudek has prepared this initial assessment as a stand-alone document to evaluate the site-specific fire hazard potential in designated areas. Our analysis summarized herein is based on project-related information provided by you, multiple field assessments (prior to, during and following grazing activities), team meetings, and knowledge of the area and typical fire behavior.

1.1.1 Year 1 Results

As detailed within this report, the initial small herd livestock grazing program treated large areas adjacent to existing or proposed development in the following project areas (PAs) (Figure 2):

PA 1 through 1E

PA 2 through 2B

PA 4 through 4B

*PAs 3 and 5 did not include grazing

As depicted in Table 1 and Appendices A through C, PAs that were grazed during 2021 exhibit considerable fire hazard reductions. Table 1 provides a high-level summary of the magnitude of fire behavior reduction. Appendices A through C indicate visually where the fire hazard reduction occurs. Note that fire behavior reductions vary throughout the grazed areas based on original fuel type, how heavily it was grazed, slopes and terrain features, and other factors. Every grazed area has benefitted from a reduction of the flame lengths, fire spread rates, and fireline intensity.

The preliminary results from Year 1 indicate that the livestock grazing program, which has been an historic operation on the Newhall Ranch dating back to its earliest land uses, provides benefits for existing and planned communities by providing the equivalent of extended fuel breaks across the landscape. Essentially, the grazing reduces fuels



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and proportionally, the fire hazard, and creates an additional buffer beyond the already provided community fuel modification zones. The grazed landscapes modify the fire behavior over large land areas and create a fire environment that would produce much lower intensity wildfires that are slower moving and include shorter overall flame lengths. This condition is expected to be even more pronounced with ongoing grazing of these PAs as this first year program was somewhat selective, shorter term, and did not occur to the desired fuel reduction goal level across all grazed areas.

Table 1. Pre-Grazing vs Post-Grazing Fire Behavior

Fire Behavior Characteristic	Pre-Grazing Measurement	Post-Grazing Measurement
Flame Length	Up to 58 feet	Up to 18 feet
Rate of Spread	Up to 1,114 feet per minute	Up to 210 feet per minute
Fire Line Intensity	Up to 37,810 Btu/ft/s	Up to 2,975 Btu/ft/s

Source: Dudek 2021.

Based on the results observed from the 2021 program, Dudek recommends that the program is continued and expanded as feasible, to include additional areas where Project level and regional benefits in overall fire hazard are provided as well as more consistent grazing within the grazed PAs.

2 Project Information

The PAs are located within the FivePoint Newhall Ranch project in western Los Angeles County, west of the City of Santa Clarita, California (Figure 1). The study area includes designated sites (undeveloped natural areas) in locations adjacent to existing or proposed development areas. Some areas have a history of livestock grazing, some have been modified by other activities, and some are native or non-native vegetation.

The sites consist of areas with gently rolling to steeper slopes, ephemeral stream channels, with occasional dirt or paved access roads. Vegetation on-site consists of grassland, coastal sage scrub, chaparral, irrigated and thinned fuel modification areas (Appendix D, Photographs). Elevations range from approximately 2,000 to 2,400 feet above mean sea level (amsl).

The Project area is subject to seasonal weather conditions that can heighten the likelihood of fire ignition and spread, which may result in fast moving and low to moderate-intensity wildfire.

2.1 Site Observations

The following were observed during the initial site visit on August 11, 2021:

<u>Areas for assessment</u>: Aerial photo/figure provided by FivePoint entitled "Small Animal Herd Vegetation Management" depicted six areas of concern identified by client. These areas were the primary focus of the field assessment. Client subsequently provided an updated figure with four areas identified, noting that Areas 1, 2, 3 and 4 (with revised boundaries) should be given priority for assessment.

Note: the Project delineated the Spineflower avoidance areas and no grazing was conducted in these protected species areas.

- Fuels/Vegetation: A variety of vegetation and fuel types were observed throughout the areas of assessment: hillsides covered with grass and sage scrub vegetations; slopes with sage scrub, scattered annual grass and forbs; moderately steep slopes covered with chaparral and sage scrub; slopes with coastal mixed chaparral.
- Topography: Generally, the areas assessed have slopes that vary from gently rolling to moderately steep. Many of the sites have small, narrow canyons that create a varietly of aspects and vegetation types. In select areas there is some modified terrain that is relatively flat, while in others the manufactured slopes are moderately steep.
- Land uses (on/off site): On-site land uses within the areas of assessment include undeveloped land, drainage basins/facilities, transmission lines, and fuel modification zones. Adjacent land uses include existing development (residential, commercial and institutional), grading for future development and roadways, and existing roadways.
- Fuel modification zones: Various forms of fuel modification have been implemented in the assessment areas including thinning of native vegetation and irrigated landscaping on both natural and manufactured slopes. However, the maintenance of the fuel modification varies from routine to abandoned.



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3 Pre-Fuel Reduction Fire Hazard Assessment

3.1 Fire Behavior Modeling

Dudek staff conducted site-specific fire hazard assessments to help define the prioritization for the fuel management plan. This included evaluations of the wildland urban interface (WUI) areas that comprise the study area, the adjacent developed communities, and evaluation of the fire environment of each delineated area.

Wildfire hazard assessment considerations for prioritization included the following criteria: threat to structures; fuel types; proximity of fuel to structures; potential point of wildfire origin; topography: slope, aspect and alignment with fire corridor that may present a risk; recent history of wildfire in the area.

Following site evaluation and vegetative fuels data collection efforts, fire behavior modeling was conducted to document the type and intensity of fire that would be expected on the project site given characteristic site features including topography, vegetation, and weather. Dudek utilized FlamMap, which is a graphics-based GIS model that utilizes the same fire spread algorithms contained in the BehavePlus software package. The advantage of FlamMap modeling is that it evaluates anticipated site-wide fire intensity, spread rate, and flame length values based on variations in topography and vegetative cover and provides a graphical output that can be evaluated on site maps, whereas BehavePlus provides a tabular output. BehavePlus was utilized for specific target areas for confirmation of FlamMap results. Fire behavior modeling includes a high level of analysis and information detail to arrive at reasonably accurate representations of how wildfire would move through available fuels on a given site. Fire behavior calculations are based on site specific fuel characteristics supported by fire science research that analyzes heat transfer related to specific fire behavior. FlamMap, a GIS-based fire behavior software application that uses the same principles as BehavePlus was used to provide useful graphical displays of the modeling output.

3.1.1 Fire Behavior Modeling Background

Predicting wildland fire behavior is not an exact science due to the many variables that must be considered. As such, the movement of a fire will likely never be fully predictable, especially considering the variations in weather, the limits of weather forecasting, and the weather that is often created by firestorms. Nevertheless, practiced and experienced judgment, coupled with a validated fire behavior modeling system, results in useful and accurate fire information (Rothermel 1993). To be used effectively, the basic assumptions and limitations of fire behavior modeling applications must be understood.

- First, it must be realized that the fire model describes fire behavior only in the flaming front. The primary driving force in the predictive calculations is dead fuel less than 0.25 inches in diameter. These are the fine fuels that carry fire. Fuels greater than 1 inch in diameter have little effect, while fuels greater than 3 inches in diameter have no effect on fire behavior.
- Second, the model bases surface fire calculations and descriptions on a wildfire spreading through fuels that are within 6 feet of the ground and contiguous to the ground. Surface fuels are classified as grass, grass/shrub, shrub, timber litter, timber understory, or slash.

- Third, the software assumes that weather is uniform. However, because wildfires almost always burn under non-uniform conditions, creating their own weather, length of projection period and choice of fuel model must be carefully considered to obtain useful predictions.
- Fourth, fire behavior computer modeling systems are not intended for determining sufficient fuel modification zone/defensible space widths. However, results can provide the average length of the flames, which is a key element for determining defensible space distances for minimizing structure ignition.

FlamMap can provide valuable fire behavior predictions, which can be used as a tool in the decision-making process. In order to make reliable estimates of fire behavior, one must understand the relationship of fuels to the fire environment and be able to recognize the variations in these fuels. Fuels are made up of the various components of vegetation, both live and dead, that occur in a particular landscape. The type and quantity will depend upon soil, climate, terrain, and management and disturbance (e.g., fire) history. The major fuel groups of grass, grass/shrub, shrub, trees, tree litter, and slash are defined by their constituent types and quantities of litter and duff layers, dead woody material, grasses and forbs, shrubs, regeneration, and trees. Fire behavior can be predicted largely by analyzing the characteristics of these fuels. Fire behavior is affected by seven principal fuel characteristics: fuel loading, size and shape, compactness, horizontal continuity, vertical arrangement, moisture content, and chemical properties.

The seven fuel characteristics help define the 13 standard fire behavior fuel models (Anderson 1982) and the more recent custom fuel models developed for Southern California (Weise and Regelbrugge 1997). According to the model classifications, fuel models used for fire behavior modeling (BehavePlus, FlamMap, FARSITE) have been classified into four groups, based upon fuel loading (tons/acre), fuel height, and surface-to-volume ratio. Observation of the fuels in the field (on site) determines which fuel models should be applied in modeling efforts. The following describes the distribution of fuel models among general vegetation types for the standard 13 fuel models and the custom Southern California fuel models:

- Grasses Fuel Models 1 through 3
- Brush Fuel Models 4 through 7, SCAL 14 through 18
- Timber Fuel Models 8 through 10
- Logging slash Fuel Models 11 through 13.

In addition, the aforementioned fuel characteristics were utilized in the recent development of 40 new fire behavior fuel models (Scott and Burgan 2005) developed for use in the BehavePlus, FlamMap, and FARSITE modeling systems. These new models attempt to improve the accuracy of the 13 standard fuel models outside of severe fire season conditions, and to allow for the simulation of fuel treatment prescriptions. The following describes the distribution of fuel models among general vegetation types for the 40 new fuel models:

- Non-burnable Models NB1, NB2, NB3, NB8, NB9
- Grass Models GR1 through GR9
- Grass shrub Models GS1 through GS4
- Shrub Models SH1 through SH9
- Timber understory Models TU1 through TU5
- Timber litter Models TL1 through TL9
- Slash blowdown Models SB1 through SB4.

3.1.2 FlamMap Analysis

3.1.2.1 Base Mapping Data

FlamMap software was utilized to graphically depict fire-modeling results for the project area for existing conditions and anticipated post-grazing conditions. FlamMap software requires a minimum of five (5) separate input files that represent field conditions in the analysis area, including elevation, slope, aspect, fuel model, and canopy cover. Each of these files was created as a raster GIS file using ArcGIS 10.8.1 software, exported as an ASCII grid file, then utilized in creating a FARSITE Landscape file that served as the base for the FlamMap runs. The resolution of each grid file and associated ASCII file that was used in the models described herein is 10 feet, based on digital terrain data available for Los Angeles County. In addition to the Landscape file, wind and weather data are incorporated into the model inputs. The output fire behavior variables chosen for each of the modeling runs was flame length, spread rate, and fireline intensity. The following paragraphs provide descriptions of the input variables used in processing the FlamMap models. In addition, data sources are cited and any assumptions made during the modeling process are described.

Elevation

Elevation data were derived from digital terrain data publicly available from Los Angeles County, projected in North American Datum 1983, California State Plane, Zone 5 with units in feet. The resolution of the file was 10 feet elevation within the analysis area ranges from 1,110 feet to 1,795 feet above mean sea level (AMSL). These data were utilized to create an elevation grid file, using units of feet above sea level. The elevation data are a required input file for FlamMap runs and are necessary for adiabatic adjustment of temperature and humidity and for conversion of fire spread between horizontal and slope distances.

<u>Slope</u>

Using ArcGIS Spatial Analyst tools, a slope grid file was generated from the elevation grid file described above. Slope measurements utilized values in percent of inclination from horizontal. Slope values in the analysis area range from 0% to 177%. The slope input file is necessary for computing slope effects on fire spread and solar radiance.

<u>Aspect</u>

Using ArcGIS Spatial Analyst tools, an aspect grid file was generated from the elevation grid file described above. The aspect values utilized were azimuth degrees. Aspect values are important in determining the solar exposure of grid cells.

Fuel Model

Vegetation coverage data in the form of a GIS shapefile were used in this analysis to create a fuel model file for existing conditions, which was derived from vegetative cover data mapped for the analysis area (grazing area boundary) and edited based on field observations. Vegetation mapping data was utilized in field efforts to classify vegetation cover type with an appropriate fuel model. To analyze post-grazing fire behavior, a separate fuel model shapefile was created using the existing vegetation coverage and reclassifying fuels based on expected future condition following implementation of grazing operations. Generally, post-grazing fuel models were selected that represented a reduction in overall fuel loading and a reduction in the flashy fuel (grass) component of the fuel bed.



The result includes 7 separate fuel models utilized for the analysis area, of which, one is a non-combustible classification (e.g., developed areas). Once fuel model values were assigned to general vegetation types, the vectorbased vegetation data files (existing and post-grazing) were converted to grid files for inclusion in FlamMap modeling. The unique fuel model assignments are presented in Table 2.

Canopy Cover

Canopy Cover is a required raster file for FlamMap operations. It is necessary for computing shading and wind reduction factors for all fuel models. Canopy cover is measured as the horizontal fraction of the ground that is covered directly overhead by tree canopy. Crown closure refers to the ecological condition of relative tree crown density. Stands can be said to be "closed" to recruitment of canopy trees but still only have 40% or 50% canopy cover. Coverage units can be categories (0-4) or percentage values (0-100).

General Vegetation Type	Fuel Model (Existing Conditions)	Fuel Model (Post- grazing)	Canopy Cover Value
Chaparral	SH2 (142), SH5 (145)	SH1 (141), SH2 (142)	0
Coastal Sage Scrub	GS2 (122), SH2 (142)	GS1 (121), SH1 (141	0
Grassland/Herbaceous	GR2 (102)	GR1 (101)	0
Ornamental	TL2 (182)	TL1 (181)	75
Riparian	TL2 (182)	TL1 (181)	75
Disturbed	GR1 (101)	GR1 (101)	0
Developed/non-burnable	NB9 (99)	NB9 (99)	0

Table 2. On-Site Fuel Models - Existing and Post-Grazing Condition

3.1.2.2 Wind and Fuel Moisture

In order to utilize weather and fuel moisture variables for the fire behavior modeling area, data from the Del Valle Remote Automated Weather Station (RAWS) was analyzed. Utilization of RAWS data is necessary for fire behavior modeling as it includes data for fuel moisture, temperature, relative humidity, and wind speed. The Del Valle RAWS is located approximately 4.1 miles to the northwest of the project area. The following summarizes the location and available data ranges for the Montecito RAWS:

Latitude: 34°25'46" Longitude: 118°40'01" Elevation: 1,278 feet Data years: 1998 to 2021

Wind and weather data are a required component to fire behavior modeling efforts. The Del Valle RAWS data was processed with the FireFamily Plus version 5.0 (FireFamily Plus 2019) software package to determine weather conditions to be incorporated into modeling efforts. The selected weather scenario used 97th percentile conditions to mimic a fire event during Santa Ana wind conditions. The analysis period for weather data analysis was June 1–December 31.

These weather values were incorporated into the Initial Fuel Moisture file used as an input in FlamMap. Wind direction and wind speed values for the FlamMap run were manually entered during the data input phase. Table 3 presents the wind and weather values used in the FlamMap fire behavior modeling runs conducted in support of this analysis.

Table 3. FlamMap Weather Input Variables

Model Variable	Value
1-hour fuel moisture	2%
10-hour fuel moisture	2%
100-hour fuel moisture	3%
Live herbaceous moisture*	30%
Live woody moisture	60%
20-foot wind speed (mph)	55 mph (maximum speed)
Wind direction	268 degrees (Santa Ana)

Note:

* Live herbaceous moisture values were lower than 30% so the herbaceous fuels are considered fully cured (Scott and Burgan 2005).

Finally, wind vectors were modeled within the FlamMap runs using the WindNinja tool embedded in the FlamMap software. WindNinja models the effect of topography on wind speed and direction and generates wind vector files for use in the modeling runs. The grid resolution for the WindNinja analysis was set at 60 meters.

3.1.2.3 Model Outputs

Three output grid files were generated for the existing condition and post-grazing FlamMap runs, resulting in a total of six output files. The output files represent flame length, spread rate, and fireline intensity. Flame length, the length of the flame of a spreading surface fire within the flaming front, is measured from midway in the active flaming combustion zone to the average tip of the flames (Andrews et al. 2008). It is a somewhat subjective and non-scientific measure of fire behavior but is extremely important to fireline personnel in evaluating fireline intensity and is worth considering as an important fire variable (Rothermel 1993). Flame length values in the resulting grid file are in feet. Table 4 presents an interpretation of flame length and its relationship to fireline intensity. Fireline intensity is a measure of heat output from the flaming front and also affects the potential for a surface fire to transition to a crown fire.

Flame Length	Fireline Intensity	Interpretations
Under 4 feet	Under 100 BTU/ft/s	Fires can generally be attacked at the head or flanks by persons using hand tools. Hand line should hold the fire.
4 feet to 8 feet	100-500 BTU/ft/s	Fires are too intense for direct attack on the head by persons using hand tools. Hand line cannot be relied on to hold the fire. Equipment such as dozers, pumpers, and retardant aircraft can be effective.
8 feet to 11 feet	500-1,000 BTU/ft/s	Fires may present serious control problems—torching out, crowning, and spotting. Control efforts at the fire head will probably be ineffective.
Over 11 feet	Over 1,000 BTU/ft/s	Crowning, spotting, and major fire runs are probable. Control efforts at head of fire are ineffective.

Table 4. Fire Suppression Interpretation

Note: BTU/ft/s = British thermal units per foot per second.

Source: BehavePlus 5.0.5 Online Documentation, March 16, 2010. BehavePlus Fire Modeling System: Version 4.0 User's Guide (Andrews, Bevins, and Seli 2008).



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Maps depicting flame length, rate of spread, and fireline intensity values for both the pre-fuel reduction/grazing condition and the post-fuel reduction/grazing condition are included in Appendices A through C, respectively. A map depicting existing and post-grazing fuel model values is presented in Appendix D. As previously indicated, substantial reductions in all fire behavior characteristics is observed through the livestock fuel removal which included ingesting the vegetation and trampling the vegetation to create a thick matt. This trampling process reduces fire hazard by changing the fuel structure from a vertical structure with a high fuel to air ratio and creating a lower, prostrate structure with tightly packed vegetation with a low fuel to air ratio. With lower air ratios, the ability for combustion to occur is reduced as fire requires oxygen to burn and lower air ratios reduces combustion efficiency.

The fire behavior modeling results vary depending on topography and fuel type. As FlamMap utilizes site-specific digital terrain data (including slope, vegetation, aspect, and elevation data) slight variations in predicted flame length values can be observed based on fluctuations of these attributes across the landscape. As presented, wildfire behavior in each of the fuel types varies depending on weather conditions.

When classifying vegetation types into fuel models, efforts were made to most accurately represent the fuel type observed. However, the scale at which the vegetation mapping was conducted did not allow for small-scale fuel mapping within a larger vegetation type classification. For example, small pockets of tall grass within a larger area classified as scrub were not separated for this analysis. Second, the fuel models selected to represent post-developed conditions were selected based on expected fire behavior in these fuel types, as no available fuel models exist for managed and/or irrigated landscape vegetation.

4 Grazing Area Prioritization

4.1 Prioritization of Areas 1 through 5

4.1.1 High priority

Units 1B-1E: These units are immediately adjacent to the north side of the Westridge development and are considered high priority for fuel management. The SCE transmission towers and Edison access road traverse these units. Hillsides are covered with grass and sage scrub vegetation with about 30% to 40% slopes with a northern aspect leading up to houses on top of the slope. Several "chutes" are in alignment with the aspect. Existing fuel modification (clearing and landscaping) is variable; some houses are immediate adjacent to native vegetation.

Unit 2A: This unit is adjacent to the northern edge of Stevenson Ranch and includes terrain sloping to the north with intervening canyons covered with chaparral and sage scrub vegetation that is below existing development. Existing fuel modification (clearing and landscaping) is variable; some houses are immediate adjacent to native vegetation.

4.1.2 Moderate priority

Unit 2B: This unit is southwest of the Westridge Junior High School and includes slopes adjacent to landscaped manufactured slopes bordering the campus structures and playfields. The vegetation is predominantly sage scrub with scattered annual grass and forbs.

Area 3: This area has limited risk, yet fuel management is recommended throughout the area due to roadside exposure, high traffic intersection, proximity to the Magic Mountain theme park, and high visibility. The entire area has rolling hills with predominantly grasses and scattered small shrubs. Avoid Spineflower.

4.1.3 Low priority/Optional

Unit 1A: This unit runs along the east side of the Westridge Pkwy extension from the Westridge development to Magic Mountain Pkwy. It presents a roadside exposure only and does not present a threat to any structures.

Unit 4A: This unit includes gentle rolling slopes with grass and scattered shrubs uphill from the turf ballfields and playfields on the Westridge High School campus; no structures are threatened.

Unit 4B: This unit runs along the west side of the Westridge Pkwy extension, just north of Westridge High School. It presents a roadside exposure only and does not present a threat to any structures or future development.

4.1.4 Prioritization of Areas 5 through 7

These areas were included on the initial vegetation management figure but were omitted from the revised figure provided by the client; the findings are included here as a courtesy.

Units 7A-7C: These units are adjacent to the western edge of the Stevenson Ranch development and should be considered a high priority. Terrain slopes generally toward the west with intervening canyons. The worst-case fuel



type in this area is coastal mixed chaparral. Existing fuel modification (clearing and landscaping) is variable; some houses are immediate adjacent to native vegetation.

Area 5: This unit presents limited risk. The entire southern edge is adjacent to golf course fairways with houses on the opposite side. The eastern edge is alongside The Old Road, presents a roadside exposure only, and does not present a threat to any structures. Avoid Spineflower.

Area 6: This unit presents a limited risk for future development; some uphill slopes with grass and scattered small shrubs; the north side of the intervening ridge has manufactured slopes that will be landscaped and irrigated.

Appendix D: Project Site Photo Series provides representative photographs of the vegetation on and adjacent to the project site. Photos of the pre- and post- fuel reduction project are included.

4.2 Fuel Modification Zones

A minimum 100-foot-wide FMZ is required by Los Angeles County for defensible space in areas adjacent to open space lands; in many instances up to 200 feet is required. Typically, Los Angeles County requires Zone A, which is the first 30 feet, would be irrigated and landscaped with less flammable plant material. Zone B, which is from 31 to 100 feet, would be irrigated and landscaped at a slightly higher density with less flammable plant material. Zone C, which is from 101 to 200 feet, would include modification of the native vegetation by thinning and pruning to maintain it in a fire-resistant condition, i.e., a landscape that would not readily facilitate fire ignition or spread and if ignited, would result in reduced fire intensity and flame lengths and slower spread.

Based on our observations the fuel modification zones surrounding the existing adjacent development include thinning of native vegetation, and irrigated landscaping on both natural and manufactured slopes. However, the maintenance of the fuel modification varies from routine to abandoned. The 100 feet of FMZ required and provided is considered functional in terms of fire protection and the ignition resistant communities occurring within and planned for the area would be adequately protected with 100 feet of FMZ. However, providing holistic land management on the historical grazing lands will effectively increase community protection from wildfire effects. This approach would, for the first time on Newhall Ranch, provide fuel management focused livestock grazing on historically, passively grazed lands. This type of fire hazard reduction is unique to Newhall Ranch and provides an opportunity to protect the developed and developing areas by moving the wildland fuels away from the communities through livestock focused fuel management. With this program, the FMZ areas will exceed requirements by several to over 10 times, effectively creating a wide fuel break and extending FMZs to several hundred feet or more.

5 Small Livestock Fuel Management Recommendations

The management units identified by Dudek within each delineated area were selected based on the fuels, terrain, and proximity to developed areas whereby a potential wildland fire may threaten adjacent structures. Consideration was not given to any other land management objectives the client may need to consider, nor to the feasibility of small livestock being able to access or even graze the units. Those decisions would have to be made following the preparation of this assessment.

The main objective was to identify and prioritize management units presenting a potential wildland fire threat to adjacent development (existing or future) that may benefit from enhanced fuel management (by livestock). The client will address the land management objectives component to coincide with the fuel management component annually.

The livestock manager will address the livestock feasibility component. FivePoint will then conduct an analysis of opportunities and constraints to develop an implementation plan as desired.

5.1 Fuel Management Recommendations

- a) Maintain the identified management units using small livestock consistent with the "thinning" standards of a Fuel Modification Area C for a fire-resistant condition.
 - a. Vegetation should not be "cleared" from the grazing area (do not remove to bare soil)
 - b. Vegetation should be thinned and reduced to approximately 50% of the pre-grazing biomass groundcover
 - c. Grazing should focus on management of flashy fuels, such as non-native annual grasses
 - d. Overgrazing may result in bare soil and erosion potential
 - e. Dudek will conduct site assessments during the grazing program at appropriate intervals to monitor the grazing progress, advise on "thinning" levels obtained vs desired, and document progress.
- b) Expand the modification of fuels within the delineated areas as needed in order to facilitate the needs of small livestock. Continue the program for at least 3 years and then re-evaluate the program and whether annual treatments are appropriate or if a longer period between grazing would suffice, especially during low precipitation years.
- c) With subsequent grazing efforts, focus on more consistent fuel reduction within each grazed PA such that there are fewer polygons of heavier fuels. Currently some PAs include vegetation that was not grazed at intensities that would reduce fuel by approximately 50% or some areas within a PA are not consistently reduced with some areas much heavier than 50% reduction and others much less than 50% reduction.
- d) From University of California Cooperative Extension: Selecting the right animal for the job is dependent on management goals and what forages are available. Livestock class or type that is used as part of a grazing strategy has a significant impact on the resulting vegetation. Various livestock types have different preferences and utilization patterns depending on the vegetation present, the terrain, their experience with various plants, and their familiarity with the site. All livestock may eat whatever vegetation is available, but they clearly have preferences (Table 6). Forage can be utilized efficiently when more than one type of livestock utilizes a site. Site goals may be more effectively achieved by using more than one type of livestock.



- Cattle (cows with calves) tend to prefer grass species. Cows with calves tend to prefer feeding close to water, within ½ mile and on areas with gentle slopes, under 20%.
- Cattle (yearlings) tend to feed long distances from water and readily utilize areas of steep terrain.
- Sheep tend to eat forbs such as clovers, dandelions and other broad leaf plants.
- Goats tend to eat shrubs and to a lesser extent forbs and grass.

Table 5. Foraging Animal Preferences

Forage	Cattle	Sheep	Goats
Grass	78	53	50
Forbs	21	24	29
Browse	1	23	21

Source: University of California Agriculture and Natural Resources (Source Website).

While goats may be more effective at removing small (<1in) woody material, cattle are more effective at removing grassy fuel. In addition, animals do not consume all plants equally which can lead to a shift in plant species if overgrazed (good or bad depending upon aforementioned management goals).

5.1.1 Controlling Effectiveness

Although livestock may have a mind of their own, here are some ways to direct their attention.

- a) Strategically position feed supplementation areas, water sources, or mineral supplementation sites to encourage activity in a specific location where you want increased livestock impact.
- b) Increase herd density to encourage consumption of less palatable species
- c) Follow grazing with mechanical treatment of toxic or physically unavailable vegetation.
- d) Select appropriate grazing species and breed to meet your needs.
- e) Cull individuals that do not directly meet management goals.
- f) Avoid excessive grazing that may exacerbate any potential for soil erosion.
 - a. Slopes greater than approximately 10% should not be grazed beyond 50% biomass ground cover
- g) Remove dead and dying fuels on a regular basis that may not be part of the livestock's palette.
- h) The areas with the heaviest fuels (typically chaparral) may produce the most aggressive fire behavior, but may not necessarily need annual maintenance; schedule livestock as needed to maintain a fire resistant condition.
- i) Prepare an evacuation plan for the livestock and familiarize all staff with the plan, which should include emergency communication, primary evacuation protocol and a contingency plan.
6 Limitations

Dudek's analysis of the project is based on our extensive experience as fire protection planners and understanding of fire behavior. We continue to recommend that Dudek work closely with the Project team as the management plan evolves and is implemented to ensure the intended management objectives are being met.

Our analysis does not provide a guarantee that all area populations will be protected from wildfire at all times. There are many variables that may influence overall safety. It is recommended that the individual communities provide and maintain FMZs as part of a conservative approach to fire safety. The extended grazed fuel areas will enhance the effectiveness of the community FMZs. Wildfire is a dynamic and somewhat unpredictable occurrence, and it is important for anyone living in wildland urban interface areas to educate themselves on practices, including the County's Preparedness Program that will improve overall safety.

Legend

- Existing Ranch Roads Spineflower - Avoid
- FivePoint Ownership
- High Country Trail overgrown

0.25

0.5

- Drive Routes
- 370 ac: Development Adjacent Fuel Mod Fire Abatement
- 70 ac: Entrada North "Tenderloin" Fallow Ag Field Maintenance
- 80 ac: Oak Woodland Restoration Non-native vegetation Mgmt
- 10 ac: Potrero Preserve Expansion Introduction Enhancement Area
- 1,100 ac: Salt Creek South Fork Watershed Corps Advanced Mit Enhancement Area Range Land Mgmt

POTRERO WINDY GAP

& SALT CREEK

Miles



TENDERLOIN

EDGE OF TR 61105

EDGE OF TR 61105

tum_

Westridge

Stevenson Ranch

DUDEK



Appendix A

FlamMap Fire Behavior Modeling - Flame Length





SOURCE: AERIAL-NAIP 2020

Appendix A Flame Length - Existing Site Conditions and Post Treatment Site Conditions Newhall Livestock Fuel Management Plan

Appendix B

FlamMap Fire Behavior Modeling - Rate of Spread





SOURCE: AERIAL-NAIP 2020

Appendix B Rate of Spread -Existing Site Conditions and Post Treatment Site Conditions Newhall Livestock Fuel Management Plan

Appendix C

FlamMap Fire Behavior Modeling - Fireline Intensity





SOURCE: AERIAL-NAIP 2020

Appendix C Fireline Intensity - Existing Site Conditions and Post Treatment Site Conditions Newhall Livestock Fuel Management Plan

Appendix D

FlamMap Fire Behavior Modeling - Fuel Models





SOURCE: AERIAL-NAIP 2020

Appendix D Fuel Models - Existing Site Conditions and Post Treatment Site Conditions Newhall Livestock Fuel Management Plan

Appendix E Site Photograph Log – Before and After

TO BE PROVIDED

Appendix E Fuel Modification Zone Undesirable Plant List

Botanical Name	Common Name	Comment*
Adenostoma fasciculatum	Chamise	F
Adenostoma sparsifolium	Red Shank	F
Artemesia californica	California Sagebrush	F
Carpobrotus edulis	Hottentot-fig	F, I
Cortaderia spp.	Pampas Grass	F, I
Cupressus spp.	Cypress	F
Eriogonum fasciculatum	Common Buckwheat	F
Eucalyptus spp.	Eucalyptus	F
Jasminum humile	Italian Jasmine	F
Plumbago auriculata	Cape Plumbago	F
Tecoma capensis	Cape Honeysuckle	F

*F = flammable, I = Invasive

Notes:

- 1. Certain plants are considered to be undesirable in the landscape due to characteristics that make them highly flammable. These characteristics can be either physical or chemical. Physical properties would include large amounts of dead material retained within the plant, rough or peeling bark, and the production of copious amounts of litter. Chemical properties include the presence of volatile substances such as oils, resins, wax, and pitch. Plants with these characteristics should not be planted close to structures in fire hazard areas. These species are typically referred to as "Target Species" since their complete or partial removal from the landscape is a critical part of hazard reduction. Therefore, any plant listed in the above table is not allowed as part of an acceptable Fuel Modification Plan.
- 2. Plants on this list that are considered invasive are a partial list of commonly found plants. There are many other plants considered invasive that should not be planted in a fuel modification zone and they can be found on The California Invasive Plant Council's Website www.cal-ipc.org/ip/inventory/index.php. Other plants not considered invasive at this time may be determined to be invasive after further study.
- 3. For the purpose of using this list as a guide in selecting plant material, it is stipulated that all plant material will burn under various conditions.
- 4. The absence of a particular plant, shrub, groundcover, or tree, from this list does not necessarily mean it is fire resistive.
- 5. All vegetation used in Fuel Modification Zones and elsewhere in the Entrada South or Valencia Commerce Center project sites shall be subject to approval of the L.A. County Fire Department's Fuel Modification Unit or Fire Code official.

Appendix F Construction Fire Prevention Plan

Entrada South and Valencia Commerce Center - Modified Project

Construction Fire Prevention Plan

JULY 2022

Prepared for:

EYESTONE ENVIRONMENTAL

2121 Rosecrans Avenue, Suite 3355 El Segundo, California 90245 *Contact: Ashley Rogers*

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AMSL	Above Mean Sea Level
CAL FIRE	California Department of Forestry and Fire Protection
CFC	California Fire Code (2016)
CFD	Community Facilities District
CFPP	Construction Fire Prevention Plan
CFR	Code of Federal Regulations
FAHJ	Fire Authority Having Jurisdiction
IC	Incident Command or Incident Commander
Modified Project	Entrada South and Valencia Commerce Center Project
NFPA	National Fire Protection Association
0&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
RFW	Red Flag Warning
LACoFD	Los Angeles County Fire Department
SSO	Site Safety Officer/Fire Safety Coordinator
TBD	To be determined
USGS	U.S. Geological Survey

Definitions

- 1. Activity Risk: Activity risks include those actions that present a risk of igniting a wildfire.
- 2. Fire Patrol: A Newhall Ranch or designated contractor individual will be assigned as "Fire Patrol" specifically to monitor work activities when an Activity Risk exists for fire compliance. The Fire Patrol personnel shall regularly monitor the area for any signs of fire or unsafe practices.
- 3. Fire Season: Fire season is no longer officially designated by the wildland fire agencies. Southern California is considered to be in fire season on a yearlong basis. CALFIRE adjusts their staffing patterns as fire conditions moderate or escalate and this can be used as an indicator of potential fire activity.
- 4. Fire Tools: Essential firefighting tools to be staged near work activities are a 46-inch round point shovel, Pulaski, McLeod, 5-gallon "Indian" Backpack hand pump or water fire extinguisher, and a minimum 10-pound 4A:80BC Dry Chemical Fire extinguisher.
- 5. Incident Commander (IC): The Incident Commander is the agency representative in the leadership role for a wildfire event that reaches the level of establishment of the Incident Command system. This is not a responsibility of the Project and is implemented by the applicable agencies responding to a particular incident.
- 6. Incident Command System (ICS): The Incident Command System is "a systematic tool used for the command, control, and coordination of emergency response" according to the United States Federal Highway Administration. A more detailed definition of an ICS according to the United States Center for Excellence in Disaster Management & Humanitarian Assistance is "a set of personnel, policies, procedures, facilities, and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities. This is not a responsibility of the Project and is implement by the applicable agencies responding to a particular incident.
- 7. Plan: The Construction Fire Prevention Plan (CFPP).
- 8. Red Flag Warning (RFW): A Red Flag Warning is issued for a stated period of time by the National Weather Service using pre-determined criteria to identify particularly critical wildfire danger in a particular geographic area. See Section 8 for construction and maintenance measures that must be implemented during RFWs.
- 9. Site Safety Officer (SSO): The Site Safety Officer or Fire Safety Coordinator is a Project representative that serves as a liaison to the emergency service agencies and all contractors or inspectors on the jobsite for the utilities on emergency incidents and construction-related activities. The SSO has the authority to stop any project work that appears to pose a particular fire risk or hazard.
1 Summary

This Construction Fire Prevention Plan (CFPP) provides direction for fire safety awareness on the Entrada South and Valencia Commerce Center Project (Modified Project) sites during construction. CFPPs do not anticipate every potential fire scenario that may occur during construction, but aim to educate site personnel to potential risks associated with fire ignitions and the procedures that when implemented consistently will minimize the potential for a vegetation ignition. This CFPP provides standard protocols and approaches for reducing the potential of ignitions for typical construction site activities. When consistently employed, the concepts discussed herein will help minimize and avoid ignitions as well as extinguish any ignitions while they are small and controllable.

2 Introduction

This Construction Fire Protection Plan (CFPP) provides detailed guidance on construction phase fire safety with a goal of minimizing the likelihood of fire ignitions within the construction area through mandated protocols and prevention measures to be employed by all on-site personnel during construction. This CFPP has been prepared for the Entrada South and Valencia Commerce Center project (Modified Project) and considers its fire environment (locations, weather, fuels, and ignition sources) in development of the specific measures to be implemented during construction.

The Modified Project Site is located in an unincorporated portion of Santa Clarita Valley in northwestern Los Angeles County (Figure 1). The development proposed by the Modified Project within the Entrada Planning Area includes 1,574 dwelling units and 730,000 square feet of non-residential development, as compared to 1,725 dwelling units and 450,000 square feet of non-residential development for the 2017 Approved Project. The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of Interstate 5 (I-5) and north of Henry Mayo Drive and the Santa Clara River. The State-certified EIR analyzed the environmental implications of 3.4 million square feet of industrial/commercial space.

The Entrada and VCC planning areas are located within State Responsibility Areas designated as Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2007). The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety.

The Project's region is located in a broad ecological and biogeographic transition zone for the coastal and mountain ecoregions. This alluvial Santa Clara River Valley also provides access via the Santa Clara River to the edges of the Mojave Desert and the foothills of the San Gabriel Mountains. While much of the region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steepwalled canyons, is south of the Modified Project Site.

The Project Site is within the planning boundary of the State-approved Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP), which was the subject of a State-certified Environmental Impact Report (EIR) (SCH No. 2000011025; hereafter referred to as the State-certified EIR). In the State-certified EIR for the RMDP/SCP, the Project Site is identified as the "Entrada Planning Area" and the "VCC Planning Area." The Entrada Planning Area is also sometimes referred to as Entrada South. The State-certified EIR determined that the Project would have a less than significant impact on adopted emergency response plans or emergency evacuation plans based on the location of fire states, a system of improved roads, and fire flows for the Project. The State-certified EIR also determined the Project would result in less than significant impacts related to wildfire with regulatory compliance and incorporation of mitigation measures.

Entrada Planning Area: The Entrada Planning Area consists of approximately 382 acres located west of I-5 and the City of Santa Clarita and south of the Santa Clara River and the Six Flags Magic Mountain theme park (Figure 1). The Entrada Planning Area is located in the U.S. Geological Survey (USGS) 7.5-minute Newhall quadrangle map, Township 4 North, Range 16 West, and generally in Sections 19, 20, and 30.



3

VCC Planning Area: The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of I-5 and north of Henry Mayo Drive (State Route-126 [SR-126]) and the Santa Clara River (Figure 1). The VCC Planning Area is located in the U.S.G.S. 7.5-minute Newhall quadrangle map, Township 4 North, Range 17 West, and generally in Sections 11 and 12.



SOURCE: ESRI 2022; Hunsaker 2021

1 Miles

FIGURE 1 Modified Project Location Map

Construction Fire Protection Plan for the Entrada South and Valencia Commerce Center Project

3 Emergency Notification Procedures

Any fire event at or near the site will trigger the emergency notification procedures identified in this section. Fire reporting is critical for tracking where, when, how, and why fire ignitions occur and will help the fire agencies develop protocols for reducing their occurrence.

3.1 First Call = 9-1-1

Reporting fires and other emergencies: The first call should be to 9-1-1 so that appropriate apparatus can be dispatched.

Technical Staff Contact: Project contact information will be provided to Los Angeles County Fire Department local stations to assist responding firefighters during an emergency.

The first call should be to 9-1-1 so that emergency responders can be dispatched. Travel times to the site require notification of 9-1-1 as early as possible after the fire or other emergency has been observed.

For Non-Emergencies, contacts near the site include:

- Fire/Emergency Medical (Los Angeles County Fire Department, Battalion 6) 661.753.9710
- Santa Clarita Police and Sheriff (Santa Clarita Office) 661.255.1121
- California Highway Patrol (Valencia Office) 661.600.1600
- Hospital Henry Mayo Santa Clarita 23845 McBean Parkway: 661.200.2000

To facilitate the arrival of fire services during construction, an emergency response meeting point will be established with the local Los Angeles County Fire Department (LACoFD) personnel. The Site Safety Officer (SSO) or designee will meet the emergency response team at the meeting point, likely the Project's main entrance, to lead them into the site. The meeting point will be selected with fire agency input.

3.2 Evacuation Procedures

During significant emergency situations at or near the Project site during construction, the site manager and/or SSO, in consultation with law or fire authorities, as possible, may issue an evacuation notice to construction personnel. When an evacuation has been called, all site employees will gather at a designated assembly area and the SSO will account for all personnel, as time allows. Once all employees are accounted for, or sooner if dictated by the emergency, the vehicles will safely convoy from the site to safe zones, which are generally areas off-site away from the threat. Should there still be persons within the site after the evacuation has been called, the SSO will send convened personnel off site to safe zones and the SSO and supervisors will perform a sweep of the project site to locate persons and reconvene at the assembly area. Once all personnel are accounted for, they will exit the site. Should a structure or wildland fire (or other emergency) occur that threatens the primary assembly area; other locations may be designated as secondary assembly areas by the SSO or supervisors, as dictated by the situation. The SSO and/or Site Supervisors should be prepared to be available to the Incident Commander (IC) throughout the Incident to facilitate information exchange.



3.2.1 Evacuation Routes

Depending on the type and severity of the emergency, along with weather and/or localized site conditions, roadways designated on Figures 2a and 2b for Entrada and VCC Planning Areas, respectively, and will be used for evacuating the area during construction.

The Modified Project's primary evacuation routes are accessed through a series of roadways, which connect with the primary ingress/egress roads (i.e., Magic Mountain Parkway, Commerce Center Drive, Hasley Canyon Road, and The Old Road) that intersect off-site primary and major evacuation routes.

Entrada Planning Area Primary and Secondary Emergency Ingress/Egress

- Primary Route: Magic Mountain Parkway, or to The Old Road or I-5 to the north or south.
- Secondary Route: Westridge Parkway to Valencia Blvd then east to The Old Road or I-5.

VCC Planning Area Primary and Secondary Emergency Ingress/Egress

- **Primary Route:** Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- **Primary Route:** Commerce Center Drive to SR-126 to the east or west.
- Secondary Route: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.

Depending on the nature of the emergency requiring evacuation, it is anticipated that the construction personnel in the Entrada Planning Area traffic would exit the Modified Project Site via Magic Mountain Parkway, which is the direct route out of the Modified Project Site and onto other down-stream roadways. In a typical evacuation that allows several hours or more time, traffic may be directed in several directions to the north or south to I-5 and away from a west or east/northeast wind driven fire determined mostly by the fire's location, its spread rate and direction, time available before it could threaten evacuation routes, traffic levels, and others. If less time is available, or one or more potential routes are considered unsafe, fire and law enforcement officials may direct all traffic in one direction.

The SSO and site managers are primarily responsible for evacuations. They will employ procedures to determine the emergency, talk with fire officials, as possible, and declare the emergency status. Foreman level supervisors shall assist in accounting for personnel.

8



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK 💩 0_____000 2,000

FIGURE 2a Entrada South Community Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK 💩 0______ Feet

FIGURE 2b Valencia Commerce Center Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK

4 Modified Project Roles and Responsibilities

All employees should know how to prevent and respond to fires, and are responsible for adhering to policies regarding fire emergencies. In particular, the following sections detail general responsibilities, by position.

4.1 Project Applicant

The Supplemental Environmental Impact Report for the Modified Project includes a site-specific Fire Protection Plan (FPP) and a Wildfire Evacuation Planto determine overall fire risk and a Wildfire Evacuation Plan to assist future residents, were prepared and approved for the Project. The Project is required to implement measures to reduce the risk and comply with federal, state, and local fire safety/protection policies. Additionally, the SSO or a designated Site Fire Safety Coordinator will conduct training and make equipment available to provide a safe working environment for employees and contractors.

4.2 Site Safety Officer

The SSO or a designated Site Fire Safety Coordinator will manage the Project's FPP and this CFPP during construction. Among the other responsibilities of the SSO are:

- Understanding the CFPP and its mandates for training, fire prevention, fire suppression, and evacuation.
- Understanding the fire risk associated with the site and with activities that will occur on site.
- Developing and administering the fire prevention and safety training program.
- Ensuring that fire control equipment and systems are properly maintained and in good working condition.
- Monitoring combustibles on the site and managing where they are stored.
- Conducting fire safety surveys and making recommendations.
- Posting fire rules on the project bulletin board at the contractor's field office and areas visible to employees.
- Stopping project work activities that pose a fire hazard or are not in compliance with this CFPP.
- Reporting all fires ignited on the site, whether structural, vegetation, electrical, or other to LACoFD.

Construction Fire Prevention Plan / Entrada South and Valencia Commerce Center - Modified Project

5 Fire Safety Plan Goals

The primary goals of this CFPP are to address the identified ignition sources and risks so that the personnel involved with constructing the Project have clearly defined protocols and procedures for reducing fire risk and maintaining a fire safe worksite. Among the goals developed for the Project site are:

- Prevent/minimize fires during construction, operation and decommissioning
- Provide a safe work-site for all employees, contractors, visitors and emergency personnel
- Prevent shock to emergency responders, workers, and unauthorized trespassers
- Prevent arcing or sparking, which could ignite vegetation on site
- Prevent or minimize dollar loss to the equipment
- Prevent or minimize potential for a fire starting on site to spread off site
- Provide water, appropriate fire extinguishers and access for firefighters
- Provide adequate signage and shut off devices to stop power feed into power lines in the event of a line failure, or fire in right of way
- Provide water trucks equipped with fire extinguishers, hoses, shovels, and Pulaski's (fire fighting hand tool) when work involves the use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and/ or explosives.
- Provide the ability to report a fire or other emergency to 9-1-1 without delay and to make contact with internet websites and personnel
- Report all fire ignitions, regardless of size, to the LACoFD

6 Site and Project Description

6.1 Location

The Project's region is located in a broad ecological and biogeographic transition zone for the coastal and mountain ecoregions. This alluvial Santa Clara River Valley also provides access via the Santa Clara River to the edges of the Mojave Desert and the foothills of the San Gabriel Mountains. While much of the region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steep-walled canyons, is south of the Modified Project Site.

6.2 Vegetation and Topography

6.2.1 Vegetation

Extensive vegetation type mapping is useful for fire planning because it enables each vegetation community to be assigned a fuel model, which is used in a software program to predict fire behavior characteristics, as discussed in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions. Generally, wildland-urban interfaces with shrubland-dominated vegetation are found to be more fire-prone than those with grasslands or other natural spaces (Elia et al., 2019). The Modified Project Site's vegetative fuels are primarily annual grassland, scrub and chaparral habitat, and riparian forest. Man-made land cover types, such as agriculture and disturbed land were also previously mapped on the Entrada and VCC Planning Areas. These vegetation community and land cover types were confirmed by Dudek fire protection planners in the field and the dominant vegetation types were assigned fuel models for use during fire behavior modeling (see Section 4.1.1 Fire Behavior Modeling Analysis). The vegetation communities are shown in Figure 3a for the Entrada Planning Area and Figure 3b for the VCC Planning Area.

Post-development vegetation composition proximate to the Entrada and VCC Planning Area footprints is expected to be significantly different than current conditions. Following build-out, irrigated landscape vegetation associated with fuel modification zones (FMZ) A and B are expected to cover the immediate area surrounding the Modified Project Site, extending 100 horizontal feet from each of the structures. Consistent with requirements, native and naturalized vegetation occurring within FMZ Zone C is not expected to be irrigated, although overall fuel volumes will be reduced by removing dead and dying plants, non-natives, highly flammable species, and thinning the remaining plants so they would not readily facilitate the spread of fire on an ongoing basis. The provided FMZ areas will be maintained in order to comply with County Fire Fuel Modification Plan guidelines.

6.2.2 Topography

The Modified Project Site is located in the Santa Clara River Valley, between the Santa Susana Mountains to the south and the Topatopa Mountains to the north. The Modified Project Site is topographically diverse with slope gradients ranging from moderate to steep on the hillsides to very gentle in the Santa Clara River floodplain and major tributary canyons.



The Entrada Planning Area is located south of the Santa Clara River on rugged terrain dominated by steep slopes. It is dissected by four south–north-trending tributaries to the Santa Clara River, including one along Magic Mountain Canyon and three unnamed tributaries (Figure 4a, Topography). All four tributaries exit the Entrada Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the southern portion of the site is dominated by north–south-trending ridges. A narrow panhandle (roughly 330 feet wide) extends along the western portion of the site to a fairly level former pasture area.

The VCC Planning Area is located north of the Santa Clara River and is dissected by two south-north-trending tributaries to the Santa Clara River: Castaic Creek and Hasley Creek (Figure 4b). Both tributaries exit the VCC Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the site is situated in relatively flat areas along Castaic Creek and within the lower elevations of Hasley Canyon. The remaining portions of the site have greater topographic relief. Site elevations range from approximately 990 feet amsl along the Castaic Creek bottom to approximately 1,210 feet amsl at the top of the north-central ridge (Dudek 2020).





SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 3a Entrada Planning Area's Vegetation Communities and Land Cover Types Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK

Modified Project

Off-Site Project Impact Area

C Valencia Commerce Center Tract Boundary

General Vegetation Communities and Land Cover Types

Coastal Scrub

Grass and Herb Dominated Communities

Oak woodland

Riparian

Man-made land cover

□ Specific Vegetation Communities and Land Cover Types

AGR = Agriculture

BES = Blue elderberry stands

CGL = California annual grassland

CSB = California sagebrush scrub

CSB-CB = California sagebrush scrub-California buckwheat

DEV = Developed

DL = Disturbed land

MFS = Mulefat scrub

ORN = Ornamental

RW = River wash

SCBR = Scale broom scrub

SCWRF = Southern cottonwood-willow riparian forest

SPM = Short-podded mustard stand

TAM = Tamarisk scrub

VOW = Valley oak woodland

dCB = Disturbed California buckwheat

dCSB-CB = Disturbed California sagebrush scrub-California buckwheat

dRRBS = Disturbed rubber rabbitbrush scrub

dSCBR = Disturbed scale broom scrub



SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 3b VCC Planning Area's Vegetation Communities and Land Cover Types Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK



SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL QUADRANGLE

FIGURE 4a Entrada South Topography Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Project



SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL AND VAIL VERDE QUADRANGLES

800 Beet FIGURE 4b Valencia Commerce Center Topography Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Project

SOURCE. USGS, 7.3 MINUTE SERIES, NEWHALLAND VAIL VERDE QUADRANGL

7 Project Specific Risk Summary

7.1 Fire Risk

Fire risks must be assessed based upon the potential frequency (probability of an incident occurring) and consequence (potential damage should an event occur). The evaluation of fire risks must take into account the frequency and severity of fires.

The Project's fire risks are associated with the following:

7.1.1 Construction Phase Risks

- Earth-moving equipment have potential to create sparks, heat sources, fuel or hydraulic leaks, etc.
- Chainsaws and small combustible engines have the potential to result in vegetation ignition from overheating, spark, fuel leak, etc.
- Vehicles have the potential for heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders have the potential to create an open heat source may result in metallic spark coming into contact with vegetation
- Wood chippers have the potential to include flammable fuels and hydraulic fluid that may leak and spray onto vegetation with a hose failure
- **Compost piles** have the potential to create large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders have the potential for sparks from grinding metal components may land on a receptive fuel bed
- **Torches** have the potential to act as a heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- **Dynamite/blasting** if necessary, blasting has the potential to cause vegetation ignition from open flame, excessive heat or contact of heated material on dry vegetation
- Other human-caused accidental ignitions have the potential for ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others

Fire Prevention Measures for all Construction Activities:

- Minimize combustible and flammable materials storage on site.
- Store any combustible or flammable materials that need to be on site away from ignition sources.
- Parking areas shall be cleared of all grass and brush to a distance of at least 10 feet beyond the parking area.
- Keep evacuation routes free of obstructions.
- Label all containers of potentially hazardous materials with their contents and stored in the same location as flammable or combustible liquids.



- Perform "hot work" according to fire safe practices in a controlled environment and with fire suppression equipment at the job site. A fire watch person (Fire Patrol), with extinguishing capability (e.g., fire extinguishers), should be in place for all 'Hot Work" and heavy machinery activities during construction. Ensure hot work adheres to the guidelines provided.
- Dispose of combustible waste promptly and according to applicable laws and regulations.
- Report and repair all fuel leaks without delay.
- Do not overload circuits or rely on extension cords where other options would be safer.
- Turn off and unplug electrical equipment when not in use.
- Direct contractors on site to restrict use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives during RFW in accordance with Section 8, below. When the above tools and equipment are used near substantial fuel sources, water trucks/tenders (per project design feature (PDF-WF-1 as identified in the SEIR for the Modified Project)) (4,000 gallon capacity) equipped with hoses, shovels, Pulaski's, and McLeod's shall be accessible to personnel.
- Equip all construction-related vehicles located near substantial fuel sources with a 10 pound 4A:80 BC Dry Chemical Fire Extinguisher, a 5-gallon backpack pump or water fire extinguisher, a 46-inch round point shovel, and a first-aid kit.
- When an evacuation has been called, all site personnel will gather at the designated assembly area and the SSO will account for all personnel to the extent practicable. Once all personnel are accounted for, the vehicles will safely convoy from the site to safe zones to the extent practicable.

7.1.2 Consultants and Contractor On-site Risk

Consultants and contractors should know how to prevent and respond to fires, and are responsible for adhering to fire safety standards and best practices.

Fire Prevention Measures for Consultants/Contractors:

- All vehicles brought onto the site and located near substantial fuel sources shall be equipped with fire prevention equipment:
 - 10 pound, 4A:80BC dry chemical fire extinguisher
 - 46-inch round point shovel
 - 5-gallons of water or a 5-gallon water backpack
 - First-aid kit
- No driving (cars, trucks, ATVs or similar) over unmaintained and dry vegetation.
- Vehicles to be parked a minimum of 10 feet from nearest vegetation within an area devoid of any vegetation.
- Site activities limited during Red Flag Warning Weather periods in accordance with Section 8, below; stay
 alert to fire and weather conditions and evacuate employees, if safe to do so.
- Consultants/Contractors will conduct operations safely to limit the risk of fire
- Hot Work shall adhere to the guidelines provided below in Section 7.5.
- During significant emergency situations, an evacuation notice may be issued by the site manager/supervisor or SSO to the extent practicable. When an evacuation has been called, all consultant or contractor employees will gather at the designated assembly area and the SSO will account for all



personnel. Once all employees are accounted for, the vehicles will safely convoy from the site to safe zones to the extent practicable, which are generally areas off-site away from the threat.

7.3 Best Practices to Reduce Construction Risks

The SEIR includes measures to be employed as PDFs and mitigation measures (MMs). The following constitute best practices during construction that are Fire Code required measures or recommended as part of this plan during construction to reduce the risk of ignitions. These measures may be monitored through the SSO and ongoing worker safety training.

- Fire rules posted on the project bulletin board at the contractor's field office and areas visible to employees. This shall include all consultants, contractors and subcontractors if more than one.
- Fires ignited on site reported to LACoFD.
- The engineering, procurement, and construction contracts for the project identify fire safety requirements.
- All internal combustion engines used at the Modified Project Site should be equipped with spark arrestors that are in good working order.
- Once initial two-track roads have been cut, light trucks and cars are recommended only on roads where the roadway is substantially cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- During construction, the Project should be equipped with at least one water tender. Each truck should be equipped with 50 feet of 0.25-inch fast response hose w/fog nozzles. Any hose size greater than 1¹/₂" shall use National Hose (NH) couplings.
- A cache of shovels, McLeod's, and Pulaski's is recommended to be available at staging sites. Additionally, on-site pickup trucks should be equipped with first-aid kits, fire extinguishers and shovels if located near high fuel areas.
- Equipment parking areas and small stationary engine sites to be cleared of all extraneous flammable materials.
- The on-site contractor must restrict use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives during RFW conditions in accordance with Section 8. When the above tools and equipment are used, water tenders equipped with hoses, shovels, McLeod and Pulaski shall be accessible to personnel.
- A fire watch (person responsible for monitoring for ignitions) will be provided during hot works and heavy machinery activities and is recommended to monitor for a minimum of 30 minutes following completion of the hot work activities.
- Smoking and vaping should not occur in wildland areas or within 50 feet of combustible materials storage, and shall be limited to designated areas or areas cleared of all vegetation.
- Each project construction site (if construction occurs simultaneously at various locations) to be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires.
- Construction workers at the site to receive training on the proper use of firefighting equipment and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by the LACoFD.



7.4 Daily Fire Prevention Measures

To limit the risk of fires, all site staff, employees, and contractors are recommended to take the following precautions:

- Fire safety to be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis.
- No Smoking or vaping allowed on site except in designated smoking areas which include cleared area with
 no combustible vegetation or materials and approved butt receptacles (noncombustible containment of
 cigarette butts). Smoking or vaping inside closed vehicles at the site may be allowed in designated areas
 away from vegetation, at the discretion of the SSO.
- Combustible materials to be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation.
- Evacuation routes to be maintained free of obstructions that would block evacuations. Unavoidable evacuation route blockages shall be coordinated such that a secondary route is identified and available.
- Disposal of combustible waste in accordance with all applicable laws and regulations.
- Use and store flammable materials in areas away from ignition sources.
- Proper storage of chemicals, such that incompatible (i.e., chemically reactive) substances would be separated appropriately, shall be required.
- Performance of hot work (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch shall be required. Hot work permits are required and will be reviewed and granted by the SSO for all hot work.
- Equipment shall be kept in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease.
- Immediate reporting of fuel or petroleum leaks to be required. The site mechanic shall ensure that all leaks are repaired immediately upon notification.
- Immediate repair and cleanup of flammable liquid leaks to be required.
- Extension cords not to be relied on if wiring improvements are needed, and overloading of circuits with multiple pieces of equipment shall be prohibited.
- Turning off and unplugging electrical equipment when not in use.

7.4.1 Fire Prevention/Protection System Maintenance

The SSO (or trained specialist, when necessary) is recommended to ensure that fire suppression and related equipment is maintained according to manufacturers' specifications. National Fire Protection Association (NFPA) guidelines shall be implemented for specific equipment.

Per Fire Code, the following equipment is subject to ongoing maintenance, inspection, and testing procedures:

- Portable fire extinguishers;
- Fire alarm and suppression systems;
- Water trucks and associated equipment; and
- Emergency backup generators/systems and the equipment they support.



7.5 Hot Work

These requirements are primarily from 2019 California Fire Code (CFC) Chapter 35, Welding and other Hot Work, and NFPA 51B, Fire Prevention During Welding, Cutting and other Hot Work. Hot work is defined in the CFC as operations involving cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, or other similar operations. Hot work areas are defined as the areas exposed to sparks, hot slag, radiant heat, or convective heat because of the hot work.

A Hot Work Permit shall be obtained for all hot work regardless of location from the SSO, following guidelines from the LACoFD. In accordance with NFPA 51B and the CFC Chapter 26, hot work shall only be done in fire safe areas designated by the SSO and shall comply with the following:

- All personnel involved in Hot Work shall be trained in safe operation of the equipment by the SSO. This will include providing training at "tailgate safety meetings". They shall also be made aware of the risks involved and emergency procedures, such as how to transmit an alarm and who is responsible to call 9-1-1.
- Signage required in areas where workers may enter indicating "Caution; Hot Work in progress; Stay Clear" would be posted on site.
- Hot work would not be done on any containers which contain or have contained flammable liquids, gases, or solids until containers have been thoroughly cleaned, purged, or inerted.
- A dry chemical fire extinguisher with a minimum rating of 4A:80BC, a 5-gallon backpack pump or water fire extinguisher, and a 46-inch round point shovel, shall be readily accessible within 25 feet of hot work area.
- The SSO or safety manager shall inspect the hot work area before issuing a permit and shall then make daily inspections.
- Welding and cutting would comply with 2019 CFC) Chapter 35- welding and Hot Work.
- Electric arc hot work would comply with CFC Chapter 35.
- Piping manifolds and Hose Systems for Fuel Gases and Oxygen would comply with CFC Section 3509.
- Cylinder use and storage shall comply with 2019 CFC Chapter 53, "Compressed Gases."
- Equipment to be consistent with LACoFD guidance for construction equipment, including torches, manifolds, regulators, or pressure reducing valves, and any acetylene generators.
- Personal Protective Clothing would be selected to minimize the potential for ignition, burning, trapping hot sparks, and electric shock.
- A fire watch will be in place for a minimum of 30 minutes, or longer as considered necessary by the SSO, following any hot work.
- Any ignitions would be immediately extinguished (as possible) by site personnel and LACoFD would be notified of the incident.

The SSO shall have the responsibility to assure safe Hot Work operations and shall have the authority to modify hot work activities associated with construction and/ maintenance activities, and to exceed the requirements in NFPA 51B and 2019 CFC, to the degree necessary to prevent fire ignition. Workers must be trained on the hot work information and criteria in this CFPP.



8 Red Flag Warning Protocol

Red Flag Warnings are issued by the National Weather Service and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. To ensure compliance with Red Flag Warning restrictions, the National Weather Service website would be monitored at the site (http://www.srh.noaa.gov/ridge2/fire/briefing.php). During Red Flag Warnings, construction related activities would be limited and precautions may be taken on site during periods of a Red Flag Warning, when conditions such as low humidity and high winds are present. Upon announcement of a Red Flag Warning, red flags will be prominently displayed at the entrance gate and main office, indicating to employees and contractors that restrictions are in place. Any hot work (work that could result in ignition sources or increase fire risk), grading in native vegetated areas, or any other work near native or unmaintained vegetation that could result in heat, flame, sparks, or may cause an ignition to vegetation shall be prohibited during Red Flag Warning conditions unless the result would be less safe without completing the task. If vehicles are required to be used during Red Flag Warning conditions, vehicles shall remain only on designated access roads on the site or areas of the site not located near native or unmaintained vegetation.

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9 Fire Safety Briefings, Inspections, and Training

9.1 Briefings and Inspections

The SSO would conduct routine, unannounced inspections a minimum of once, weekly. The SSO would develop an inspection check list to document these inspections.

Prior to Project construction, Project personnel would receive training on the contents of this CFPP, along with additional fire safety and fire prevention information provided by an informed SSO (or designee). As possible, firefighters from LACoFD will attend these meetings and provide input, which has a dual benefit of informing site personnel and providing Project familiarity for the firefighters.

Site supervisors/foremen will be responsible for sharing CFPP content with consultants and construction personnel throughout the duration of the Project. A review of the content of this CFPP would take place at a formal safety briefing at a minimum of once per month.

Each daily safety tailgate session should include an assessment of the day's fire-related risks or hazards and the mitigation for each.

Compliance, including monitoring compliance, with this CFPP is mandatory. All levels of project management have the authority to shut down any operation that presents an inappropriate amount of fire risk or hazard until it can be properly mitigated.

Violations of any of the requirements of this CFPP would be addressed by the SSO or other supervisory personnel, immediately. Appropriate consequences for repeated or serious negligence in respect to this CFPP would be dealt with accordingly. All Project-related vegetation fires, regardless of size, shall be promptly reported to the SSO and LACoFD to determine if appropriate mitigation measures are being taken.

9.2 Training Requirements

9.2.1 Basic Fire Safety Training

The SSO and or site supervisors/foremen would present basic fire prevention training to employees upon employment, and shall maintain documentation of the training, which includes the following:

- The Project-specific FPP
- Review of the Occupational Safety and Health Administration (OSHA) Fire Protection and Prevention (29 CFR 1926.24)
- Proper response and notification in the event of a fire;
- Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan), and hand tools, such as shovels, and recognition of potential fire hazards.



The SSO would train persons entering the site on the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees would receive this training at the following times:

- Upon first entering the facility
- Annually during a pre-planned meeting
- When changes in work processes necessitate additional training

Upon returning to the site after having been gone longer than 90 days

9.2.2 Site Supervisor Fire Safety Training

Prior to Project construction, site supervisors would receive a minimum of 1 hour training on wildland fire prevention and safety. This training would be provided by the SSO or qualified designee. This training would then be shared with all construction personnel by the site supervisor or the SSO.

Each site supervisor would be trained on the following:

- Fire reporting
- Extinguishing small fires in order to prevent them from growing into more serious threats.
- Fire prevention
- Identifying work activities that may result in a fire hazard

9.2.3 Communication

The ability to communicate with personnel working on the Modified Project Site is mandatory. Construction crews would be required to have a cell phone or satellite phone, and/or radios that are operational within the area of work to report an emergency. Contact information for lead construction personnel would be provided to respective agencies. Communication pathways and equipment would be tested and confirmed operational each day prior to initiating construction activities. Fires and medical emergencies would be immediately reported to LACoFD via 9-1-1.

Each on-site worker would carry at all times a laminated, CFPP card listing 24-hour contact information, including telephone numbers for reporting an emergency and immediate steps to take if an incident occurs. Information on the CFPP card would be updated as needed and redistributed to all workers before the initiation of any construction activities. The Project's compliance monitor would provide the CFPP cards to the site's SSO prior to construction kick-off so that all site staff can be provided training and receive their cards.
10 Project Personnel Fire Fighting Limitations

Responding to fires at the Modified Project Site, whether structural, wildland, or other, is the responsibility of LACoFD. Because their response to the site may require several minutes or more, Project employees and contractors should provide only initial firefighting efforts, and only if they have had appropriate training. No employee shall fight a fire beyond the incipient stage and the arrival of professional fire suppression personnel. Involvement in firefighting is voluntary and should only be attempted by trained, qualified individuals.

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Appendix G Stantec OVOV Analysis



То:	File	From:	Daryl Zerfass
			Irvine
Project/File:	2042604600	Date:	April 20, 2022

1 Introduction and Executive Summary

This memorandum analyzes the Entrada South and Valencia Commerce Center Modified Project's consistency with the circulation, emergency access, and evacuation framework established by Los Angeles County for the Santa Clarita Valley area. For context, this analysis summarizes relevant information and policies related to circulation, emergency access, and evacuation from the:

- Los Angeles County Westside Bridge and Major Thoroughfare District
- Santa Clarita Valley Area Plan (One Valley One Vision)
- State-Certified EIR
- Initial Study for the Modified Project

As summarized below, Los Angeles County has engaged in extensive planning for the circulation and transportation framework of the Santa Clarita Valley area. These efforts include the Santa Clarita Valley Area Plan (One Valley One Vision), jointly approved by Los Angeles County and the City of Santa Clarita in 2012, which established the long-term land use and circulation framework for the area, which took in account the need to provide adequate emergency access and evacuation as the Santa Clarita Valley area is built out over time. The Modified Project is consistent with the land use designations and circulation framework established by the Santa Clarita Area Plan, including the Area Plan's transportation policies related to emergency access and evacuation.

2 Discussion

2.1 Los Angeles County Westside Bridge and Major Thoroughfare District

The Los Angeles County Westside Bridge and Major Thoroughfare District was approved in 2011 for the purpose of financing for specific improvements in the westside area of the Santa Clarita Valley. Improvements include, but are not limited to new and improved roadways, bridges, intersections, and interchanges. An illustration of the District boundaries and key facilities is attached for reference. The

District helps ensure that infrastructure, roadways, bridges, intersection and interchange are funded and constructed in a manner to ensure the orderly development of the Santa Clarita Valley area. The circulation system contemplated by the District is consistent with applicable Los Angeles County long-range plans for the area. The Modified Project would comply with the District's fee requirements and would be consistent with the purpose of the District.

2.2 Santa Clarita Valley Area Plan (One Valley One Vision)

In 2012, Los Angeles County and the City of Santa Clarita jointly approved the Santa Clarita Valley Area Plan, One Valley One Vision (OVOV) to ensure the orderly development of the Santa Clarita Valley. OVOV established area-wide circulation and transportation framework and took into account emergency access and evacuation during wildfires and other emergencies. An illustration of the OVOV circulation plan is attached for reference.

OVOV provides "[p]olicies to ensure that the circulation system is safe, such as provision of emergency access and maintenance of evacuation routes, [which] are consistent with provisions of the Safety Element."¹ The OVOV EIR determined that the circulation framework, emergency access, and evacuation planning for the OVOV area would result in less than significant impacts, as follows:

"[OVOV] policies are designed to maintain adequate emergency access throughout the County's [OVOV] Planning Area. They would promote mobility to allow for acceptable response times by emergency vehicles, and ensure emergency access to various types of properties. Additionally, the County would maintain a current evacuation plan. Since the proposed [OVOV] Area Plan would provide the framework to ensure adequate emergency access, impacts would be less than significant."²

Further, the OVOV EIR analyzed the impact of wildland fires on emergency access and evacuation related to buildout of the OVOV area.³ The OVOV EIR concluded that OVOV's plans and policies would ensure that the buildout of the OVOV area would be consistent with existing and future LA County evacuation plans and procedures, ensuring safe egress and evacuation during emergencies, including emergencies caused by fires or wildfires.⁴

¹ Santa Clarita Valley Area Plan, One Valley One Vision, 2012, Circulation Element, p. 72.

² OVOV Draft EIR, Nov. 2010, Chapter 3.2, Circulation and Transportation, p. 3.2-66, available at <u>https://planning.lacounty.gov/ovov</u>.

³ OVOV Draft EIR, Nov. 2010, Chapter 3.11, Hazards and Hazardous Materials, pp. 3.11-28 to 3.11-29, available at <u>https://planning.lacounty.gov/ovov</u>.

⁴ *Id*. at 3.11-30.

Relevant transportation-related policies in OVOV and the Modified Project's consistency assessment is provided as follows:

OVOV Policy	Modified Project Consistency Assessment
Objective C-2.1: Implement the Circulation Plan (as shown on [OVOV] Exhibit C-2) for streets and highways to meet existing and future travel demands for mobility, access, connectivity, and capacity.	"[OVOV] contains several policies intended to ensure that adequate emergency access is maintained throughout the Santa Clarita Valley. In order to promote mobility within the roadway network, the proposed Area Plan seeks to limit excessive cross traffic, access points, and turning movements on arterial highways; and enforce the appropriate spacing of traffic signals (Policy C 2.1.1), enhance connectivity of the roadway network through such methods as grade separations and bridges (Policy C 2.1.2), enhance the capacity of the roadway system by upgrading intersections when necessary (Policy C 2.1.3), ensure that the future dedication and acquisitions of roadways are based on projected demand (Policy C 2.1.5), and implement the construction of paved crossover points through medians for emergency vehicles (Policy C 2.2.9)." ⁵ The Modified Project is designed to implement and be consistent with the circulation system established by OVOV. The State-certified EIR determined that the 2017 Approved Project would not significantly interfere with an emergency access or evacuation with mitigation. As stated below, the Initial Study for the Modified Project determined that the Modified Project would not impair implementation of the County's evacuation plan. The Modified Project is consistent with this objective and the related policies.
Policy C 2.1.1: Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile.	See above discussion for Objective C.2.1.
Policy C 2.1.2: Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis.	See above discussion for Objective C.2.1.

⁵ *Id*. at 3.2-65.

OVOV Policy	Modified Project Consistency Assessment
Policy C 2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate.	See above discussion for Objective C.2.1.
Policy C 2.1.4: Ensure that future dedication and acquisition of right-of-way is based on the adopted Circulation Plan, proposed land uses, and projected demand.	See above discussion for Objective C.2.1.
Policy C 2.2.9: Medians constructed in arterial streets should be provided with paved crossover points for emergency vehicles, where deemed necessary by the Fire Department.	See above discussion for Objective C.2.1.
Objective C-2.5: Consider the needs for emergency access in transportation planning.	"[OVOV] would facilitate consideration of the needs for emergency access in transportation planning. The County would maintain a current evacuation plan (Policy C 2.5.1), ensure that new development is provided with adequate emergency and/or secondary access, including two points of ingress and egress for most subdivisions (Policy C 2.5.2), require visible street name signage (Policy C 2.5.3), and provide directional signage to the I-5 and SR-14 freeways at key intersections to assist in emergency evacuation operations (Policy C 2.5.4)." ⁶ In addition, as discussed below, the Initial Study for the Modified Project determined that the Modified Project would not impair implementation of the County's evacuation plan. The Modified Project is consistent with this objective and the related policies.
Policy C-2.5.1: Maintain a current evacuation plan as part of emergency response planning.	See above discussion for Objective C.2.5
Policy C-2.5.2: Ensure that new development is provided with adequate emergency and/or secondary access for purposes of evacuation and emergency response; require two points of ingress and egress for every subdivision or phase thereof, except as otherwise approved for small subdivisions where physical constraints preclude a second access point.	See above discussion for Objective C.2.5
Policy C 2.5.3: Require provision of visible street name signs and addresses on all development to aid in emergency response.	See above discussion for Objective C.2.5

⁶ *Id*.

OVOV Policy	Modified Project Consistency Assessment
Policy C 2.5.4: Provide directional signage to Interstate 5 and State Route 14 at key intersections in the Valley, to assist emergency evacuation operations.	See above discussion for Objective C.2.5

The Modified Project is consistent with the land use plan and buildout contemplated by OVOV. The Modified Project is largely surrounded by existing development, roadways, and infrastructure. Emergency access and evacuation associated with the Modified Project would be consistent with the area-wide circulation, access and evacuation framework established by the County's evacuation plans and OVOV.

2.3 Summary: State-Certified EIR – Emergency Access and Evacuation

The State-certified EIR concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. The following summarizes the State-certified EIR's conclusions related to emergency access or evacuations.

The State-certified EIR (page 4.17-62 of the Final EIR) concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies and that impacts related to emergency response would be less than significant with mitigation:

The roadway network of the Newhall Ranch Specific Plan's Mobility Plan has been designed as an extension of the regional circulation element. The circulation system will also serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. In addition, all applicable safety standards pursuant to Los Angeles County codes would be met at the time of the building permit issuance. An illustration of the Newhall Ranch Specific Plan's circulation plan is attached for reference.

Through the expansion of the on-site highway system and the provision of three additional fire stations as required by Section 2.5.3 (Public Services and Facilities Plan -- Public Facilities/Services), the Newhall Ranch Specific Plan ensures that emergency response will be expanded in conjunction with the additional demands placed on the emergency response personnel. In addition, the proposed Project would comply with Mitigation Measure PH-7, which requires the provision of secondary route access where necessary. With implementation of these Project-incorporated mitigation measures, impacts to public safety related to emergency response services would be less than significant relative to Significance Criterion 4.

The State-certified EIR (page 4.17-62 of the Final EIR) determined that project-related impacts related to offsite emergency services would be reduced to a less-than-significant level with the implementation of identified road improvements:

Development provided on the Specific Plan site may occasionally require emergency services from Los Angeles County fire stations located beyond the project site boundaries. As described in Subsection 4.8.9 (Traffic Mitigation), project-related impacts to off-site roadways would be reduced to a less-than-significant level with the implementation of identified road improvements. In addition, the Specific Plan development would be required to comply with applicable Los Angeles County secondary access/evacuation requirements (Mitigation Measure PH-7). With the implementation of proposed roadway operation and access requirements, the circulation system in the project region

would be adequate to provide emergency response services to the Specific Plan site. Therefore, secondary emergency response or evacuation impacts would not be significant and no additional mitigation measures are required.

With the implementation of mitigation measures provided in Subsection 4.8.9, roadways located beyond the boundary of the Project site would provide adequate capacity to accommodate anticipated traffic volumes generated by facilitated development located on the Specific Plan, VCC, and Entrada project sites. With implementation of the identified measures, the off-site roadway system would operate at acceptable levels, provide adequate emergency vehicle access, and not result in significant impacts to emergency vehicle response times. No additional mitigation measures are required.

2.4 Summary: Initial Study for the Modified Project – Emergency Access and Evacuation

The Initial Study for the Modified Project concluded that the Modified Project does not include any modifications to the 2017 Approved Project that would impair implementation of, or physically interfering with, an adopted emergency response plan or emergency evacuation plan. The following summarizes the Initial Study's conclusions.

Specifically, in response to Question 9(f) of the Initial Study, the Initial Study determined:7

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The State-certified EIR found that impacts to public safety related to emergency response were not significant for the Entrada and VCC Planning Areas. The Modified Project does not include any modifications to the 2017 Approved Project that would increase interference with an adopted emergency response plan or emergency evacuation plan. The Modified Project includes the same mix of uses as the 2017 Approved Project, with only changes to the residential and non-residential allocations for Entrada South that do not have the potential to impair an adopted emergency response plan or emergency evacuation plan. Like the 2017 Approved Project, Modified Project development in the Entrada and VCC Planning Areas would address fire and emergency access needs through the implementation of Mitigation Measure RMDP/SCP-PH-7, which requires compliance with Los Angeles County Code, Title 21, Chapter 21.24 regarding secondary evacuation access. Further, the Modified Project's circulation system would be designed and constructed in accordance with all applicable Los Angeles County Fire Department (LACFD) requirements. Therefore, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts for this topic area; no additional analysis in the Supplemental EIR is required.

Additionally, PDF-HM-1, set forth in Section 17, Transportation, of this Initial Study, provides additional benefits for the Modified Project. PDF-HM-1 would require the submission of a detailed Construction Traffic Management Plan which would include provisions for adequate emergency access to all residences and businesses during construction activities. PDF-HM-1 is beneficial and

⁷ Initial Study, Entrada South and Valencia Commerce Center Project, October 7, 2021, p. 73.

is not relied upon to reach the conclusion that no additional analysis in the Supplemental EIR is required.

Further, the Initial Study determined in response to Question 17(d) that the Modified Project would not have the potential to cause new significant impacts related to emergency access:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

Similarly, the Initial Study in response to Question 20(a) determined that the Modified Project would not have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Modified Project would not increase impacts related to emergency response or evacuation as compared to the 2017 Approved Project. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

As shown by the information above, planning efforts by Los Angeles County and the City of Santa Clarita, which established the long-term land use and circulation framework for the area, took in account the need to provide adequate emergency access and evacuation as the Santa Clarita Valley area is built out over time. The Modified Project is consistent with the land use designations and circulation framework established by the Santa Clarita Area Plan, including the Area Plan's transportation policies related to emergency access and evacuation.

Sincerely,

STANTEC CONSULTING SERVICES INC.

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Attachments: Westside Bridge and Major Thoroughfare District - Links, Bridges, and Interchanges Santa Clarita Valley Area Plan - Circulation Plan of Streets and Highways Newhall Ranch Specific Plan - Master Circulation Plan Newhall Ranch Specific Plan - Regional Access







SPECIFIC PLAN Prepared For: Newhall Ranch Company
LEGEND state highway Major highway
COLLECTOR
BUS PULL-IN
STREET SECTIONS SECTIONS A1 & A2 EXHIBIT 2.4-3 SECTIONS B, C & D EXHIBIT 2.4-4
English 0 2000' Metric 0 225m 450m 900m NORTH
EXHIBIT 2.4-2 MASTER CIRCULATION PLAN MAY 2003 m: \newhall1\sp-revise-0403\circ.dwa



SPECIFIC PLAN Prepared For: Newhall Ranch Company

EXHIBIT 2.4-1 REGIONAL ACCESS

Computer Mapping by IORM Systems



Wildfire Evacuation Plan Entrada South and Valencia Commerce Center Projects

OCTOBER 2023

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CAL FIRE	California Department of Forestry and Fire Protection
CERT	Community Emergency Response Team
Evacuation Plan	Wildfire Evacuation Plan
EMS	Emergency Medical Services
EOC	Emergency Operations Center
ERP	Emergency Response Plan
FPP	Fire Protection Plan
HOA	Homeowner's Association
IC	Incident Command
I-5	Interstate 5
LACDACC	Los Angeles County Department of Animal Care and Control
LACDCFS	Los Angeles County Department of Children and Family Services
LACCSS	Los Angeles County Department of Community and Senior Services
LACDHS	Los Angeles County Department of Health Services
LACDMH	Los Angeles County Department of Mental Health
LACDPH	Los Angeles County Department of Public Health
LACDPSS	Los Angeles County Department of Public Social Services
LACDPR	Los Angeles County Department of Parks and Recreation
LACDPW	Los Angeles County Department of Public Works
LACoFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sheriff Department
OA	Operations Area
OEM	Office of Emergency Management
Project	Entrada South/VCC Project
ТЕР	Temporary Evacuation Point
TRA	Temporary Refuge Areas
WUI	Wildland Urban Interface

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN

1 Wildfire Preparedness

The Quick Reference Guide provides helpful tips and educational resources, so residents, employees and visitors of the Entrada South and Valencia Commerce Center (VCC) Project (Modified Project) are prepared in the event of a wildland fire evacuation.

Figures 1a and 1b illustrate the emergency evacuation routes potentially available to the Entrada South and VCC community. Figure 2 displays the Modified Project's vicinity location and Figures 3a and 3b is the Modified Project's site plan.

The Modified Project's evacuation routes for residents, employees and visitors are detailed below and in Figure 1. Residents, employees, and visitors should know available routes, stay informed, and follow directions provided by law enforcement or fire agencies, news media and other credible sources. Do not rely on navigation apps that may inadvertently lead persons toward the approaching wildfire. Potential evacuation routes are detailed in Section 4.

1.1 Nearest Medical Facilities

Henry Mayo Newhall Hospital (11.6 miles) 23845 McBean Parkway Valencia, California 91355

Directions from Entrada South/VCC:

- South on The Old Road (approximately 2 miles)
- Left at McBean Parkway (approximately 1.1 miles)
- Left on Orchard Village Road (approximately 300 feet)
- Hospital straight ahead

Olive View - UCLA Medical Center (20.9 miles)

14445 Olive View Drive Sylmar, California 91342

Directions from Entrada South/VCC:

- South on The Old Road (approximately 1.2 miles)
- Turn left onto I-5 South on-ramp (approximately 0.1 miles)
- Continue on I-5 South (approximately 12.3 miles)
- Merge onto SR-210 East (approximately 2 miles)
- Take Exit 2, Roxford Street (approximately 0.2 miles)
- Left on Roxford Street (approximately 1.1 miles)
- Continue on Olive View Drive (approximately 0.6 miles)
- Hospital on left (approximately 0.1 miles)



Providence Holy Cross Medical Center – Mission Hills (21.6 miles) 15031 Rinaldi Street Mission Hills, California 91345

Directions from Entrada South/VCC:

- South on The Old Road (approximately 1.2 miles)
- Turn left onto I-5 South on-ramp (approximately 0.1 miles)
- Continue on I-5 South (approximately 14 miles)
- Exit 157 toward San Fernando Mission Boulevard (approximately 0.1 miles)
- Left on San Fernando Mission Boulevard (approximately 0.1 miles)
- Left on Laurel Canyon Boulevard (approximately 0.2 miles)
- Left on Rinaldi Street (approximately 0.3 miles)
- Hospital on right (approximately 0.1 miles)

See also local Urgent Care facilities:

Concentra Urgent Care 25733 Rye Canyon Road Valencia, California 91355

Kaiser Permanente Urgent Care 26877 Tourney Rd, Santa Clarita, California 91355 Facey Immediate Care 26357 McBean Pkwy Suite 120, Valencia, California 91355

1.2 Register to Receive Emergency Alerts

The County of Los Angeles uses a free mass notification system for residents and businesses called Alert LA County. The County's Office of Emergency Management (OEM) uses the system for notification of an emergency or disaster in communities. The system sends important emergency messages including evacuation instructions. It has accessibility features for people with disabilities and others with access and functional needs including the option to select your preferred language for notifications.

In the event of a wildfire or similar emergency within the proximity of the Modified Project site, the Incident Commander (IC) will contact the Los Angeles County Sheriff Department (LACSD) and other law enforcement agencies that may be needed to support an emergency situation (i.e., California Highway Patrol). The LACSD and/or LACoFD coordinate with OEM to activate the Alert LA County system and release an emergency notification to the affected population. Because Alert LA County uses the 911 database, only land-line numbers are automatically included in the system. Therefore, the Modified Project's residents, employees and visitors should register mobile phone numbers, and email addresses with the Alert LA system (https://lacounty.gov/emergency/alert-la/) in order to receive emergency evacuation instructions.

Contact Los Angeles County Office of Emergency Management Department at AlertLACountySupport@ceooem.lacounty.gov or dial 323.980.2260.

The Modified Project area is part of the greater Los Angeles media market, and the media outlets will also be a good source of information via television and radio. Media outlets cover emergency situations and information is disseminated guiding resident, employee, and visitor response. Commercial media broadcasts emergency



information via nine radio stations: KHTS AM 1220, KFI AM 640, KNX AM 1070, KABC AM 790, KCBS FM 93.1, KFWB AM 980, KROQ FM 106.7, KRLA AM 870, KAVL AM 610. Television news outlets include:

- KABC 7 News: abc7.com
- KCBS 2/ KCAL 9 News: losangeles.cbslocal.com
- KNBC 4 News: nbclosangeles.com
- KTLA 5 News: ktla.com
- KTTV Fox 11 News: foxla.com

1.3 Get Involved in Community Readiness

Entrada South's HOA and VCC leasing agency are encouraged to form a volunteer Community Emergency Response Team (CERT) through the LACoFD CERT program. LACoFD offers free, Federal Emergency Management Agency (FEMA)-approved 20-hour CERT training to the communities within its jurisdiction. Classes are taught by trained emergency personnel, including firefighters and Emergency Medical Services (EMS) personnel. Through this training, residents learn about hazards that may impact their area as well as basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Upon completion of the course, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. Additional program information is available at https://fire.lacounty.gov/community-emergency-response-team/.

Additionally, the Entrada South's HOA and VCC leasing agency will organize annual evacuation public outreach; engage directly with organizations such as the California Fire Safe Council; and maintain a fire safe page on the Modified Project's webpage, which will include this Wildfire Evacuation Plan (Evacuation Plan) as well as links to important citizen preparedness information.

This Evacuation Plan is prepared specifically for the Modified Project and focuses on wildfire evacuations, although many of the concepts and protocols will be applicable to other emergency situations. Ultimately, this Evacuation Plan will be used by the Entrada South's HOA and VCC leasing agency to educate residents on their evacuation approach during wildfires and other similar emergencies. It is critical for the Modified Project residents to understand the importance of being prepared, so if/when the time comes where evacuation is necessary, they will be able to systematically implement this evacuation plan. Some actions Entrada South and VCC Project residents can complete in advance include:

- Follow the "Ready, Set, Go!" model developed for wildfire evacuations.
- Create an escape plan from the residence, as well as familiarity with escape routes out of the area.
- Create a car emergency kit, including cell phone charger, flashlight, jumper cables, water, and food.
- Gather important paperwork, including (personal) birth and marriage certificates, passports, Social Security cards; and (business) account information, data storage, and any other important documents.
- As time allows, make sure to secure your residence by locking all doors and windows, and unplugging electrical equipment, such as appliances and electronics.

Sample emergency preparedness resources available to residents are provided in Appendices A-1 through A-2 (Los Angeles County Fire Department Emergency Survival Guide and "Ready, Set, Go!" Wildland Fire Action Guide)



and Appendices B-1 and B-2 (Family Disaster Plan and Checklists). In addition, Modified Project residents are encouraged to become familiar with the concepts detailed at the following websites:

- LACoFD Emergency Preparedness Guide: https://fire.lacounty.gov/emergency-disaster-preparednesssafety-tips/
- "Ready, Set, Go!" Wildland Fire Action Guide: https://www.fire.lacounty.gov/rsg/
- Family Communication Plan: https://www.fema.gov/media-library-data/1440449346150-1ff18127345615d8b7e1effb4752b668/Family_Comm_Plan_508_20150820.pdf
- Red Cross Emergency Planning: http://www.redcross.org/get-help/how-to-prepare-for-emergencies/ make-a-plan
- Building a disaster kit: http://www.redcross.org/get-help/prepare-for-emergencies/be-red-cross-ready/ get-a-kit
- Hazardous Materials Emergency Preparedness: https://www.ready.gov/hazardous-materials-incidents
- Making a Plan Checklist: https://www.ready.gov/make-a-plan

1.4 Evacuation Plan Purpose and Limitations

Wildfires and other emergencies are often fluid events and the need for evacuations are typically determined by onscene first responders or by a collaboration between first responders and designated emergency response teams, including Office of Emergency Management and the Incident Command (IC) established for larger emergency events. As such, and consistent with all emergency evacuation plans, this Evacuation Plan is to be considered a tool that supports existing pre-plans and provides for residence and guests, who are familiar with the evacuation protocol, but is subservient to emergency event-specific directives provided by agencies managing the event.

1.5 California Office of Attorney General's Guidance

The California Office of the Attorney General issued (October 2022) guidance (Guidance) outlining best practices for analyzing and mitigating wildfire impacts of development projects under the California Environmental Quality Act (CEQA). The Guidance does not impose additional legal requirements on local governments, nor does it alter any applicable laws or regulations. Instead, the Guidance is intended to help local governments' evaluation and approval considerations for development projects in fire-prone areas, and to help project design in a way that minimizes wildfire ignition and incorporates emergency access and evacuation measures. The following provides an overview of the Guidance and relevant elements of the Modified Project. A discussion of the Guidance regarding designs to minimize wildfire ignition is addressed in the Entrada South and Valencia Commerce Center Fire Protection Plan (Dudek 2023).

Evacuation

In addition to evaluating the potential increased risk of ignition, the Guidance provides information about analyzing the project's impact on evacuation and emergency access. This analysis is relative to the project's particular impacts and risks (e.g., higher density infill projects within developed areas would require less detailed analysis than a new low-density development within a high wildfire risk area and/or surrounded by open space). The Project is a higher density, clustered development that does not have an extended, intermix "edge" with a wildland interface area. The Modified Project is consistent with the OVOV Area Plan, constituting infill development within existing

developed areas and roadways (e.g., within the existing Valencia Commerce Center and adjacent to existing development at Mission Village, Magic Mountain and Westridge). Consistent with the Guidance, this Evacuation Plan evaluates evacuations considerations for the Modified Project.

Evacuation Analysis

The Guidance states that for projects located in high wildfire risk areas that present an increased risk of ignition and/or evacuation impacts, evacuation modeling and planning should be considered. As with the 2017 Approved Project, the Modified Project is consistent with the OVOV Area Plan, constituting infill development within existing developed areas and roadways (e.g., within the existing Valencia Commerce Center and adjacent to existing development at Mission Village, Magic Mountain, and Westridge). Further, as with the 2017 Approved Project, the Modified Project provides important road network improvements, including connection of existing dead-end road that will provide secondary access for the Project and the neighboring community. These improvements assist Modified Project access and evacuation capacity as described in this Evacuation Plan.

The Guidance further states that evacuation modeling and analysis should augment existing information when necessary to include adequate analysis of the following evacuation related topics.

- Evaluation of the capacity of roadways to accommodate evacuation and simultaneous emergency access.
 This Project Evacuation Plan evaluates the Modified Project's roads as well as existing roads that would be utilized in an evacuation event along with emergency access
- Assessment of the timing for evacuation. This Evacuation Plan provides an analysis of evacuation timing in Section 4 and is found to be acceptable for the types of wildfires that may occur in the Modified Project's vicinity. As described below, evacuation procedures now rely on advanced notification technology which enables phased or sequential evacuations where populations that are threatened are moved first and populations that may be threatened are moved in a phased approach. This method reduces traffic surges and congestion.
- Evaluation of the project's impacts on existing evacuation plans. The Modified Project is consistent with the OVOV Area Plan, which accounted for the planned buildout of the Santa Clarita Valley area and accounted for evacuation risks. The Modified Project would utilize primary evacuation routes that would be available to other evacuees, and the potential additional time needed to evacuate is considered insignificant due to the variety of options available to emergency managers that can facilitate early evacuations.
- Consideration of the adequacy of emergency access, including the project's proximity to existing fire services and the capacity of existing services. The Project's Fire Protection Plan (Section 6) includes a comprehensive analysis of fire service for the Project and surrounding areas. The Project does not create a significant impact on the ability of existing fire response resources to respond to the anticipated Project calls. There would be acceptable access throughout the site and evacuations would not interfere with fire response.
- Multiple access points and proximity to evacuation routes. The Modified Project is designed with multiple
 points of ingress and egress to the Entrada South and VCC Planning Areas. Both Planning Areas are located
 adjacent to regional roadways, including the I-5, SR-126 and other major thoroughfares (e.g., Magic Mountain
 Parkway). The Modified Project's design and land uses are consistent with the OVOV Area Plan, which
 accounted for the planned regional transportation of the Santa Clarita Valley area, including emergency
 evacuation events.



Consistent with the Guidance, this Evacuation Plan, the FPP and Supplemental EIR analyze the Project's potential to cause evacuation impacts or to conflict with evacuation plans.



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK & <u>1,000</u> 2,000 Feet FIGURE 1a Entrada South Community Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK & <u>1,050</u> 2,100 Feet FIGURE 1b Valencia Commerce Center Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN



SOURCE: ESRI 2022; Hunsaker 2021

1 Miles FIGURE 2 Vicinity Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN

🗂 Entrada South Tract Boundary



SOURCE: ESRI; Hunsaker 2021

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FIGURE 30 Entrada South Modified Project Site Plan Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN





SOURCE: ESRI; Hunsaker 2020

FIGURE 3b Valencia Commerce Center Project Site Plan Fire Protection Plan for the Entrada South and Valencia Commerce Center Projects
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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN

2 Background

This Evacuation Plan has been prepared based on the Los Angeles County Office of Emergency's (EOC) Operations Area (OA) Emergency Response Plan (ERP).

To establish a framework for implementing well-coordinated evacuations, the OEM addresses evacuations as part of the County's OA ERP. Large-scale evacuations are complex, which often require multi-departmental and/or multijurisdictional efforts, and involve coordination between many departments, agencies, and organizations. Emergency services and other public safety organizations play key roles in ensuring that an evacuation is effective, efficient, and safe. OEM is charged with emergency management and is responsible for maintaining situational awareness of threats that may necessitate a citizen evacuation.

Evacuation is a process by which people are moved from a place where there is immediate or anticipated danger, to a safer place, and offered temporary shelter facilities. When the threat passes, evacuees are able to return to their normal activities, or to make suitable alternative arrangements.

Evacuation during a wildfire is not necessarily directed by the fire agency, except in specific areas where fire personnel may enact evacuations on scene. The Los Angeles County Sheriff's Department has primary responsibility for evacuations, and when necessary, will be supported by LACoFD, Los Angeles Department of Public Works, and other cooperating departments and law enforcement agencies. LACSD, OEM and responding fire department personnel work closely within the Unified Incident Command System to assess fire behavior and spread, which ultimately guides evacuation decisions. For mass evacuations several Los Angeles County departments have primary agency responsibility and authority for providing services. These departments include: Office of Emergency Management (OEM), Fire Department (LACoFD), Sheriff's Department (LACSD), Department of Public Works (LACDPW), Department of Children and Family Services (LACDCFS), Community and Senior Services (LACCSS), Health Services (LACDHS), Mental Health (LACDMH), Public Health (LACDPH), Public Social Services (LACDPSS), Department of Animal Care & Control (DACC) and County Department of Parks and Recreation (LACDPR). A description of each of these department's area of responsibility is provided below, and a full list of responsibilities by County Department can be found in Appendix F of the OA ERP.

- **OEM:** Will activate the Operational Area OAEOC to support larger-scale evacuations, coordinates the Specific Needs Awareness Planning (SNAP) program, and coordinates requests for resources through SEMS.
- LACoFD: The Fire Department's mission is to "proudly protect lives and property and the environment providing prompt, skillful, cost-effective protection and life safety services." This includes response to emergencies of all types: fires, floods, earthquakes, wildland fires, hazardous materials incidents, civil disturbances, emergency medical rescues, Urban Search and Rescue incidents and ocean lifeguard rescues.

The County of Los Angeles Fire Chief is designated as the Region I Coordinator and is primarily responsible for the overall coordination of mutual aid fire and rescue resources during major emergencies.

- LACSD: During an emergency where the CEOC/OAEOC is activated, the Sheriff is the Director of Emergency Operations. The supportive law enforcement departments are: Superior and Municipal Courts, District Attorney, Public Defender, Alternate Public Defender and Probation.
- LACDPW: The Department of Public Works (DPW) is the lead County department in conducting Damage Assessment and Construction and Engineering Recovery activities and has a lead role in responding to major emergencies. DPW is responsible for maintenance and repair of infrastructure, including the road

network, flood control system, general aviation airports administered by the department, sewer and waterworks districts and building and safety functions.

- LACDCFS: The primary concern of the Department of Children and Family Services (DCFS) is the safety and well-being of the children in its care, and children, otherwise known as "unaccompanied minors", who may be left unsupervised as a result of a disaster. In a major disaster, DCFS is a support for DPSS and provides a variety of services for displaced children and offer various programs, including: 1) deployment of DCS staff to designated Red Cross shelters to process the initial intake and registration of unaccompanied minors, including follow-up action to reunite them with their parents/guardians or to provide appropriate placement; 2) support the DPSS, on request, in the provision of emergency welfare services, including assigning staff to emergency shelters or relief programs to assist in interviewing victims, processing requests for disaster assistance and other related tasks; and 3) continuing commitment to provide services to children under DCFS care, including the placement of children affected by a disaster.
- LACCSS: The Department of Community and Senior Services (CSS) is designated as a support department to DPSS for disaster-response efforts. CSS will provide liaison through a human services community-based network of contractors through the operational units (Aging and Adult Services, Employment and Training, Community Services Block Grant) at Senior Centers, Community Centers, Senior Congregate and Home-Delivered Meals, Food Pantries and shelters throughout the County. CSS also manages Adult Protective Services (APS) for high-risk individuals aged 18 and over, who are a danger to themselves and others. APS social workers will conduct health and safety checks on high-risk individuals, in coordination with DPSS In Home Supportive Services (IHSS) social workers immediately following a disaster, to determine their status and need for assistance.
- LACDHS: The mission of the Department of Health Services (DHS) during disaster response is to provide for the medical and health needs of the population of the OA by organizing, mobilizing, coordinating and directing public and private medical and health resources. The Director of Health Services, as the OA Coordinator, is responsible for the countywide management and allocation of medical and health resources, both public and private.

DHS is unique in that a majority of its medical response capability is provided by private sector health facilities. These facilities include hospitals, clinics and skilled nursing facilities that may also be designated as Field Treatment Sites (FTS) sites to handle mass casualties.

- LACDMH: The mission of the Department of Mental Health during a disaster is to coordinate and provide mental health services to the community, emergency responders and maintain continuity of care to existing consumers. The department is responsible for the countywide management and allocation of mental health resources to the community.
- LACDPH: This Department of Public Health directs and coordinates public health actions and services during disaster response conditions. Public health actions may include:
 - Management and command of disease control operations
 - Activation of mass dispensing operations
 - Activation of quarantine and isolation options
 - Issuance of Health Officer Orders
 - Activation of seizure orders in support of health operations
 - Activation of radiological response plans and management of radiation incident operations

Public Health services may include:



- Managing of radioactive sources
- Coordinating inspection of health hazards in damaged buildings
- Inspecting foodstuffs and issuance of disposal orders
- Inspecting potable water delivery systems
- Inspecting and certifying medications
- Providing vector control
- Inspecting emergency sheltering and feeding operations
- Detecting and identifying possible sources of contamination dangerous to the general physical and mental health of the community
- LACDPSS: is the OA coordinator for care and shelter. DPSS is the OA liaison with private, not-for-profit human services agencies, including Community Based Organizations. DPSS is also the OA liaison with the grocery industry. DPSS manages the CalFresh (formerly the Emergency Food Stamp program) program when activation is requested by the County and approved by the USDA. DPSS In-Home Supportive Services (IHSS) Social Workers conduct health and welfare checks on high risk IHSS consumers immediately following a disaster.
- LACDACC: During emergencies, the Department of Animal Care and Control responds to disaster areas to rescue domestic animals, and provides support for the placement of exotic animals, birds, reptiles displaced by catastrophic events and provides support to fire and law enforcement agencies responding to the crisis. Additionally, the Department offers emergency animal housing at its shelters. Depending on the circumstances, the Department may also set up temporary emergency animal shelters to assist persons who have taken their pets from evacuated areas. This department also acts as a support department to the Sheriff as needed.
- LACDPR: In the event of a disaster, the Department of Parks and Recreation will make its parks and facilities available to relief and disaster agencies to provide care and shelter for disaster victims. Park Rangers will act as the primary security resource at these facilities.

In a widespread disaster, DPSS and Parks and Recreation personnel may be used to assist staff from the relief agencies. Parks and Recreation are a support for DPSS during an emergency.

Every evacuation scenario will include some level of unique challenges, constraints, and fluid conditions that require interpretation, fast decision making, and alternatives. For example, one roadway incident that results in blockage of evacuating vehicles may require short-term or long- term changes to the evacuation process. Risk is considered high when evacuees are evacuating late, and fire encroachment is imminent. This hypothetical scenario highlights the importance of continuing to train responding agencies, model various scenarios, educate the public, and take a conservative approach to evacuation decision timelines (evacuate early) while providing contingency plans.

Equally important, the evacuation procedures should be regularly updated with lessons learned from actual evacuation events, as new technologies become available that would aid in the evacuation process, and as changing landscapes and development patterns occur adjacent to the Modified Project area that may impact how evacuation is accomplished. This Evacuation Plan is consistent with the County's evacuation planning standards.

As demonstrated during evacuations throughout Los Angeles County over the last several years, an important component to successful evacuation is early assessment of the situation and early notification via managed evacuation declarations. Los Angeles County utilizes early warning and informational programs to help meet these

important factors. Among the methods available to citizens for emergency information are: Alert LA County, radio, television, social media/internet, neighborhood patrol car, and public address notifications.

3 County Evacuation Planning Summary

This Evacuation Plan incorporates concepts and protocols detailed in Los Angeles County's Emergency Response Plan and the California Master Mutual Aid Agreement, which dictate who is responsible for an evacuation effort and how resources will be requested and coordinated.

Before the Office of Emergency Management has had the opportunity to convene and gain situational awareness, first responders are responsible for determining initial protective actions. Initial protective actions are shared/communicated to the OEM and necessary support agencies as soon as possible to ensure an effective, coordinated evacuation.

During an evacuation effort, if necessary, the LACSD will be assisted by other law enforcement and support agencies. As described in Section 2 above, a number of County departments will support evacuation efforts. Procurement, regulation, and allocation of resources will be accomplished by those designated in the County's ERP.

3.1 Evacuation Response Operations

An evacuation of any area requires significant coordination among numerous public, private, and community/nonprofit organizations. Wildfire evacuations will typically allow time for responders to conduct evacuation notification in advance of an immediate threat to life safety; giving residents time to gather belongings and make arrangements for evacuation. On the other hand, other threats, including wildfires igniting nearby, may occur with little or no notice and certain evacuation response operations will not be feasible. Evacuation assistance of specific segments of the population may also not be feasible.

3.1.1 Evacuation Points and Shelters

When the LACSD or IC implements an evacuation order, they coordinate with Los Angeles Department of Public Social Services, the OAEOC, and others to decide on a location to use as a Temporary Evacuation Point (TEP) or shelter. The Office of Emergency Management will utilize the Alert LA County system and will notify local television and radio stations; the County will also use social media (e.g., Facebook, Twitter) and will direct evacuees to the established TEPs or shelters, which may include schools or other facilities. TEPs will provide basic needs such as food, water, and restrooms. In addition to designated shelters, other points of temporary refuge may include large, well-known sites such as shopping centers and libraries.

Subject to field decisions by LACSD, possible shelters that could provide short-term refuge for evacuated residents of the Modified Project might include:

- Live Oak Elementary School, 27715 Saddleridge Way, Castaic, CA 91384
- West Ranch High School, 26255 Valencia Blvd, Santa Clarita, CA 91381
- Rancho Pico Junior High, 26250 Valencia Blvd, Stevenson Ranch, CA 91381



Potential evacuation shelters and assembly areas that could provide a longer stay for refuge are:

- College of the Canyons, 26455 Rockwell Canyon Rd, Santa Clarita, CA 91355
- Los Angeles Valley College, 5800 Fulton Avenue, Van Nuys

If there are residents and/or guests unable to evacuate and need transportation assistance to get to a TEP or shelter, the LACSD or IC may establish transportation points to collect and transport people without transportation resources to evacuation points. Transportation should be accessible to all populations, including people with disabilities and other access and functional needs.

3.1.2 Animal Evacuations

The Pets Evacuation and Transportation Standards Act of 2006 amends the Stafford Act, and requires evacuation plans to take into account the needs of individuals with household pets and service animals prior to, during, and following a major disaster or emergency. Although evacuation planning attempts to include the needs of pets and animals, the primary responsibility of public agencies is the protection of human life and prevention of loss or damage to property. Primary responsibility for basic care and sheltering of pets and small animals, including exotic animals, during a major disaster or emergency is that of the pet owner.

The LADACC supports all animal evacuation, sheltering, and care. Under the Animal Emergency Response Annex of the OA ERP, plans are in place to transport and shelter pets in a disaster. Animal Control Officers, trained volunteers, the Humane Society, and private animal care shelters will assist in the rescue, transport, and sheltering of small and large animals. In addition, potential volunteer resources and private groups should be identified and tracked. Service animals will be evacuated with their owners. Animal Services is available to assist with the evacuation of service animals if requested by the owner.

In the event temporary emergency small animal shelters need to be activated, the Animal Care & Health Unit Leader will identify potential shelter locations. A Public Information Officer will coordinate with LADACC and media outlets to broadcast information regarding the location of these shelters.

3.1.3 Temporary Refuge

Temporary Refuge is the practice of going or remaining indoors during or following an emergency event. This procedure is recommended if there is little time for the public to react to an incident and it is safer for the public to stay indoors for a short time rather than travel outdoors. Seeking temporary refuge has the advantage that it can be implemented immediately, allowing people to remain in their familiar surroundings and providing individuals with everyday necessities such as telephone, radio, television, food, and clothing. However, the amount of time people can remain in a place of temporary refuge is dependent upon availability of food, water, medical care, utilities, and access to accurate and reliable information.

The decision on whether to evacuate or seek temporary refuge is carefully considered with the timing and nature of the incident. Taking temporary refuge on site is the preferred method of protection for people that are not directly impacted or in the direct path of a hazard. This will reduce congestion and transportation demand on the major transportation routes for those who are truly in danger and therefore have been directed to evacuate. Modern, newly constructed developments incorporate redundant sources of water for fighting fires, ignition-resistant construction, fuel modification zones, and other features which work together as a system to provide onsite defensibility against



fire. For this reason, fire and law enforcement personnel may elect to instruct residents and guests to take temporary refuge within the Modified Project in the event this is determined to be safer than evacuating.

3.1.4 Area Protection and Evacuation Planning

This section briefly summarizes the current status of emergency planning for the neighboring developments, including the Westridge Community and commercial/industrial-office uses for Entrada South Planning Area and North Bluffs, Hasley Hills and Hasley Canyon communities, and commercial/industrial-office uses for VCC Planning area. There is no information regarding CERT or other emergency response teams within any of the existing communities or surrounding business parks. To the extent that the neighboring communities and business parks are would be open to collaborating on emergency response efforts, it is a goal of this Project to make reasonable efforts to coordinate with neighboring developments.

Entrada South Planning Area

Six Flags Magic Mountain Theme Park

The Six Flag Magic Mountain evacuation plan is not available publicly; however, it is anticipated to be consistent with typical emergency response plans and that based on their location and reliance on several roadways for evacuation, we do not anticipate conflicts. Additionally, as recently the 2019 Sloan Fire, Six Flags Magic Mountain implemented an early evacuation of the park, which is consistent with the County's stance on evacuations.

William S. Hart Union School District: Rancho Pico Junior High and West Ranch High School

The William S. Hart Union School District annually updates its Comprehensive School Safety Plan (Safety Plan) for each of the schools within the district, including Rancho Pico Junior High and West Ranch High School. The Safety Plan describes school administration and student/parent responsibilities during an emergency. According to the Rio Norte Junior High Safety Plan and West Ranch High School Safety Plan, in the event of a wildland fire threatening the area student should be sheltered in place, unless specifically directed by Fire Department personnel to evacuate.

Newhall School District: Oak Hills Elementary

Per the Oak Hills Elementary School Comprehensive School safety Plan and Emergency Operations Plan, if a school is in the path of the smoke, it also means it could be in the path of the fire itself. Preparation for an evacuation will start right away. Administrators will contact the Superintendent for arrangements. The Incident Commander will make the decision on when and where the evacuation will take place.

VCC Planning Area

Castaic Union School District: Live Oak Elementary

The Castaic Union School District does not have a safety plan that is publicly available for the district or the individual schools. It is anticipated that the District's and/or the Live Oak Elementary School's emergency plan would be consistent with typical emergency response plans.



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4 Evacuation Road Network

Wildfire emergencies that would be most likely to include an evacuation of the Modified Project area would be large wildfires approaching from the north or east under extreme fire weather conditions, or from wildfires with potential to spot into the Modified Project area, as discussed further in the Modified Project's Fire Protection Plan (FPP). Wildfires from the west may also occur but would typically occur under less extreme fire conditions. Extreme fires are often wind driven and occur during declared Red Flag Warning periods where low humidity and high winds facilitate fire ignition and spread. If a wildfire ignites to the north or east and is fanned by fire weather conditions with winds from the north/east, an early evacuation of the area may occur as many as several or more hours prior to actual threatening conditions at the Modified Project site, or if ignited close to the Modified Project, may not allow significant lead time. Fires occurring on typical weather days have been very successfully controlled at small sizes due to the slower fire spread and fast response and would not typically trigger a need to evacuate the entire Project site. Fires burning in the open space fuels to the west of the Modified Project site on a typical day would be much lower threat to the Modified Project and would have a reduced evacuation potential.

If a wildfire ignited closer to the Modified Project site during weather that facilitates rapid fire spread, a different evacuation approach would need to be considered. Because it is preferred to evacuate long before a wildfire is near, and in fact, history indicates that most human fatalities from wildfires are due to late evacuations when evacuees are overtaken on roads, it is prudent to consider a contingency option. For example, if a wildfire is anticipated to encroach upon the Modified Project area in a timeframe that is shorter than would be required to evacuate all occupants, then options available to responding fire and law enforcement personnel should include 1) partial relocation where occupants are temporarily relocated to internal areas, or 2) temporary refuge where occupants are instructed to remain in protected on-site structures or at a designated site, while firefighters perform their structure protection function.

As described further in the Modified Project's FPP, the Modified Project site is located within an area that is subject to wildfires and based on the adjacent land uses and open space in the vicinity, the wildfire potential is considered very high. The fire intensity would be expected to be low to moderate within the Modified Project site due to the design characteristics and moderate to high within the open space areas within and surrounding the Modified Project site. This reduced fire behavior would be expected to facilitate evacuations as well as potential on-site sheltering within designated safe refuge areas, if considered safer than a short-notice evacuation.

Although not a designated shelter-in-place community, Project structures include the same level of ignition resistance (e.g., enhanced construction materials) and landscape maintenance (e.g., annual FMZ inspection), are defensible against the anticipated wildfire exposure, and are designed to require minimal resources for protection, which enables these contingency options.

The Modified Project roads and adjacent road circulatory system will be able to effectively handle average daily trips generated by the Modified Project. However, as evidenced by mass evacuations in the County of Los Angeles and elsewhere, even with roadways that are designed to the code requirements, it may not be possible, or necessary to move large numbers of persons at the same time. Road infrastructure throughout the United States, and including the County of Los Angeles, is not designed to accommodate a short-notice, mass evacuation (FEMA 2008). The need for evacuation plans, pre-planning, and tiered or targeted and staggered evacuations becomes very important for improving evacuation effectiveness.



Among the most important factors for successful evacuations in urban settings is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, firefighters or other means, potential backups and slowed evacuations can be minimized. Another important aspect of successful evacuation is a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables the subsequent traffic surges on major roadway to be smoothed over a longer time frame and can be planned to result in traffic levels that flow better than when mass evacuations include large evacuation areas at the same time. This Evacuation Plan defers to Law Enforcement and OEM to appropriately phase evacuations and to consider the vulnerability of communities when making decisions. For example, newer development in the area, including the Modified Project, will offer its occupants a high level of fire safety on-site (refer to the Fire Protection Plan for the Entrada South/VCC Project prepared by Dudek (2022), along with options for firefighter safety zones and temporary on-site refuge as a contingency, as discussed further in this Evacuation Plan.

The Modified Project's planned interior road network interconnects with the existing regional road system to provide multi-directional primary and secondary emergency evacuation routes consistent with most developments in this area. Consistent with the County of Los Angeles evacuation approach, major ground transportation corridors in the area will be used as primary evacuation routes during an evacuation effort. The road systems were evaluated to determine the best routes for fire response equipment and "probable" evacuation routes for relocating people to designated safety areas. The primary roadways that would be used for evacuation from the Entrada South Planning Area are Magic Mountain Parkway, The Old Road (and eventually Westridge Parkway and Valencia Boulevard). The primary roadways that would be used for evacuation from the Commerce Center Drive, Hasley Canyon Road, The Old Road, and Henry Mayo Drive. These roads provide access to urbanized areas and major traffic corridors including I-5.

During an emergency evacuation from the Modified Project, the primary and secondary roadways may be providing citizen egress while responding emergency vehicles are inbound. Because the roadways are all designed to meet or exceed County of Los Angeles requirements, unobstructed travel lane widths, shoulders, vehicle turnouts, adequate parking, turning radius, grade maximums, signals at intersections, and roadside fuel modification zones, potential conflicts that could reduce the roadway efficiency are minimized, allowing for smoother evacuations.

The Modified Project's primary evacuation routes are accessed through a series of roadways, which connect with the primary ingress/egress roads (Magic Mountain Parkway, Commerce Center Drive, Hasley Canyon Road, The Old Road) that intersect off-site primary and major evacuation routes.

Entrada Planning Area Primary and Secondary Emergency Ingress/Egress

- Primary Route: Magic Mountain Parkway, or to The Old Road or I-5 to the north or south.
- Secondary Route: Westridge Parkway to Valencia Blvd then east to The Old Road or I-5.

VCC Planning Area Primary and Secondary Emergency Ingress/Egress

- Primary Route: Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- Primary Route: Commerce Center Drive to SR-126 to the east or west.
- Secondary Route: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.

Depending on the nature of the emergency requiring evacuation, it is anticipated that the majority of the Entrada South Planning Area traffic would exit the Modified Project site via Magic Mountain Parkway, which is the direct route out of the Modified Project site and onto other down-stream roadways. In a typical evacuation that allows several hours or more time, traffic may be directed in several directions to the north or south to I-5 and away from a west or east/northeast wind driven fire determined mostly by the fire's location, its spread rate and direction, time available before it could threaten evacuation routes, traffic levels, and others. If less time is available, or one or more potential routes are considered unsafe, fire and law enforcement officials may direct all traffic in one direction and may consider directing some Project populations to temporarily refuge in a designated building.

Fire Access Road Maintenance

Maintenance is an important component for the long-term reliability of all Project roadways. Maintenance obligations for the Entrada South and VCC Project will be as follows:

 Routine road and roadside landscape maintenance throughout the Modified Project sites, per the Modified Project's FPP (Dudek 2022).

4.1 Mass Evacuations vs Phased Evacuations

Mass evacuation events have become extremely rare as wildfire evacuation technology and capabilities have improved dramatically in the last 20 years. Wildfire evacuations are managed to move smaller populations in a successive phasing to minimize traffic surges. Populated areas are evacuated in phases based on proximity to the event and risk levels. For example, it is anticipated that wildfire evacuations of the Modified Project area will likely include the relocation of perimeter populations that are closest to open space, either to on-site temporary shelter sites or off-site, rather than mass evacuating the entire area. The Modified Project and the existing communities are built to ignition resistant standards and represent fire-safe fuel breaks that provide emergency managers many options that do not all include a mass evacuation. The result of this type of evacuation is that residents that may be in locations that would be closest to a wildfire burning in open space areas are temporarily moved from the vicinity and vehicle congestion on evacuation routes is minimized, enabling a more efficient evacuation. Under this evacuation approach, the evacuation would include a much smaller population and would be implemented in a surgical way. The evacuation time would be even lower and would have very little impact on the existing communities, except for evacuees who decide to leave the area despite not being directed to do so (Sorensen and Vogt 2006).

PHASED EVACUATION The purpose of a phased evacuation is to reduce congestion and transportation demand on designated evacuation routes by controlling access to evacuation routes in stages and sections. This strategy can also be used to prioritize the evacuation of certain communities that are in proximity to the immediate danger. A phased evacuation effort will need to be enforced by law enforcement agencies and coordinated with the EOC and affected jurisdictions.

Evacuations in Los Angeles County are now managed by a system that enables emergency managers to designate small areas in a surgical approach that can target neighborhoods, blocks or streets for alert messaging. Similarly, numerous cities and counties are implementing similar plans, with one example being an evacuation planning system called Zonehaven. Zonehaven is a software program that uses an algorithm incorporating various factors or inputs affecting disasters or emergency events to produce a digital evacuation map or real-time guide based on numerous, pre-set, community zones vs large swaths of a community. These factors include weather, traffic

flows, street design, historical disaster data, geography and more. They are used to build a communitywide (city or county or whatever entity is purchasing the program) baseline digital map of evacuation zones.

First responders use these types of programs to guide decision-making for if, when, and where to order evacuations or evacuation warnings. Residents of affected zones are alerted using a variety of means, including alert systems, Nixle local alerts, social media such as Twitter and Facebook, and door-to-door warnings.

Dept of Homeland Security (2019) provides supporting data for why jurisdictions have moved to the surgical evacuation approach that leverages the power of situation awareness to support decision making. According to their Planning Considerations: Evacuation and Shelter in Place document, they indicate that delineated zones provide benefits to the agencies and community members. Evacuation and shelter-in-place zones promote phased, zone-based evacuation targeted to the most vulnerable areas, which allows jurisdictions to prioritize evacuation orders to the most vulnerable zones first and limit the need to evacuate large areas not under the threat. Zones help:

- Jurisdictions to understand transportation network throughput and capacity, critical transportation and resource needs, estimated evacuation clearance times, and shelter demand.
- Planners to develop planning factors and assumptions to inform goals and objectives.
- Community members to understand protective actions to take during an emergency.
- Shelters to limit traffic congestion and select locations suitable for the evacuated population.

The amount of time needed to evacuate the Modified Project would vary by the type of incident, the number of evacuation routes utilized, the amount of mobilization time, actual areas at risk, and other factors. It has also been established herein that the targeted approach would minimize the size of the area being evacuated and use a phased approach, which may further reduce the evacuation time estimates.

In any populated area, safely undertaking large-scale evacuations may take several hours or more and require moving people long distances to designated areas. Further, evacuations are fluid and timeframes may vary widely depending on numerous factors, including, among other things, the number of vehicles evacuating, the road capacity to accommodate those vehicles, residents' awareness and preparedness, evacuation messaging and direction, and on-site law enforcement control.

A recent study titled "Review of California Wildfire Evacuation from 2017 to 2019^{"1} provides more insights on the topic. This research involved interviews with 553 individuals (297 evacuees affected by various fires) including the Creek Fire, Rye Fire, Skirball Fire, and Thomas Fire, which were considered successful evacuations. The study aimed to understand the decision-making processes of these individuals during the fires, such as whether to evacuate or stay, when to leave, the paths taken, chosen shelters, destinations, and modes of transportation. According to this research, the time it took for evacuations ranged from under 30 minutes to over 10 hours. From this dataset, the average evacuation time for the Creek Fire was found to be 3 hours and 40 minutes, involving 115,000 people. For the Thomas Fire, the average time was 4 hours and 25 minutes, impacting 104,607 individuals. In both evacuations, all populations were evacuated in a timely and efficient manner to minimize risk to residents.

California fire and law enforcement agencies have integrated training, experience, and technology to assist in successful evacuations, which focus on moving persons at risk to safer areas before a wildfire encroaches on a

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¹ Wong, S. D, Broader, J. C, & Shaheen, S. A. (2020).

populated area. Timeframes for moving people vary by site specifics, population, road capacities and other factors and there is no one threshold that would be appropriate to all locations.

Technological advancements and improved evacuation strategies learned from prior wildfire evacuation events have resulted in a system that is many times more capable of managing evacuations. With the technology in use today, evacuations are more strategic and surgical than in the past, evacuating smaller areas at highest risk and phasing evacuation traffic so that it flows more evenly and minimizes the surges that may slow an evacuation. Mass evacuation scenarios where large populations are all directed to leave simultaneously, resulting in traffic delays, are thereby generally avoided, and those populations most at risk are able to safely evacuate. While mass evacuation scenarios are generally avoided with the technology in use today, the evacuation simulations conducted in this report are based on mass evacuation scenarios to provide a worst-case scenario.

Los Angeles County has historically had an extremely high success rate for safely evacuating large numbers of people and doing so in a managed and strategic way using available technological innovations and local programs (e.g., Red Flag Parking Program) to increase road capacity in the 2018 Woolsey Fire and 2019 Getty Fire (Wong, et. al 2020). Safely undertaking large-scale evacuations may take several hours or more and require moving people long distances to designated areas. Further, evacuations are fluid and timeframes may vary widely depending on numerous factors, including, among other things, the number of vehicles evacuation, the road capacity to accommodate those vehicles, residents' awareness and preparedness, evacuation messaging and direction, and on-site law enforcement control.

Due to its location, the Project would also provide the responding emergency managers (e.g., Incident Commander, LA County Sheriff) the alternative option of recommending that all or a portion of the onsite population shelter in place. This on-site sheltering option is a contingency plan, but an important option in the scenario when evacuation is considered infeasible or the less safe option.

Further, any additional time does not necessarily generate a greater safety risk. Emergency personnel who issue evacuation orders can consider the additional time needed to implement an evacuation when determining when and where to issue evacuation orders. Risk to nearby development, including the Modified Project or existing communities, is assessed on a regular basis in a wildfire event. Hours or days of lead time may be available to assess risk and make evacuation determinations. Further, peak occupancy conditions like those assumed in the modeling typically do not occur as all residents are not typically at home while maximum occupancy at industrial, commercial and office uses is also occurring. Further, drifting smoke, awareness of the risk, road closures, or other factors result in people avoiding the area in a fire event.

The potential occurrence of a large evacuation event including evacuation of existing populations is minimal, but theoretically possible. In this case, the existing populations for Entrada South would be associated with residences of surrounding communities, Six Flags Magic Mountain, Rancho Pico Junior High School, Oak Hills Elementary School, West Ranch High School, and Commercial-Office and Industrial uses and the existing populations for VCC would be associated with residences of surrounding communities, Live Oak Elementary School, and Commercial-Office and Industrial uses.

In an actual evacuation scenario, a phased evacuation would be implemented where orders are given to evacuate based on vulnerability, location, and/or other factors, which enables the subsequent traffic surges on major roadways to be smoothed over a longer time frame and improve traffic flow. A phased strategy can also be used to prioritize the evacuation of certain communities that are in proximity to the immediate danger.



The existing condition includes alternatives to reliance on I-5 as part of the baseline. While this Evacuation Plan includes the I-5 as a major evacuation route, there are emergency scenarios where the primary evacuation route along the I-5 is not available due to partial closure. This situation would require alternative routing of evacuating vehicles and a more surgical, alternate approach. There are various potential scenarios that could interrupt traffic on the I-5 freeway. One such example, that would not be likely to occur during a wildfire, is "Operation Snowflake." When forecasters predict heavy snow will drop to 4,500 feet or lower, Caltrans coordinates with the California Highway Patrol to activate Operation Snowflake, an alert system that calls for maintenance crews to work aroundthe-clock to keep the I-5 Grapevine in northern Los Angeles County open. Operation Snowflake provides an example of the coordination between agencies to close the I-5 and reroute traffic to keep it moving. In Operation Snowflake, when roads are shut down, Caltrans blocks the northbound lanes on the I-5 at Lake Hughes Road at Castaic and the southbound lanes at Grapevine Road in Kern County. There are many tools available to emergency managers, such as the addition of state-of-the-art traffic signals at crucial intersections. For example, a recently installed signal at the Old Road and Parker in Castaic². This technology is considered to be a significant aid for scenarios in which drivers are diverted off Interstate 5 and onto surface streets, which often includes The Old Road³. The technology is one of multiple ways to manage evacuation flow on I-5 freeway if there is an incident on I-5 because engineers can recalibrate the timing in response to increased volumes. The intersection improvement at this intersection signalizes and directs dedicated left-turn lanes for both east and west, which will reduce the conflict in both directions⁴. During a fire, people can be moved in certain directions by remotely timing signals to focus on moving traffic away from the fire area.

Law enforcement and fire agencies have pre-fire plans in place for specific regions and fire scenarios. Within these pre-fire plans, there is flexibility to allow in-the-field adjustments to the real-time changes in a fire's location, movement and populations at risk. Law enforcement and other unified command departments and organizations use available tools to move traffic from higher risk areas to lower risk areas, including intersection control. One such scenario is for areas where schools are part of an evacuation event. Schools have evacuation plans and they typically include moving students off-site and having parents pick them up at the off-site location. It would be up to law enforcement to determine whether incoming traffic would be allowed, limited, or sent to a pick-up location where school children are moved via busses or other means during an evacuation. Schools are included in the evacuation modeling analysis below. Because a modeling analysis cannot account for every conceivable evacuation scenario, a reasonable "worst case" mass evacuation scenario was run to account for a spectrum of potential evacuation variants that would fall within the umbrella of a worst-case mass evacuation, such when parents are trying to evacuate their children from school or go to their children's school and then go home before evacuating, by including applicable schools in the modeling runs.

In an actual evacuation scenario, a phased evacuation would likely be implemented, which enables the subsequent traffic surges on major roadways to be smoothed over a longer time frame and improve traffic flow. A phased strategy typically will prioritize evacuating communities determined to be at the greatest risk. As the modeling cannot take into account every possible evacuation scenario or certain phased modeling scenarios, a worst-case mass evacuation scenario was assumed. Actual evacuations, if any, would likely have a reduced effect because the worst-case assumptions involving the maximum number of people requiring evacuation and the congested timing of the modeled evacuation is unlikely to occur in practice.

² The Signal Santa Clarita Valley. August 2023. County celebrates improving commute in Castaic.

³ Mark Pestrella, Director of LA County Public Works in The Signal article, August 2, 2023.

⁴ Captain Ed Krusey, California Highway Patrol's Newhall area office in The Signal article August 2, 2023

4.2 Modified Project Evacuation Compared to 2017 Approved Project

In 2012, Los Angeles County and the City of Santa Clarita jointly approved the OVOV to ensure the orderly development of the Santa Clarita Valley. OVOV established area-wide circulation and transportation framework that took into account emergency access and evacuation during wildfires and other emergencies.

OVOV provides "[p]olicies to ensure that the circulation system is safe, such as provision of emergency access and maintenance of evacuation routes, [which] are consistent with provisions of the Safety Element."⁵ The OVOV EIR determined that the circulation framework, emergency access, and evacuation planning for the OVOV area would result in less than significant impacts, as follows:

"[OVOV] policies are designed to maintain adequate emergency access throughout the County's [OVOV] Planning Area. They would promote mobility to allow for acceptable response times by emergency vehicles, and ensure emergency access to various types of properties. Additionally, the County would maintain a current evacuation plan. Since the proposed [OVOV] Area Plan would provide the framework to ensure adequate emergency access, impacts would be less than significant."⁶

Additionally, the OVOV EIR analyzed the impact of wildland fires on emergency access and evacuation related to buildout of the OVOV area.⁷ The OVOV EIR concluded that OVOV's plans and policies would ensure that the buildout of the OVOV area would be consistent with existing and future LA County evacuation plans and procedures, ensuring safe egress and evacuation during emergencies, including emergencies caused by fires or wildfires.⁸

The State-certified EIR concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. The following summarizes the State-certified EIR's conclusions related to emergency access or evacuations.

The State-certified EIR (page 4.17-62 of the Final EIR) concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies and that impacts related to emergency response would be less than significant with mitigation:

The roadway network of the Newhall Ranch Specific Plan's Mobility Plan has been designed as an extension of the regional circulation element. The circulation system will also serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. In addition, all applicable safety standards pursuant to Los Angeles County codes would be met at the time of the building permit issuance. An illustration of the Newhall Ranch Specific Plan's circulation plan is attached for reference.

Through the expansion of the on-site highway system and the provision of three additional fire stations as required by Section 2.5.3 (Public Services and Facilities Plan – Public

⁵ Santa Clarita Valley Area Plan, One Valley One Vision, 2012, Circulation Element, p. 72.

⁶ OVOV Draft EIR, Nov. 2012, Chapter 3.2, Circulation and Transportation, p. 3.2-66, available athttps://planning.lacounty.gov/ovov.

⁷ OVOV Draft EIR, Nov. 2010, Chapter 3.11, Hazards and Hazardous Materials, pp. 3.11-28 to 3.11-29, available at https://planning.lacounty.gov/ovov.

⁸ *Id.* at 3.11-30.

Facilities/Services), the Newhall Ranch Specific Plan ensures that emergency response will be expanded in conjunction with the additional demands placed on the emergency response personnel. In addition, the proposed Project would comply with Mitigation Measure PH-7, which requires the provision of secondary route access where necessary. With implementation of these Project-incorporated mitigation measures, impacts to public safety related to emergency response services would be less than significant relative to Significance Criterion 4.

The State-certified EIR (page 4.17-62 of the Final EIR) determined that project-related impacts related to offsite emergency services would be reduced to a less-than-significant level with the implementation of identified road improvements:

Development provided on the Specific Plan site may occasionally require emergency services from Los Angeles County fire stations located beyond the project site boundaries. As described in Subsection 4.8.9 (Traffic Mitigation), project-related impacts to off-site roadways would be reduced to a less-than-significant level with the implementation of identified road improvements. In addition, the Specific Plan development would be required to comply with applicable Los Angeles County secondary access/evacuation requirements (Mitigation Measure PH-7). With the implementation of proposed roadway operation and access requirements, the circulation system in the project region would be adequate to provide emergency response services to the Specific Plan site. Therefore, secondary emergency response or evacuation impacts would not be significant and no additional mitigation measures are required.

With the implementation of mitigation measures provided in Subsection 4.8.9, roadways located beyond the boundary of the Project site would provide adequate capacity to accommodate anticipated traffic volumes generated by facilitated development located on the Specific Plan, VCC, and Entrada project sites. With implementation of the identified measures, the off-site roadway system would operate at acceptable levels, provide adequate emergency vehicle access, and not result in significant impacts to emergency vehicle response times. No additional mitigation measures are required.

Consistent with CEQA Guidelines Appendix G, a Project's impact on evacuation is significant if the Project will significantly impair or physically interfere with implementation of an adopted emergency response or evacuation plan. The State-certified EIR determined that impacts related to access during an emergency would be less than significant with mitigation. The Modified Project would apply the same mitigation and is consistent with the circulation and traffic system of the Area Plan, which took into account access and evacuation during wildfires. As discussed herein, this Evacuation Plan has been prepared consistent with the County EOP. As with the 2017 Approved Project, the Modified Project would not cut off or otherwise negatively modify any existing evacuation routes, and therefore would not significantly impair or physically interfere with implementing an adopted emergency response or evacuation plan. And the Modified Project incorporates two evacuation routes that can be used for evacuation and emergency access.

As detailed in Appendix C, even under a conservative evacuation scenario, this Evacuation Plan finds that the Modified Project would be substantially similar to the 2017 Approved Project. The modeling shows a slight decrease in evacuation times for the Entrada South Planning Area as compared to the 2017 Approved Project (worst-case evacuation would be reduced by approximately 1.8 minutes at Westridge Parkway to Valencia Blvd. to I-5) and no change in evacuation travel times for the VCC Planning Area, . . . In both the Entrada South and VCC Planning Areas, the evacuation times as compared to those of the 2017 Approved Project would be substantially the same along



the primary evacuation routes. Therefore, the Modified Project would not result in a significant change to evacuation times as compared to the 2017 Approved Project. See Appendix C, attached, for more detailed discussion of the evacuation modeling.

5 Resident Wildfire/Evacuation Awareness

The Entrada South HOA and VCC Leasing Agency will be active in its outreach to residents regarding fire safety and general evacuation procedures. There are aspects of fire safety and evacuation that require a significant level of awareness by residents and emergency services in order to reduce and/or avoid problems with an effective evacuation. Mitigating potential impediments to successful evacuations requires focused and repeated information through a strong educational outreach program. The Entrada South's HOA and VCC leasing agency will engage residents, business owners and employees and coordinate with local fire agencies for fire safety awareness through a variety of methods.

This Evacuation Plan will be accessible on the Entrada South's HOA and VCC leasing agency website. Annual reminder notices will be provided to each homeowner encouraging them to review the plan and be familiar with evacuation protocols. The Entrada South's HOA and VCC leasing agency will coordinate with LACoFD to hold an annual fire safety and evacuation preparedness informational meeting. Representatives of LACoFD will be invited to attend, and important fire and evacuation information will be reviewed. One focus of these meetings and the Entrada South's HOA and VCC leasing agency annual message will be on the importance of each resident to prepare and be familiar with their own "Ready, Set, Go!" evacuation plan. The "Ready, Set, Go!" program is defined at: https://fire.lacounty.gov/rsg/ and information about preparing an individual Action Plan is provided in Appendix A.

The focus of the "Ready, Set, Go!" program is on public awareness and preparedness, especially for those living in the wildland-urban interface (WUI) 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 evacuation preparedness information is disseminated to those subject to the potential impact from a wildfire. There are three components to the program:

- "READY" Preparing for the Fire Threat: Take personal responsibility and prepare long before the threat of a wildfire so you and your residence are ready when a wildfire occurs. Homeowners will create defensible space by clearing brush away from buildings as detailed in the Modified Project's FPP (Dudek 2021). Additionally, homeowners will use only fire-resistant landscaping and maintain the ignition resistance of buildings on-site. Assemble emergency supplies and belongings in a safe spot. Confirm you are registered with the County's Alert LA County system. Make sure all individuals residing within the residence and guests understand the plan, procedures and escape routes.
- "SET" Situational Awareness When a Fire Starts: If a wildfire occurs and there is potential for it to threaten the Entrada South Planning Area and the VCC Planning Area, pack your vehicle with your emergency items. Stay aware of the latest news from local media, County of Los Angeles and LACSD for updated information on the fire. If you are uncomfortable, leave the area.
- "GO!" Leave Early! Following your Action Plan provides you with knowledge of the situation and how you will approach evacuation. Leaving early, well before a wildfire is threatening your community, provides you with the least delay and results in a situation where, if a majority of individuals also leave early, firefighters are now able to better maneuver, protect and defend structures, evacuate other residents who couldn't leave early, and focus on citizen safety.

"READY! SET! GO!" is predicated on the fact that being unprepared and attempting to flee an impending fire late (such as when the fire is physically close to your community) is dangerous and exacerbates an already confusing



situation. This Evacuation Plan provides key information that can be integrated into the Individual Action Plans, including the best available routes for them to use in the event of an emergency evacuation.

Situational awareness requires a reliable information source. One of the most effective public notification methods is Reverse 9-1-1. The Los Angeles County OEM operates the notification system that provides a recorded message over landline telephone systems relating to evacuation notices. In addition, the OEM operates a program known as Alert LA County that has the capability to send emergency notifications over both landlines as well as to cell phones and via text messages. The Entrada South's HOA and VCC leasing agency will encourage residents to register cell phone numbers and email addresses with Alert LA County annually. The registration of cell phones can be done online at https://lacounty.gov/emergency/alert-la/.

As part of the Modified Project's resident and employee fire awareness and evacuation readiness program, information will be delivered in a variety of methods. The Entrada South's HOA and VCC leasing agency and property management agency will be responsible to provide and distribute to each homeowner and business owner a complete copy of the Modified Project's Fire Protection Plan and this Evacuation Plan, including materials from the READY! SET! GO! programs. The Entrada South's HOA's and VCC leasing agency's websites will include a link to the FPP and Evacuation Plan, which can be accessed by surrounding developments.

As part of the approval of this Modified Project, it shall be binding on the Entrada South's HOA and VCC leasing agency to actively participate as a partner with the OEM to assist with the coordination and distribution of fire safety information they develop.

6 Evacuation Procedures

6.1 Relocation/Evacuation

Wolshon and Marchive (2007) simulated traffic flow conditions in the wildland urban interface (WUI) under a range of evacuation notice lead times and housing densities. To safely evacuate more people, they recommended that emergency managers (1) provide more lead-time to evacuees and (2) control traffic levels during evacuations so that fewer vehicles are trying to exit at the same time. In some emergencies, longer lead-times will be possible while in others, it will not. Traffic controls may be possible with longer lead times but may be limited to controlling some intersections during short notice events.

Wildfire emergency response procedures will vary depending on the type of wildfire and the available time in which decision makers (IC, LACoFD, LACSD, and/or OEM) can assess the situation and determine the best course of action. Based on the development, its road network, and the related fire environment, the primary type of evacuation envisioned is an orderly, pre-planned evacuation process where people are evacuated from the Modified Project to urban areas further from an encroaching wildfire (likely to urban areas south and east) well before fire threatens. This type of evacuation must include a conservative approach to evacuating, i.e., when ignitions occur and weather is such that fires may spread rapidly, evacuations should be triggered on a conservative threshold. This threshold must include time allowances for unforeseen, but possible, events that could slow the evacuation process.

Evacuation is considered by many to offer the highest level of life protection to the public, but it can result in evacuees being placed in harm's way if the time available for evacuation is insufficient (Cova et al. 2011). An example of this type of evacuation, which is highly undesirable from a public safety perspective, is an evacuation that occurs when fire ignites close to vulnerable developments. This type of situation is inherently dangerous because there is generally a higher threat to persons who are in a vehicle on a road when fire is burning in the immediate area. Conditions may become so poor, that the vehicle drives off the road or crashes into another vehicle, and flames and heat overcome the occupants. This type of evacuation must be considered a very undesirable situation by law and fire officials in all but the rarest situations where late evacuation may be safer than seeking temporary refuge in a structure (such as when there are no nearby structures, the structure(s) is/are already on fire, or when there is no other form of refuge).

The third potential type of evacuation is a hybrid of the first two. In cases where evacuation is in process and changing conditions result in a situation that is considered unsafe to continue evacuation, it may be advisable to direct evacuees to pre-planned temporary refuge locations, including their own home if it is ignition resistant and defensible, such as those within the Modified Project. As with the second type of evacuation discussed above, this situation is considered highly undesirable, but the evacuation pre-planning must consider these potential scenarios and prepare decision makers at the IC level and at the field level for enacting a contingency to evacuation when conditions dictate.

Indications from past fires and related evacuations in Los Angeles County and throughout Southern California, which have experienced large wildfires, are that evacuations are largely successful, even with a generally unprepared populace. It then stands to reason that an informed and prepared populace would minimize the potential evacuation issues and related risk to levels considered acceptable from a community perspective.



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Evacuation orders or notifications are often triggered based on established and pre-determined buffers. These buffers are often hard or soft lines on a map and are based on topography, fuel, moisture content of the fuels, and wind direction. Evacuations are initiated when a wildfire reaches or crosses one of these pre-determined buffers. Evacuations can also be very fluid. The IC, law enforcement, and OEM would jointly enact evacuations based on fire behavior.

6.2 Evacuation Baseline

For purposes of this CEWP, the first and most logical choice for all residents and guests within the boundaries of the Modified Project is to adhere to the principals and practices of the "READY! SET! GO!" Program previously mentioned in this document. As part of this program, it is imperative that each household develop a plan that is clearly understood by all individuals, as well as participating in the educational and training programs sponsored by the Entrada South's HOA and VCC leasing agency, OEM, and LACoFD. In addition, it is imperative that the "READY! SET! GO!" information be reviewed on a routine basis along with the accompanying maps illustrating evacuation routes, temporary evacuation points and pre-identified safety zones. It must be kept in mind that conditions may arise that will dictate a different evacuation route than the roads used on a daily basis.

Residents are urged to follow the directions of emergency notices and personnel and to evacuate as soon as they are notified to do so or earlier, if they feel uncomfortable. Directions on evacuation routes will be provided in most cases, but when not provided, residents and guests will proceed according to known available routes away from the encroaching fire as detailed in Section 1 of this plan. Residents and guests are cautioned not to rely on navigation apps which may inadvertently lead them toward an oncoming fire.

Note: This Evacuation Plan should be updated periodically (suggested every 5 years) to review changing conditions in the area and to refine evacuation options, routes, and contingencies as the landscape and road system develops over time.

6.3 Civilian and Firefighter Evacuation Contingency

As of this document's preparation, no community in California has been directed to shelter in place during a wildland fire. This is not to say that people have not successfully sheltered in place during wildfire; there are numerous examples of people sheltering in their homes, in hardened structures, in community buildings, in swimming pools, and in cleared or ignition resistant landscape open air areas. The preference for the Modified Project will always be early evacuation following the "Ready, Set, Go!" model, but there exists the potential for unforeseen civilian evacuation issues, and having a contingency plan will provide direction in these situations that may result in saved lives.

Potential problems during wildfire evacuation from the Modified Project include:

- Fires that prevent safe passage along planned evacuation routes (particularly for Magic Mountain Parkway, The Old Road, Hasley Canyon Drive, Commerce Center Drive, and portions of I-5)
- Inadequate time to safely evacuate
- Fire evacuations during peak traffic conditions or when large events are occurring
- Blocked traffic due to accidents or fallen tree(s) or power pole(s)
- The need to move individuals who are unable to evacuate



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It is recommended that LACSD and LACoFD conduct concerted pre-planning efforts focusing on evacuation contingency planning for civilian populations when it is considered safer to temporary seek a safer refuge than evacuation.

6.3.1 Safety Zones

The International Fire Service Training Association (IFTSA; Fundamentals of Wildland Fire Fighting, 3rd Edition) defines Safety Zones as areas mostly devoid of fuel, and which are large enough to assure that flames and/or dangerous levels of radiant heat will not reach the personnel occupying them. Areas of bare ground, burned over areas, paved areas, and bodies of water can all be used as safety zones. The size of the area needed for a safety zone is determined by fuel types, its location on slopes and its relation to topographic features (chutes and saddles) as well as observed fire behavior. Safety zones should never be located in topographic saddles, chutes or gullies. High winds, steep slopes or heavy fuel loads may increase the area needed for a Safety Zone.

The National Wildfire Coordinating Groups (NWCG), Glossary of Wildland Fire Terminology provides the following definitions for Safety Zone and Escape routes:

Safety Zone. An area cleared of flammable materials used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a safety zone close at hand allowing the fuels inside the control line to be consumed before going ahead. Safety zones may also be constructed as integral parts of fuel breaks; they are greatly enlarged areas which can be used with relative safety by firefighters and their equipment in the event of blowup in the vicinity.

Escape Route. A preplanned and understood route firefighters take to move to a safety zone or other low-risk area. When escape routes deviate from a defined physical path, they should be clearly marked (flagged).

According to NWCG, Safety Zone(s):

- Must be survivable without a fire shelter
- Can include moving back into a clean burn
- May take advantage of natural features (rock areas, water, meadows)
- Can include Constructed sites (clear-cuts, roads, helispots)
- Are scouted for size and hazards
- Consider the topographic location (larger if upslope)
- Should be larger if downwind
- Should not include heavy fuels
- May need to be adjusted based on site specific fire behavior

The definition for a safety zone includes provisions for separation distance between the firefighter and the flames of at least four times the maximum continuous flame height. Distance separation is the radius from the center of the safety zone to the nearest fuels. For example, considering worst-case flame lengths for existing conditions, which occur in the sage scrub/buckwheat fuel beds, will approach 26.3 feet (20 mph gusts) and could be possible adjacent the Modified Project site (Dudek 2021), then a 105.2-foot separation would be required, and potentially more if there were site-specific features that would result in more aggressive fire behavior. This setback would be

achieved in some areas of the Modified Project site, and specifically, residences could be used by firefighters as a safety zone. Additionally, the Modified Project will provide areas of safe refuge on-site.

The ignition resistant and maintained landscaping within each of the Modified Project's components, along with the adjacent fuel modification zones, and Chapter 7A of California Building Code compliant structures provide an inherent level of protection by design. The Modified Project's interior roads and structures would provide Safety Zones available to responding firefighters. The Modified Project's Safety Zones can be part of the County's preplanning efforts, although during a fire, the identified safety zones may not be feasible due to distance, location, fire behavior, etc.

Identification of potential safety zones will require additional focused study by LACoFD and other fire and law enforcement agencies when responding to an event.

6.3.2 Temporary Firefighter Refuge Areas

Firescope California (Firefighting Resources of Southern California Organized for Potential Emergencies) was formed by legislative action to form a partnership between all facets of local, rural, and metropolitan fire departments, California Department of Forestry and Fire Protection (CAL FIRE), and federal fire agencies. Firescope defines a contingency plan when it is not possible to retreat to a safety zone. This contingency includes establishment of firefighter Temporary Refuge Areas (TRA), which are defined as:

A preplanned area where firefighters can immediately take refuge for temporary shelter and shortterm relief without using a fire shelter (fire resistant tent) in the event that emergency egress to an established Safety Zone is compromised.

Examples of a TRA may include the lee side of a structure, inside of a structure, large lawn or parking areas, or cab of fire engine, amongst others. Differences between a TRA and a Safety Zone is that TRA's are closer to the immediate firefighting area, are considered a contingency to being able to get to a Safety Zone, do not include a requirement for a large area set back four times the flame lengths of adjacent fuels, and cannot be feasibly preplanned until firefighters arrive on scene and size up the situation.

Firescope appropriately notes that although Safety Zones and viable Escape Routes shall always be identified in the WUI environment, they may not be immediately available should the fire behavior increase unexpectedly. Often a TRA is more accessible in the WUI environment. A TRA will provide temporary shelter and short-term relief from an approaching fire without the use of a fire shelter and allow the responders to develop an alternate plan to safely survive the increase in fire behavior.

TRAs are pre-planned areas (planned shortly after firefighters arrive on scene) where firefighters may take refuge and temporary shelter for short-term thermal relief, without using a fire shelter in the event that escape routes to an established safety zone are compromised. The major difference between a TRA and a safety zone is that a TRA requires another planned tactical action, i.e., TRAs cannot be considered the final action, but must include selfdefense and a move out of the area when the fire threat subsides. A TRA should be available and identified on site at a defended structure. TRAs are NOT a substitute for a Safety Zone. TRA pre-planning is difficult, at best because they are very site and fire behavior specific. For the Modified Project, TRAs would likely include navigating to the interior roadways of neighborhoods where up to 100-foot-wide fuel modification zones provide defensible space



and maintained landscapes are provided, along with ignition resistant structures that offer numerous opportunities for TRA.

The developed portions of the Modified Project site, but especially the interior areas of neighborhoods are considered TRAs. This is an important concept because it offers last-resort, temporary refuge of firefighters, and in a worst-case condition, residents and guests. This approach would be consistent with Firescope California (2013) which indicates that firefighters must determine if a safe evacuation is appropriate and if not, to identify safe refuge for those who cannot be evacuated, including civilians.

Each of the Modified Project's residences can be considered for TRA, because they include the following features:

- Ignition Resistant Construction
- Up to 100-foot-wide Fuel Modification Zone
- Annual landscape inspections by 3rd party inspectors
- Wide roadways with fire hydrants
- Maintained landscapes and roadside fuel modification
- Ember resistant vents
- Interior fire sprinklers

Because there is the possibility that evacuation of the Modified Project may be less safe than temporarily refuging on site, such as during a fast-moving, wind or slope driven fire, including temporary refuge within structures or elsewhere on site is considered a contingency plan for the Modified Project. This concept is considered a component of the "Ready, Set, Go!" model as it provides a broader level of "readiness" should the ability to execute an early evacuation be negated by fire, road congestion, or other unforeseen issues. This approach would be considered a last-resort contingency during wildfire with the primary focus being on early evacuation. The decision for evacuation or temporarily refuging on site will be made by responding law enforcement and/or fire personnel.

6.4 Social Aspects of Wildfire Evacuation

Orderly movement of people is the result of planning, training, education, and awareness, all of which are promoted in Los Angeles County. Evacuation has been the standard term used for emergency movement of people and implies imminent or threatening danger. The term in this CEWE, and under the "Ready, Set, Go!" concept, indicates that there is a perceived threat to persons and movement out of the area is necessary, but will occur according to a preplanned and practiced protocol, reducing the potential for panic.

Citizen reactions may vary during an evacuation event, although several studies indicate that orderly movement during wildfire and other emergencies is not typically unmanageable. Evacuation can be made even less problematic through diligent public education and emergency personnel training and familiarity. Social science research literature indicates that reactions to warnings follow certain behavior patterns that are defined by people's perceptions (Aguirre 1994, Drabek 1991, Fitzpatrick and Mileti 1994, Gordon 2006, Collins 2004) and are not unpredictable. In summary, warnings received from credible sources by people who are aware (or have been made aware) of the potential risk, have the effect of an orderly decision process that typically results in successful evacuation. This success is heightened when evacuations are not foreign to residents (Quarantelli and Dynes 1977; Lindell and Perry 2004) as will occur within the Modified Project. Further, in all but the rarest circumstances, evacuees will be receiving information from credible sources during an evacuation. Further, it would be anticipated



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that law enforcement and/or fire personnel would be on site to help direct traffic and would be viewed by evacuees as knowledgeable and credible. The importance of training of law enforcement and fire personnel cannot be understated and annual education and training regarding fire safety and evacuation events will be essential for successful future evacuations.

6.4.1 Evacuation of Special Populations

Vogt (1990 and 1991) defines special populations as those groups of people who, because of their special situations or needs, require different planning strategies from those of the general population. Special needs populations include those in institutions or special facilities, those with disabilities in homes, those who need care, children, and others who cannot provide for their own evacuation if necessitated. The special needs population is concentrated in facilities but is also widespread in terms of facility locations and those who live in residences. Special needs populations in the Entrada South Planning Area and the VCC Planning Area include the hearing or visually impaired, foreign speaking, visitors passing through the area, and temporary visitors (e.g., day workers), and the non-ambulatory confined to residences either temporarily or permanently.

Temporary visitors or guests may not have knowledge of the area's fire hazard, they may not know how to react in a fire emergency, and they may not understand what they are being told to do. Conversely, this segment of the population would typically be easier to evacuate quickly as they have no possession or pets that they would need to prepare. They can get in their cars and be directed out of the area.

The reasons why special needs populations may fail to respond to warnings to take protective actions is that they may require special transportation while others require different types of warnings or technologies to receive a warning. Some groups must rely on caregivers to hear the warning and respond.

6.4.2 Animal Evacuations

Animal evacuations present a host of challenges that may affect the overall successful movement of people and their possessions out of harm's way. For example, livestock owners do not always have the means to load and trailer their livestock out of the area. Further, most wildfire evacuation relief shelters or commercial lodging facilities do not allow people to bring in pets or other animals. Sorensen and Vogt (2006) indicate that an issue receiving increasing attention is what evacuees do with pets or other animals such as livestock when they leave their homes and whether having pets or animals impacts their decision to evacuate.

The Modified Project would not accommodate livestock; however, household pets would be a common occurrence.

6.4.3 Re-Entry Procedures

An important component of evacuations is the citizen re-entry process. Re-entry will be initiated by the Incident Commander/Unified Command of the Incident Management Team, with the support of the Director of the Office of Emergency Management, the OAEOC Director, and the Operations Section Chief at the OAEOC. In most cases, the OAEOC will remain activated until full re-entry is complete. In the event the OAEOC has been deactivated, the Incident Commander will initiate re-entry procedures.

Incident Commander/Unified Command of the Incident Management Team, with the support of the Director of the Emergency Management Department, the OAEOC Director, and the Operations Section Chief at the OAEOC is

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responsible for coordinating the re-entry procedures with all involved agencies and ensuring effective communication. Priorities for re-entry include:

- The impacted areas must be thoroughly investigated to ensure it is safe for residents to return and normal operations have been restored. This assessment will verify:
 - The public will be notified of the re-entry status through the notification measures previously mentioned in this annex, including https://lacounty.gov/emergency/alert-la/, emergency broadcast radio, television, press releases, informational phone-lines such as 3-1-1, community briefings, and informational updates at shelters.
 - Once evacuees are permitted to return, it is important that procedures are established to properly identify residents and critical support personnel, as well as ensure the legitimacy of contractors, insurance adjustors, and other personnel. Re-entry points should be staffed by law enforcement personnel.

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ENTRADA SOUTH AND VALENCIA COMMERCE CENTER PROJECTS / WILDFIRE EVACUATION PLAN

7 Limitations

This Evacuation Plan has been developed based on wildfire and evacuation standards and the County of Los Angeles evacuation procedures and is specifically intended as a guide for evacuations for the Modified Project. This plan provides basic evacuation information that will familiarize Project residents with the evacuation route options that may be available to them during an emergency. However, because emergencies requiring evacuation have many variables and must be evaluated on a case-by-case basis, this plan shall be subservient to real-time law enforcement and fire personnel/agencies' decision-making and direction during an emergency requiring evacuation.

This Evacuation Plan promotes the "Ready, Set, Go!" model, adopted by County of Los Angeles, CAL FIRE, and many fire agencies statewide. The goal is to raise agency and citizen awareness of potential evacuation issues and get a majority of the public "Ready" by taking a proactive stance on preparedness, training drills, and resident education, and evacuation planning efforts. The Modified Project populace will be "Set" by closely monitoring the situation whenever fire weather occurs and/or when wildfire occurs and elevating pre-planned protocol activities and situation awareness. Lastly, officials will implement the plan and mandate that populations "Go" by executing pre-planned evacuation procedures, considering proposed evacuation trigger thresholds, in a conservative manner, i.e., evacuation will occur based on conservative decision points, as proposed in this evacuation plan or when directed by fire and law enforcement personnel, whichever is more conservative. The preferred alternative will always be early evacuation. However, there may be instances when evacuation is not possible, is not considered safe, or is not an option based on changing conditions. For example, should a fire occur with short notice and make evacuation from the Modified Project ill advised, a contingency plan for residents is available. This contingency would include moving people to pre-designated temporary refuge areas, including possibly within Project residences and other structures, until it is safe to evacuate, or the threat has been mitigated.

Ultimately, it is the intent of this Evacuation Plan to guide the implementation of evacuation procedure recommendations such that the process of evacuating people from the Modified Project is facilitated in an efficient manner and according to a pre-defined evacuation protocol; as well as providing a contingency option of temporarily refuging, if evacuation is considered less safe.

The Modified Project residents will be aware of and familiar with this evacuation plan as the Modified Project's HOA will post it on its website. Additionally, the Entrada South's HOA and VCC leasing agency will provide reminders to residents, business owners and employees on at least an annual basis. This educational outreach will result in a populace that understands the potential for evacuations and the routes and options that may be presented to them.

During extreme fire weather conditions, there are no guarantees that a given structure will not burn or that evacuations will be successful all of the time. Wildfires may occur in the area that could damage property or harm persons. However, successful implementation of the recommendations outlined in this Evacuation Plan will provide for an informed populace regarding evacuations. The Modified Project is designed specifically to be resistant to wildfire ignition and perform as a fire adapted project, offering fire and law officials with additional options for resident safety compared to those options available to less defensible projects.

This Evacuation Plan does not provide a guarantee that all persons will be safe at all times because of the recommendations proposed. There are many variables that may influence overall safety. This Evacuation Plan provides a summary for implementation of standard evacuation protocols, suggested roadway enhancements, and public outreach, which should result in reduced wildfire related risk and hazard. Even then, fire can compromise

the procedures through various, unpredictable ways. The goal is to reduce the likelihood that the system is compromised through implementation of the elements of this plan and regular occurring program maintenance and updates.

It is recommended that the evacuation process is carried out with a conservative approach to fire safety. This approach must include maintaining the Modified Project's fuel modification landscape (see Project Fire Protection Plan), infrastructural, and ignition resistant construction components according to the appropriate standards and embracing a "Ready, Set, Go!" stance on evacuation. Accordingly, evacuation of the wildfire areas should occur according to pre-established evacuation decision points, or as soon as they receive notice to evacuate, which may vary depending on many environmental and other factors. Fire is a dynamic and somewhat unpredictable occurrence, and it is important for anyone living in a high fire severity zone to educate themselves on practices that will improve safety.

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Appendix A-1 through A-2

LACoFD Emergency Preparedness Guide "Ready, Set, Go!" Wildfire Action Guide

LOS ANGELES COUNTY'S **EMERGENCY** NOTIFICATION SYSTEM

What is Alert LA County?

Alert LA County is a FREE* mass notification system for Los Angeles County's residents and businesses. The system will contact you when an emergency happens.

*Services like calls, SMS messages, and data can imply a cost from your service provider.

Why should I sign up for Alert LA County? I already receive other notifications from other services.

Alert LA County provides information from local County authorities and is target specific. If the area where you live or have your business is impacted by an emergency or disaster, you will receive a recorded notification with specific directions on what to do. If your area is not threatened, you will not receive a notification. Also, find out if the city where you live or have your business has its own emergency notification system so that you can sign up for it, as well.







LIVE IN LA COUNTY?

- Sign up
- Get notified
- Stay safe

If you need help signing up for Alert LA County, please dial 2-1-1 from any telephone for assistance.

SIGN UP TODAY! ALERT.LACOUNTY.GOV

Are YOU registered yet? ALERT.LACOUNTY.GOV

LOS ANGELES COUNTY'S EMERGENCY NOTIFICATION SYSTEM



Want to be notified when your community is impacted by an emergency or disaster?

How does the Alert LA County system contact you?

If there is an emergency or a disaster in your area, Alert LA County can contact you by sending you a:

- Recorded telephone message at your home or business (TTY/ TDD is also available)
- Text message (SMS)
- (a) Email

When you register, you can choose which option(s) you prefer.

Who should sign-up for Alert LA County?

All residents and businesses in Los Angeles County should sign-up to receive Alert LA County emergency notifications. The system has TTY/TDD capability.

Register online at **alert.lacounty.gov.**



What kind of emergency information does Alert LA County send?

Alert LA County may send you any one of the following three notifications. Here are some tips on what to do:



Evacuation Warning [Get ready]

- Prepare to leave your home, business or the affected area.
- Gather your family, pets, emergency kits, medications, and important documents.
- Listen and follow the instructions from emergency responders.
- If you have horses or large animals, begin to leave the area with them.

Evacuation Order [Leave now]

- endanger other people's lives.

Shelter-in-place [Stay covered where you are]

- Stay inside wherever you are.
- if needed.
- if needed.
- Listen to radio/television and the

For more information: Visit alert.lacounty.gov





• Leave your home or business immediately.

• Do not return to the area. Wait until authorities say it is safe to return.

• Be sure to follow instructions from authorities. Failure to do so may cause personal injuries or death, and may



• Turn off air-conditioner and fan units,

• Use duct tape or similar material to seal gaps around vents, windows, and doors

• Do not leave wherever you are until authorities say it is safe to leave.

Emergency Alert System to stay informed.
COUNTY OF LOS ANGELES





PROGRAM GUIDE NEIGHBORHOOD DISASTER PLANNING



WENEVERTHINK a disaster will strike our neighborhood or at least we hope it won't! However, it is not a question of IF it will happen, but WHEN.

Find out what you can do to make your neighborhood better able to meet disasters head on and bounce back afterwards.

Use this toolkit to build a disaster plan for your neighborhood.

Remember, you are not on your own. The County of Los Angeles and many of our partner cities, non-profits and agencies have plans and resources to share and are ready to help! But, with about 10 million people spread throughout the County, rescuers may not be able to provide immediate support to every neighborhood in need. Neighbors should be prepared to help themselves for several days or weeks - it depends on the size of the disaster!

For additional information visit espfocus.org



Being prepared also means neighbor helping neighbor. Be sure to include:

- Neighbors with disabilities and others of all ٠ ages who may need help following a disaster
- ٠ Neighbors who have reduced ability or inability to see, read, walk, speak, hear, learn, remember, understand and/or respond
- Neighbors with visible disabilities such as wheelchair users, people who are blind, and those with hidden needs and disability such as heart conditions, respiratory conditions, emotional or mental health conditions, arthritis, significant allergies, asthma, and/or chemical and other environmental sensitivities
- Individuals who may lack transportation, single working parents, and those who may have limited or no ability to speak, read, or understand English and will need translated information



NEIGHBORHOOD ACTION PLANNING

STEP 1 **DEFINE** YOUR AREA

Identify a manageable area, your apartment building, one block, a few small surrounding streets, etc, that you can organize with relative ease.

RECRUIT LEADERS & PARTICIPANTS

Develop a team of leaders who can help build the plan and carry out emergency support activities when the time comes.

STEP 3 SCOUT YOUR NEIGHBORHOOD

Get to know the lay of the land: what resources you have, what the landscape is, and disasters or other emergencies common to your area.

STEP 4 BUILD YOUR TEAM

Find out who lives in your area, how they can help in a disaster, and who may need extra help.

STEP 5 **PLAN** YOUR APPROACH

Create a plan that outlines what your neighborhood will do before, during, and after a disaster!

STEP 1: DEFINE YOUR AREA







TIP: Get to know CERT!

Community Emergency Response Training **prepares communities** for disasters and it is free!

From High Desert to Valleys to Coastal areas, our County is comprised of many different neighborhoods and communities.

In order for you to develop a disaster plan for your neighborhood, it is important to define the area that your plan will cover.

Here are a few questions to consider:

- What size area would be easy for you and a small team to manage? 25 to 40 households is the ideal size; however, work within existing structures and networks when available (like neighborhood watch programs, etc.)
- Will you be able to easily communicate with everyone? What languages are commonly spoken?
- Will the area allow you to practice "neighbor helping neighbor" so that you can quickly identify who needs help and provide it? If your area is larger than 40 households, divide it into smaller areas with a "block captain" for each block

TIP: The easiest way to accomplish Step #1 is to **walk** your neighborhood, **gathering this information.**



Make sure that you make note of these:

- The number of homes, businesses, schools, churches, and other buildings in the area
- The number of people in the area
- Roads and other entrance and exit points, hills, and waterways
- Earthquake liquefaction zones that may be hazardous

Next, chart your defined area on a map.



STEP 2: RECRUIT LEADERS

Once you know the area that your disaster plan will cover, it is time to identify leaders! Here is what to look for:

People with training and experience such as:

- Community Emergency Response Training (CERT) or those active in neighborhood watch
- Neighborhood councils, human sevices, clergy or business leaders
- Police, fire, military, or health care personnel
- Those with experience providing care for persons with disabilities or those who may need help following a disaster

How many leaders are needed?

- Are there a lot of people in one area of the neighborhood? Are buildings spread out?
- Match the number of leaders with the number of people who need to be led! The ideal team size is 3-7 persons



- Here are some ideas for finding and keeping leaders for your Neighborhood Disaster Plan:
- Talk with them, face to face, at community events, meetings, and when you see them day-to-day
- Post messages on social media, neighborhood groups, and other networking websites







3.1 THREATS AND RISKS

Get to know what disasters or other emergencies your neighborhood might experience. Here are some helpful hints:

Identify the threats.

Earthquakes, power outages, extreme weather, and disease outbreaks happen everywhere, but tsunamis, landslides, and floods only happen in some places. List the threats that might occur in your neighborhood.

Rate the risk.

Is the disaster very likely, somewhat likely, or not very likely to occur?

Assess the risk.

How vulnerable is your neighborhood to injuries, death or property damage? Classify these risks as high, medium or low. Use the directions under Likelihood of Occurrence and Level of Impact to asses your risks.

Likelihood of Occurrence.

ALMOST CERTAIN: Greater than 90% chance LIKELY: 50 – 90% chance MODERATE: 10 – 50% chance UNLIKELY: 3 – 10% chance RARE: 3% chance or less

Level of Impact.

MINOR: Some disruption of service possible. Little or no property damage, personal injury, or loss of life, injuries, and fatalities.

MODERATE: Disruption of some services. Minimum property damage, injury, and loss of life.

MAJOR: Many services disrupted and/or structures severely damaged. Multiple persons injured and significant loss of life.

Use a table like the one below to list these threats and risks.

THREAT	LIKELIHOOD OF OCCURRENCE	LEVEL OF IMPACT



3.2 NEIGHBORHOOD SPECIFIC HAZARDS

Los Angeles County is subject to many disasters; decide which are threats to your neighborhood:

Fires. Especially risky if buildings are closely spaced or near thick brush. Fires can come from broken or leaky gas lines too!

Earthquakes. Every Los Angeles neighborhood is at risk of an earthquake, even one of catastrophic proportions.

Landslides. Hillsides, seaside cliffs, and foothills may be subject to landslides, especially after fires and/or rainy seasons.

Flooding. Flooding may result from overflowing waterways, dam failures, heavy rains, or clogged storm drains.

Tsunami. Coastal areas may be subject to tsunamis.

Electricity, Water, and Telephone Service. These utilities may not be available for long periods after a disaster. **Chemical Emergencies.** Industrial, freeway, railway, or broken pipeline accidents can cause chemical or hazardous material release.

Disease Outbreak. Outbreaks can result in many people becoming ill and disrupt key services.

Extreme Heat and Cold. Children, older adults, and people with certain types of disabilities or some chronic conditions are more affected when it is very hot or very cold.

Terrorist Attack. Some areas are potential targets for a terrorist attacks like schools, sport settings, or transit stations.

Severe Weather. The County is also subject to very high winds, hail, and thunder storms.

Local Hazards. Be sure to identify hazards and risks that may be specific to your neighborhood, such as overhead electrical transmission lines, natural gas pipelines, chemical storage tanks, and other localized threats.

3.3 NEIGHBORHOOD ASSETS

Next, identify neighborhood assets. This includes anyone or anything that would be useful in responding to, or recovering from a disaster. Here are examples:

- Neighborhood emergency supplies
- Physical places like parks, schools, open areas garages and carports
- Organizations like neighborhood clubs, fraternal organizations, radio clubs, local military organizations, and disability service providers
- Persons trained in CERT, medical care, first aid, search and rescue, carpentry, plumbing, or crisis counseling

- Businesses inside or close to the area that might be able to provide supplies or equipment
- Equipment and supplies for clearing debris, boats for rescue during floods, communication equipment, first aid supplies, generators and other items useful during or after a disaster
- Evacuation resources, like accessible vehicles

How do we identify assets?

Make a list of threats and risks to the community, and identify which assets your neighborhood would need in a disaster. Is it vulnerable to damage? What can be done to reduce vulnerability? Be sure to list the location and contact information if necessary. Here is an example of a table that you can use:

ASSET TYPE	ASSET DESCRIPTION	ASSET LOCATION OR CONTACT INFORMATION ¹

¹Because of confidentiality concerns, names and contact information for skilled personnel are not published, but are maintained by CERT Leaders and Block Captains.

3.4 MAP YOUR NEIGHBORHOOD

Use an online mapping tool or other easy-to-obtain source. Make a sketch of your neighborhood. The free websites maps.google.com or maps.yahoo.com may be useful.

On your sketch, show streets, blocks, and house/building lots. Show units and floors for apartment or multi-unit buildings. Number the lots sequentially (1,2,3). Include all address numbers and the names of occupants for each lot.

Contact information will be checked and updated if needed in Step 4.

Include:

- All area entrance/exit routes that are accessible by foot, wheelchair/scooter, and car
- A Neighborhood Gathering Place (see next section)
- A location where the injured can be given first aid or assessed for medical treatment
- Possible barriers that could make entry/exit difficult (e.g., fallen over/under passes, trees, or power lines)
- Neighbors who may need extra help following a disaster with seeing, reading, walking, speaking, hearing, remembering, understanding, and/or responding
- You may also want to include a Neighborhood Care Center (see next section) where care can be provided for children, older adults, and children and adults with disabilities who may need support after a disaster.







3.5 NEIGHBORHOOD GATHERING PLACE

This is a space for neighbors to organize response activities. Pick one large central area to gather and organize the next steps in your neighborhood's response. Here is what to look for when identifying a possible Neighborhood Gathering Place:

- Easily seen so others will know this as the main gathering point
- Set in an area that is easy for everyone to be safe from flood, fire, fallen trees and power lines
- Has nearby accessible toilet facilities
- Well lit in case of night evacuation
- Can accommodate service animals and pets
- Big enough for planned number of persons and vehicles
- Is accessible to children and adults with disabilities

3.6 NEIGHBORHOOD CARE CENTER

This is a place where those who may need extra help following a disaster, to include children, older adults, and persons with disabilities or other access and functional needs, can be brought and cared for. Neighborhoods should strive to create a safe atmosphere within the Care Center.

3.7 TRIAGE AREA

This is a place where people injured can be given first aid or evaluated for medical treatment.

STEP 4: BUILD YOUR TEAM

STEP 4: BUILD YOUR TEAM

The most important resources you have are one another! Follow these easy activities to build your team.

Form a Group. Make sure it represents the diversity in your neighborhood and includes homeowners, families, businesses, churches, nonprofits, schools, and local organizations **in your defined area**.

Actively include people with disabilities and others who may need help after a disaster.

Also, determine if there are human service organizations; disability service providers; or residential, community care, and assisted living facilities in your neighborhood. If so, invite them to join the planning process and discuss how you may be able to help each other.





STEP 4: BUILD YOUR TEAM

Hold a meeting. Ask the leaders you identified in Step 2 to get the word out about the meeting. Make sure that all households are personally invited. Also invite local Fire and Law Enforcement. Use the Facilitator Guide to focus the meeting.

Key meeting activities are:

- Review 5 Step Neighborhood Action Kit Facilitator Guide
- Identify the skills and equipment each neighbor has that are useful in disaster response
- Identify spoken and American Sign languages used in the area

TIP: Use the same phone tree, text and communications system to notify neighbors door to door. If your neighborhood is larger, have block captains lead this.



Encourage neighbors to attend

the meeting. A personal invitation is the best way to invite neighbors. Here are a few more ideas:

- Prepare a flyer
- Build a "Be Prepared" page on your neighborhood website
- Set up a Facebook or Twitter page or piggy back off of a site with a larger following
- Develop email lists of community leaders and organizations
- Recruit community, business or homeowner organizations

Using the chart you created in Step 3, write the following for each household/facility:

- Phone, email, text, special skills, resources, number of adults/children, pets/animals/ service animals, persons who may need additional assistance
- Create a phone tree or "notification chart" through which people contact each other to relay news
- Walk the area at the end of the meeting to verify your sketch



5.1 TAKING ACTION

When Disaster Strikes...

Make Sure Everyone in Your Household is Safe

Don't forget your pets!

Put Your Personal Emergency Plan Into Action

Wear protective clothing, pull out you fire extinguisher, check your utilities and take other steps noted in your plan.

Go to Your Neighborhood Gathering Place

If it's safe, gather at your planned location to check in.

Get Organized

If the Leader in your plan is not available, choose someone to lead the overall response effort.

Form Response Teams

Using your plan, choose team leaders for every 3-7 people with a response role.

Put Neighborhood Plan into Action!

Decide what you want to do, how you plan to do it, and the time you have to respond.



TIP: Shut off the gas only if you smell or hear it. If it does not have an automatic shut-off, turn the valve so that the bar is perpendicular to the gas line. Keep a wrench wired to the gas meter and know the location of water shut-off valves.

A practice used by first responders and CERT is to organize using the Incident Command System. The chart below is an example. The **Incident Commander** is the leader. He/she is responsible for deciding what is to be done. **Operations** carries out the decided actions. **Logistics** coordinates resources (transportation, people, supplies). **Planning and Intelligence** monitors information coming in and plans for future activities. Teams include:

Search & Rescue Team. This team will look for the OK/Help signs, as well as check on those listed as needing extra help. They begin with a damage assessment to identify hazard areas and prioritize Search & Rescue operations. Ideal members have completed CERT Search & Rescue training.

Care Teams. Care Teams can consist of the Triage Team – those who determine the priority that injured survivors will receive care; the Treatment Team – those who tend to the injured; the Morgue Team – those who manage the deceased; and the Care Center Team – those who provide extra care during the disaster. Members of these teams ideally have experience in healthcare. **Materials & Supplies Team.** This team coordinates needed materials and supplies from within the neighborhood.

Transportation Team. This team coordinates transportation of supplies, equipment and people.

Communications Team. The Communications Team listens to the Emergency Alert System, Family Radio Service (FRS)/ham radio, or National Weather Radio. The Communications Team is responsible for communicating information within the neighborhood, and to/from the neighborhood and first responders and other agencies like fire and police.

Neighbor Information Team. This team coordinates information about survivors and relays information about rescue progress and survivor status (injured, missing, etc.) from the Command Post to the Care Center.

Rescue Progress Team. This team keeps track of the rescue progress of survivors.



5.2 COMMUNICATION

Be sure to call 9-1-1 if you need help in an emergency.

In LA County you can dial 2-1-1 for information after a disaster

Telephones. Don't rely on telephone service, but if you need to call someone keep the conversation brief.

Ham Radios. When planning for communications in your neighborhood see if you have neighbors who are Ham or Amateur Radio operators who can get information from the County's Disaster Communication Service.

FRS Radios. Your neighborhood can also decide to use small Family Radio Service radios to keep in touch with one another.

Other places residents can find emergency information include the following:

Alert LA County. Alert LA is a community mass notification system that will provide recorded phone, text and email messages. Register at www.alert.lacounty. gov and click on the link to "Alert LA County".

SNAP. SNAP is a voluntary web-based registry for persons with access and functional needs who may need assistance in an emergency. Register at http://snap.lacounty.gov/

TIP: Remember that your car radio might be the easiest way to listen to emergency broadcasts.



Emergency Alert System. Messages will be broadcast to the public via radio and television stations. These are voice messages with text scrolling on a television screen.

Public and Commercial Media. Television,

radio, and satellite will transmit emergency alert messages. Your car radio might be the easiest way to listen to emergency broadcasts.

Social Media and Mobile Applications

The American Red Cross has several mobile applications that can be downloaded for free information on earthquakes, fires, first aid and other topics. Be careful and selective of using social media for information after a disaster and always verify with a trusted agency before acting on information from non-official sources.



5.3 PUT IT IN WRITING

The next step is to put your plan in writing! Feel free to increase or decrease the amount of information you include in your plan – Make it Yours!

Basic Plan

Should include threats, risks, your neighborhood sketch, and your basic approach to response.

Support Annexes

"Support Annexes" provide detail that goes beyond the Basic Plan. They outline specific tasks, such as how you will communicate or notify neighbors before, during and after a disaster. Other tasks that Annexes describe could include:

Shelter-in-Place

Following a disaster, local authorities may determine that it is safer for individuals and families to remain in their places of residence, or "shelter-in-place". A Shelter-in-Place Annex would detail how the neighborhood will support if required to shelter-inplace for an extended period.

Mitigation

Address ways that you can lessen the impact of disasters. Neighborhoods can establish "neighbor helping neighbor" programs for delivering food, medicine and water to people that are unable to get these items on their own.

Evacuation

If an evacuation is required, police and fire departments will reach out to notify residents but your Annex helps get the word out to everyone in your neighborhood. Listen and take directions from officials on which evacuation routes should be used. An evacuation annex describes how the neighborhood will assist authorities to evacuate the area.



Hazard Specific Annexes

Hazard Specific Annexes describe how the neighborhood will respond to a specific disaster like a large fire, an earthquake, floods, and other threats that face your neighborhood.

Safe and Well Website

Encourage neighbors to register on the Red Cross "Safe and Well" website <https://safeandwell.communityos.org/cms/index.php>, or other form of social media, to let friends and family know they're OK.

Emergency Signs

One way your neighborhood might track the status of neighbors immediately after a disaster is to use a sign or Emergency Door Hanger. Following a disaster, place the green side of the door hanger facing out if you are "OK" or the red "HELP" side if you need help. In this way neighbors and local responders can save time and effort when surveying your neighborhood. Emergency Signs are not appropriate for every neighborhood so discuss your plan to use them in community meetings before your plan is finalized. Make your plans available in languages commonly spoken in the neighborhood and use email, a neighborhood website, or other ways to be sure the plan is understood by those unable to read the document.

Hold regular meetings, at least one a year, to review, improve, exercise, and update your plan.

Sample emergency signs can be found in the Forms packet available to Facilitators.



DISASTER INFORMATION RESOURCES

American Red Cross Prepare SoCal http://preparesocal.org/

American Red Cross Safe and Well https://safeandwell.communityos.org/cms/index.php

Emergency planning and preparedness information for Los Angeles County?

LA County Chief Executive Office, Office of Emergency Management -Emergency Survival Program (ESP) 213-974-1166 www.espfocus.org

Get training on preparedness?

American Red Cross www.redcrossla.org/classes/

Salvation Army www.disaster.salvationarmyusa.org/training/

Tzu Chi www.us.tzuchi.org/us/

Community Emergency Response Team (CERT) training?

LA County Fire Department Community Emergency Response Teams (CERT) 1-323-890-4132 www.fire.lacounty.gov

Fire Department requirements for damaged structures? LA County Fire Department

1-323-881-2481 www.fire.lacounty.gov

Information on Wildfire Mitigation? www.wikihow.com/protect_your_home_from_a_wildfire

Community and personal protection issues?

LA County Sheriff Department Emergency 911 General Information 1-323-526-5541 www.lasd.org

DISASTER RESOURCES

Road closures and conditions in Los Angeles County? LA County Department of Public Works 1-800-675 HELP (4357) www.ladpw.org

Clearing and repairs to County maintained roads and bridges?

LA County Department of Public Works Road Maintenance 1-800-675 HELP (4357) www.ladpw.org

Building inspections and permits?

LA County Department of Public Works Building & Safety Division 1-800-675 HELP (4357) www.ladpw.org

Flood control and drainage issues?

LA County Department of Public Works Flood Control 1-800-675 HELP (4357) www.ladpw.org

Road closures and conditions for State Highways? Caltrans 213-897-0383 www.dot.ca.gov

County-provided emergency social services including CalWORKs, Food Stamp, Medi-Cal, and General Relief programs? LA County Department of Public Social Services 1-866-613-3777

www.ladpss.org

Mental Health services for disaster victims? LA County Department of Mental Health 1-800-854-7771 www.dmh.lacounty.gov

Communicable disease control, preventive health measures, contamination control and health inspections. LA County Department of Public Health 800-427-8700

Assistance with injured animals and information on animals displaced by a disaster?

LA County Animal Care and Control 1-562-940-6898 www.animalcare.lacounty.gov

National Association of Professional Pet Sitters www.petsitters.org

National Lost Pet Hotline 1-900-535-1515 report lost pets 1-800-755-8111 report found pets

Humane Society www.humanesociety.org

Society for the Prevention of Cruelty to Animals International www.spcai.org

Schools and school districts in the County?

LA County Office of Education www.lacoe.edu

Status of Los Angeles Unified School District schools? Los Angeles Unified School District 213 241-4500 www.lausd.k12.ca.us

Organizations that provide response and recovery assistance in the event of a disaster?

211 LA County 211 www.211lacounty.org

FEMA www.fema.gov/assistance

General Government Assistance www.disasterassistance.gov

Small Business Administration www.sba.gov

U.S. Department of Housing and Urban Development www.hud.gov/info/disasterresources_dev.cfm

California Department of Conservation www.conservation.ca.gov/cgs/geologic_hazards/ earthquakes 20 Maps with earthquake and landslide hazards? California Earthquake Authority www.earthquakeauthority.com

Questions or reports about outages? **Southern California Edison** 800-684-8123 www.sce.com

Southern California Gas Company 800-655-4555 www.socalgas.com

Information on exposure to toxic substances? Poison Control Center 1-800-222-1222 www.aapcc.org/DNN

Emergency Financial First Aid Kit?

Operation Hope www.operationhope.org

Disaster loan and grant information?

U.S. Small Business Administration 800-659-2955 www.sba.gov

Preparing and planning for disasters? U.S. Department of Homeland Security www.ready.gov

Information and services for individuals, families and businesses needing disaster recovery assistance? U.S. Department of Homeland Security www.disasterhelp.gov

Latest earthquake information?

U.S. Geological Survey www.quake.usgs.gov/recent

Latest weather information?

National Oceanic Atmospheric Administration www.noaa.gov

Information on environmental disasters?

U.S. Environmental Protection Agency www.epa.gov/ebtpages/emergencies.html

DURING A DISASTER you may only have seconds to make big decisions.

Do you know **WHERE** to find your disaster supplies? Here are some examples of disaster supplies you may need:

DOCUMENTS

- Identification: Driver's licenses, birth certificates, passports, social security cards & bank account information, recent photographs of family members
- □ Insurance, loan documents, wills, trusts, certificates
- A list of family members with contact information (home, cell, work, address) Copy important documents to a flash drive and place in another secure remote location

MEDICAL

- □ Medical provider information
- Medications and when you need to take them
- ☐ At least a seven-day supply of prescribed medicines and if possible, copies of prescriptions
- ☐ If medications require refrigeration or special handling, make special plans (e.g., cold packs, ice cooler, mini refrigerator)

FIRST AID KIT

- □ Bandages, gauze, wipes, rubber gloves
- □ Rubbing alcohol and hydrogen peroxide

FOR BABY / CHILDREN

- Formula and bottles
- Diapers
- Medications
- □ Sanitary supplies
- □ Familiar toy or book
- Car seat

TOOLS

- Battery, solar powered or hand-crank AM/FM radio
- □ Flashlight with extra batteries
- □ Wrench for turning off gas

SUPPLIES

- Cash at least \$100-200 in small bills per person, as possible
- □ Soap, toilet paper

Toothbrush/paste

- Plastic bags
- $\hfill\square$ Two complete sets of clothing and shoes per person
- □ Blankets or sleeping bags for each person
- Extra set of keys
- Feminine products

WATER AND FOOD

- □ Water 1 gallon per person per day including infants and children (a week's supply labeled with expiration date)
- Non-perishable food that does not require refrigeration, preparation/cooking, and little or no water
- Extra food (remember special dietary needs)





DISABILITY OR LIMITED MOBILITY

If you are a person with a disability, have a sensory or cognitive disability, or limited mobility, make sure your emergency kit includes items specific to your needs and have a list of the following:

- □ Adaptive or supportive equipment and extra batteries
- Instructions on how to operate any special equipment

FOR PETS/SERVICE ANIMALS

- Identification tags
- Extra food and water
- □ Clean-up supplies
- Medicine
- □ Transport case
- Leash









This 5- Step Neighborhood Action Kit is adapted from a program created by the City of Los Angeles Emergency Management Department

COUNTY OF LOS ANGELES



NEIGHBORHOOD MEETING FACILITATOR GUIDE



THE FIRST MEETING



STEP 1 **DEFINE** YOUR AREA

Identify a manageable area, your apartment building, one block, a few small surrounding streets, etc, that you can organize with relative ease.

RECRUIT LEADERS & PARTICIPANTS

Develop a team of leaders who can help build the plan and carry out emergency support activities when the time comes.

STEP 3 SCOUT YOUR NEIGHBORHOOD

Get to know the lay of the land: what resources you have, what the landscape is, and disasters or other emergencies common to your area.

STEP 4 BUILD YOUR TEAM

Find out who lives in your area, how they can help in a disaster, and who may need extra help.

STEP 5 **PLAN** YOUR APPROACH

Create a plan that outlines what your neighborhood will do before, during, and after a disaster!

THE FIRST MEETING

The purpose of this Guide is to help you conduct neighborhood meetings and complete your neighborhood disaster plan. Throughout the Guide you will see talking points in *italics*, extra direction **[in brackets]** and additional helpful information to help you answer questions and conduct successful meetings.

BEFORE THE MEETING

- 1. Review the steps that will help us complete a neighborhood plan and begin to draft documents as described in Steps 1, 2 and 3.
- 2. Recruit assistance for launching the planning process and helping at the first meeting.
- 3. Have supplies such as an agenda, blank surveys, pencils, maps, and a sign-in sheet.
- 4. Have at least one copy of the 5 Step Neighborhood Disaster Plan Template available.
- 5. Research availability of upcoming training in your area, especially CERT, First Aid and CPR.

Other things you might want to have for the meeting include snacks, a fire extinguisher, emergency supply kit, and information about CERT training.

MEETING AGENDA

- 1. Introductions, getting to know each other and where we live.
- 2. Purpose: to discuss and plan for how to respond to disasters in our neighborhood.
- 3. Present draft documents that kick off the planning process.
- 4. Identify and recruit more team members to help plan or take on leadership roles in a disaster.
- 5. Collect or complete neighbor surveys.
- 6. Walk the proposed neighborhood to validate and complete boundary map.
- 7. Create a list and assign action items for the next meeting.

THE FIRST MEETING

OPENING REMARKS

Welcome! This is the[state name of neighborhood] Neighborhood Disaster Preparedness Meeting. Thank you for coming. The purpose of this meeting is for us to find ways that we can help each other during a disaster. Before we dive into the meeting, let's do some introductions. My name is [state first and last name] I live [attend or work] at [state address and describe it e.g., white house at the end of the culde-sac on Main Street]. Please introduce yourselves, starting here to my right [point to right]. Tell us your first and last name, and where you live, work, or attend. Please tell us something distinct about your place – like "the little church on the top of the hill" – so that we can picture each location. Thank you. [Hold up Neighbor Survey]. Does everyone have a copy of the Neighbor Survey? We will discuss it in more detail later, but please start filling in what you can; we would like to collect the completed survey from you before you leave tonight.

The purpose of this meeting is to talk about how we can prepare as a neighborhood – so tonight we will not have time to talk about personal preparedness. We can talk about it at a future meeting and there are references to sources of information in your packets. We want to be sure that we are all using the same definition of the disaster we are planning for. A disaster is any event that overwhelms the capacity of 9-1-1 emergency responders. When that happens, the people who will be our first responders are here in this room. Look around the room. Our neighbors will the ones who make sure we are safe and help us when we are in need.



REVIEW STEP 1: DEFINE THE AREA



REVIEW STEP 1

The first step to create a disaster plan for our neighborhood is to define the area that our plan will include. We have started this process but we all need to decide if this is the map we will be using for our Plan.

- What size area would be easy for a small team to manage? 25 to 40 households is ideal but it could be larger if we decide to use block captains or networks that already exist. A good reason to choose a larger planning area might be an active neighborhood watch program.
- Can we communicate easily? Do we need radios and have good access to all the residences? Do we need people who are bilingual to be sure we can talk to everyone in our area?
- Can we quickly identify who needs help and practice "neighbor helping neighbor" techniques? If we choose to plan for a larger area do we have enough team leaders to be responsive to the whole neighborhood?

[Review your neighborhood map. Review the streets, homes and other facilities covered. Provide the estimated total number of homes and other facilities included in the defined area.]

We need to make sure that we have everything correctly labeled. Are we missing anything? We need to show:

- The number of homes, business, schools, churches, and other buildings in the area
- The number of people in the area
- The roads and other entrance and exit points, hills, and waterways

Thank you.

Total time for this topic: 10 minutes



STEP 2: RECRUITING LEADERS





REVIEW STEP 2

This section is about recruiting leaders to help create the disaster plan and leaders who can take part in emergency response. There are two types of leader we are looking for:

- 1. Those who can help us with planning and disaster plan development
- 2. Those who will have a leadership role in disaster response

Of course, these two volunteer groups need to work together during this planning process so we know that our plan has people to put into action. In preparation for this meeting, we have already identified some people who are interested in taking on a leadership role. They include: [introduce your leaders and the type of help they will provide – planning or response. If you need more leaders, ask folks to volunteer at this time.]

TRAINING OPPORTUNITY

CERT Training classes is one way that we can learn skills that can be used in response to a disaster here in this neighborhood. I encourage you all to consider taking CERT classes. CERT or Community Emergency Response Training is offered throughout the year led by County Fire of the Sheriff's Department plus other City Fire Departments in the County. Classes are always free and will take about 20 hours to complete.

Total time for this topic: 10 minutes



REVIEW STEP 3

This is a big section and your input is really important as we move through the planning process. At the end of the meeting, we will tour the planning area and confirm the decisions we make tonight. We will be looking at the following:

- Threats & Risks
- Specific Hazards
- Assets
- Mapping
- Gathering Place
- Care Centers
- Triage Area

First, we need to identify the threats to our neighborhood. Threats are things like earthquakes and extreme weather. [Review the threats you have noted so far with the group.] Do we need to add any? [Document additions.]

Next, we need to list whether the disaster is highly, moderately, or not very likely to occur. [Review the risk levels that you have noted for the threats.] Does anyone have any changes or questions? [Document additions.]

Finally, we need to review how at risk our neighborhood is to injuries, death or property damage. We will classify these risks as high, medium or low. [Review the risk levels that you have noted.] Does anyone have any changes or questions? [Document additions.]

Thank you.



ASSETS

Let's talk about assets. We need to know what we have in this neighborhood that can be used to help in disaster response. Assets include anything that can be useful as we respond to or recover from a disaster. Here are examples:

- People trained in CERT, medical care, first aid, search and rescue, carpentry, plumbing, or crisis counseling
- Emergency Supply Bins
- Places like parks, schools, garages, open space and health/medical centers
- Organizations like neighborhood clubs, fraternal organizations, radio clubs, local military organizations, and disability service providers
- Businesses nearby that might be able to provide supplies or equipment
- Equipment and supplies for clearing debris, boats for rescue during floods, communication equipment, first aid supplies, generators and other items useful during or after a disaster
- Evacuation resources, like accessible vehicles

[Starting with each threat listed, ask for input from residents to identify what asset they have, where it is, how to contact the owner, how to get access to it, what is it vulnerable to, how can it be protected to it will be available to use? Document everything.]

ASSET TYPE	ASSET DESCRIPTION	ASSET LOCATION OR CONTACT INFORMATION ¹



MAPPING

Now we are going to chart our neighborhood and create a contact list. Take a look at the drawing we created. Everyone should add to the drawing so that we are all have the same information while we consider the planning area. Take a few minutes to review and update the contact information. We need your first and last name, contact information (email and 24 hour phone), the number of people at your location, and pets. Add street names if they are not shown.

Next, we are going to number all of the residences in order on the map – we will not be using street addresses because that might be confusing when we are responding and tracking our progress. [Hold up your map and show this.]

Now, take a look at the map and let's make sure we have the following information:

- Entrance and exit routes to and from the community that are accessible by foot, wheelchair, scooter, and car.
- Obstacles that after a disaster could make entry and exit difficult, such as collapsed over/under passes, downed trees, or overhead power lines.
- Names of those who may need assistance during disasters. This includes neighbors who may need extra help, children who are home alone, older adults and persons with difficulty seeing, reading, walking, speaking, hearing, remembering, understanding, or responding to direction. Writing the names here will help us remember to check on these specific neighbors soon after disaster occurs. This information will be kept confidential by our [neighborhood leaders/block captains] and is only for our use as neighbors. Of course, sharing information is voluntary.

List all of these on your drawing.

We also need to locate a Neighborhood Gathering Place. The Neighborhood Gathering Place is a space for us to meet after a disaster to organize, check that no one is left behind, and to coordinate our activities. We need to pick one large central area (e.g., park, recreation area, porch, covered car port) to gather and organize response activities.

GATHERING PLACE

- Easily seen so others will recognize this as the main gathering point
- Easy to access for everyone
- Safe from predictable hazards like flood, fire, fallen trees and power lines
- Nearby accessible toilet facilities
- Well lit in case of night evacuation
- Can accommodate service animals and pets
- Big enough for planned number of people and vehicles
- Accessible to children and adults with disabilities

We also need to locate a Neighborhood Care Center. The Neighborhood Care Center is a place where people can get extra help, including children, older adults, people with disabilities and others can be brought and cared for. Where can we locate at least one Center?

Last, let's locate a triage location, where the injured can be given first aid or assessed for medical treatment. Where should this be?

Update your map/drawing with potential locations for each of these needs.

Total time for this topic: 45 minutes



STEP 4: BUILDING TEAMS



STEP 4

Our next step is to start forming groups. Look around the room; do we represent the diversity of the people in our neighborhood? Do we need more homeowners, renters, families, businesses, churches, nonprofits, schools, or local organizations from this neighborhood? Are there any nearby service organizations, service providers, residential, care or assisted living facilities that we should include in our plan? [Document recommendations and assign them to someone to contact each group and report back.]

SKILLS & TRAINING

Now, we need to identify the skills and equipment each of us has that may be useful in disaster response.

Who has CERT or first aid training, can left heavy objects, experience caring for children or working with people who may be confused when dealing with unfamiliar activity during an emergency due to age, loss of sense of direction, not understanding what is happening, etc.?

[Document this on your contact sheet and assign someone to confirm with each person.]

PHONE TREE

Although telephone service is vulnerable for some disasters, in many cases it will be the best way to get and give important information. A phone tree is a list of people and phone numbers arranged so everyone is part of a chain of calls. For example, the person who gets the first call contacts a few people, then those people call the people on their list, and so on until everyone in the neighborhood has been contacted. Who is interested participating in a phone tree? [Document this on your contact sheet and assign someone to put it together.]

Total time for this topic: 15 minutes






STEP 5

Let's talk about what we need to do in a disaster and be sure we all have the same planning action steps.

Make Sure Everyone in Your Household is Safe Don't forget your pets!

Put Your Personal Emergency Plan Into Action

Wear protective clothing, pull out your fire extinguisher, check your utilities and take other steps noted in your plan.

Go to Your Neighborhood Gathering Place

If it's safe, gather at our planned location to check in.

Get Organized

If the Leader listed in our plan is not available, select someone else to lead the overall response effort.

Form Response Teams

Using our plan, assign team leaders for every 3-7 people with a response role.

Put Neighborhood Plan into Action!

Decide what we want to do, how we plan to do it, and the time we have to respond.

A practice used by first responders and CERT is to organize using the Incident Command System. The **Incident Commander** is the leader and he/ she is responsible for deciding what is to be done and monitoring the status of the neighborhood.

The job of **Planning & Intelligence** is mainly to gather information about what is happening in the neighborhood and give that information to the Operations teams. You will also help spread information to residents that are in the care centers or still in their homes.

The job of **Operations** is to organize teams and take action to survey the neighborhood and provide assistance. These jobs are usually assigned to people who have skills and experience.

The job of **Logistics** is to get stuff; make sure that there is the space to do the work and get the things needed to get the job done.



Here are some teams that you can form. Take a look at the list and lets find out who is interested in joining each team. Remember that each Team should have at least three members. [Document names of volunteers for each team.]

Communications Team. The Communications Team listens to the Emergency Alert System, handheld radio, and/or National Weather Radio. The Communications Team is responsible for communicating information within the neighborhood and to/from the neighborhood and first responders. **Survey & Assist Team.** This team will look for the OK/ Help signs, as well as check on those listed as needing extra help. They begin with a damage assessment to identify hazard areas and prioritize Survey & Assist operations. Ideal members have completed CERT Search & Rescue training.

Care Teams. Care Teams can consist of

- Triage Team those who determine the priority that injured survivors will receive care
- Treatment Team those who tend to the injured
- Care Center Team those who provide extra care during disaster. Members of these teams ideally have experience in healthcare.
- You may also consider creating a Reassurance Team – those who help keep fear and anxiety at low levels.

Materials & Supplies Team. This team coordinates getting the materials and supplies needed from within the neighborhood. Over time, this might also include organizing food and water supplies.

Transportation Team. This team coordinates transportation for supplies, equipment and people within the neighborhood.

Neighborhood Information Team. This team coordinates information about survivors and relays information about resuce progress and survivor status (injured, missing, etc.) from the Command Post to the Care Center.





STEP 4

Another important part of response is communications. Take a moment to review the various communications methods we can use in our neighborhood.

[If your neighborhood has a webpage or social media account, talk about how this can be used in a disaster to communicate information. Identify people to carry out related action items.]

I encourage everyone to sign up for Alert LA County, which is a community mass notification system that will provide recorded phone messages, text messages, and email. Register at www.alert.lacounty. gov and click on the link to "Alert LA County". During a disaster you can also register on the Red Cross "Safe and Well" website https://communityos. safeandwell.org. This is a tool that you can use to let friends and family know that you are OK.

Anyone with a disability or other restrictions that will make self evacuating difficult or impossible should consider signing up for SNAP. This is a voluntary web-based registry for people who could potentially have difficulty evacuating in an emergency or critical event. Register at http://snap.lacounty.gov/

One issue that the planning group must decide is whether to use the OK/HELP window sign that is part of the Action Kit. Using the signs is optional and how they will be used will be documented in the Neighborhood Plan.

WRITE IT DOWN

We have made progress in preparing our neighborhood for disaster!

Next, we need to put it in writing! This where our group of planners comes in. [Review the names of the people who volunteered as planners.] Are you still up for this? Use the plan template [show the template] to create a simple disaster plan. Can you meet soon after this meeting to put together what we talked about today?

Last, I want to call everyone's attention to the Disaster Resources listed near the end of the 5 Step Neighborhood Guide. Look through the list and explore some of the resources available.

Please return the sign-in sheet and the surveys to me before you leave. [Gather these.] Thank you.

Let's talk about what we need to do next.

First, [look at planners] can you make the plan available for review at next month's meeting? [Review the date, location, and time of the meeting.]

Once we have a plan and have assigned roles, we will need to review and clarify these roles at every other neighborhood meeting to accommodate for new people and to maintain our preparedness for disaster.

At this time, let's all head outside and review our maps. [Lead everyone outside and walk our neighborhood area together.]

Thanks for coming.

Total time for this topic: 30 minutes



1. How big should my neighborhood be?

25 to 40 households are ideal; however, use logical boundaries if they already exist (like neighborhood watch programs, homeowner associations, etc.). Organize by floor or number of units planning for a high-rise or multiple-unit building.

2. How should people be invited to the meeting(s)?

Use the flyer provided in this kit or create your own to personally invite neighbors, leaders from existing networks, and others with disaster training.

3. How can I best help persons who need extra support during the disaster, such as people with disabilities?

Ask people at your meeting to identify themselves as needing additional support what can be done to help them. Also, FEMA has published a useful summary

4. How can neighborhoods support shelter operations?

Neighborhoods can assist government and Red Cross shelter operations by locating and providing transportation for those who need help to safely evacuate an area.

5. How do I share our completed plan?

During meetings, discuss strategies in how to keep surveys and other personal information updated and confidential. Make sure that everyone understands how information will be used by the plannong teams.



FREQUENTLY ASKED QUESTIONS

TIPS FOR INCLUSIVE PLANNING

FEMA (www.fema.gov/plan/prepare/specialplans. shtm) has published a useful summary for use in emergency planning, which is adapted below:

Some people may require additional assistance and this should be reflected in your neighborhood plan. In addition to those with visible disabilities, people with hidden disabilities and activity limitations may also need help. Here are a few things to consider when planning for everyone in your neighborhood:

- Vision May be unwilling to leave familiar surroundings when the request for evacuation comes from a stranger. A service animal could become confused or disoriented in a di¬saster. People may have to depend on others to lead them and their service animal to safety during a disaster.
- Hearing May need help getting and receiving warn¬ings and directions.

- Mobility May need assistance to get to a shelter or neighborhood gathering area.
- Single working parent May need help to plan for the safety of their children.
- Non-English speaking persons May need assistance in understanding warn-ings and directions. The following agencies provide detailed information on individual, family, and community preparedness on their respective websites:

American Red Cross of Greater Los Angeles, City of Los Angeles Emergency Management Department, County of Los Angeles Office of Emergency Management

 Illness/sensitivities – People who have allergies and chemical sensitivities may not be able to manage in certain gathering areas or shelters.



COUNTY OF LOS ANGELES EMERGENCY SURVIVAL GUIDE

FUTURE MEETING TOPICS

Visit one of the websites below for additional tips and guidance regarding household preparedness.

American Red Cross Prepare SoCal http://preparesocal.org/

Safe and Well https://disastersafe.redcross.org/

Emergency Survival Program www.espfocus.org

> Ready LA http://readyla.org/

Other preparedness websites www.daretoprepare.org www.moreprepared.org

HOUSEHOLD DISASTER PLAN

Emergency situations become disasters when they overwhelm the resources here to protect our community. A large disaster in the region will create many threats to public safety and first responders will need to focus their efforts in areas where they can do the most good – helping severely endangered people and heavily impacted areas first. It is likely that some areas will not get professional assistance for days after a disaster has occurred.

Consider holding a neighborhood meeting to talk about the safety of our families and preparedness in each of our homes. The Los Angeles County Emergency Survival Guide is a free publication intended to help our residents prepare for and recover after a disaster. Before the meeting provide everyone with a copy of the Guide or a link to download the Guide at www.espfocus.org.



ANIMAL PREPAREDNESS

Things to discuss at a meeting focused on Animal Preparedness might include:

- Creating a neighborhood network of pets owners; learn where pets are and how they can be helped if their owners are away in a disaster.
- Ensuring that there are emergency supplies for neighborhood pets that includes extra leashes, collars, food, crates and other things your pet will need to be safe and secure in an evacuation or disaster.
- Knowing how your neighbors plan to take care of their pets in an evacuation or disaster.
- Learning about local emergency care providers such as the nearest veterinarian office, animal shelters, or rescue organizations.
- Understanding how to plan for neighbors with service animals; animals that stay with their owners at all times.
- Planning for pet/owner reunification by registering microchips, wearing identification tags and using photographs of owners and their pets.
- Preparing to evacuate horses as soon as an evacuation warning is issued, not waiting for mandatory evacuation orders that may come too late for safe transport.

ADDITIONAL RESOURCES

Emergency Survival Program Bulletin on Pet Preparedness www.espfocus.org

County of Los Angeles Department of Animal Care and Control www.animalcare.lacounty.gov

City of Los Angeles Department of Animal Services www.laanimalservices.com

Small Animal Rescue Team http://www.laanimalservices.com/about_us/SmART.htm

Humane Society of the United States www.humanesociety.org

National Association of Professional Pet Sitters www.petsitters.org

Society for the Prevention of Cruelty to Animals International www.spcai.org

The National Lost Pet Hotline 1-800-755-8111 to report found pets

Disease Outbreak

An outbreak can happen when a disease is new to a community, been absent for a long time, or has a population uniquely vulnerable to infection. The most serious outbreaks occur when people have little or no immunity, and there is no vaccine to prevent or medication to treat the illness. A large outbreak that sweeps across the nation and world is called a "pandemic." The disease may spread, cause serious illness and/or potentially impact daily, community life. Wherever and whenever a disease outbreak occurs, neighbors can help neighbors through planning, preparedness and concern for their community's health.

At a future neighborhood meeting consider adding a Disease Outbreak section that shows how your neighborhood will respond. Consider the following:

- An outbreak may come and go, or appear repeatedly in waves over many weeks.
- An especially severe disease outbreak could lead to high levels of illness, hospitalization, death, social disruption, and economic loss.

- Everyday life can be disrupted as many people in many places become seriously ill at the same time.
- Impacts can range from school and business closings to the interruption of basic services such as public transportation and food delivery.
- Families, neighborhoods and communities alike may need to adjust their behavior and social patterns in order to prevent the spread of disease in their homes, schools, places of work and neighborhoods.
- Neighbors may need wellness checks so that help can be given or requested for those in need.

For more information visit:

Los Angeles County Public Health http://publichealth.lacounty.gov/

Centers for Disease Control and Prevention http://www.cdc.gov/





RECOVERY

The emergency may be over, but it can take a long time for your neighborhood to get back to normal. Have a neighborhood meeting to discuss how you can prepare and support each other to recover after a disaster. Don't wait until disaster strikes – learn now about what documentation you will need, review insurance policies and understand the limits of disaster assistance programs.

What do I need to know about returning home after a disaster?

What is FEMA Disaster Assistance?

What if my home is destroyed?

What if I lost my job or can't work because of a disaster?

What if I think I need legal help?

What can I expect from my homeowners insurance?

Here are a few resources to get you started on Recovering after a disaster:

FEMA

www.fema.gov/assistance/

General Government Assistance www.disasterassistance.gov/

Small Business Administration www.sba.gov/

U.S. Department of Housing and Urban Development www.hud.gov/info/disasterresources_dev.cfm



OTHER IDEAS MITIGATION

Preparing for a disaster helps you survive and help others. When you prepare yourself, you lessen the impact a major event has on your life. This is called mitigation; disasters and events are unpredictable and can happen to anyone, but their effect on you can be lessened through what you do before the event.

EARTHQUAKE

Businesses and residents should seek to maintain or live in buildings "up to code" for earthquakes and/or ask the property owner for help. Use earthquake tie-downs and locking mechanisms for items on shelves or on walls that can fall. Falling objects can be deadly!

If possible, sign up for text alerts with the USGS to receive update texts on earthquake or aftershock notices.

INTERRUPTION OF UTILITIES

As resources allow, invest in a backup generator for electricity. Keep water in the home (or business), occasionally changing that supply (as it ages).



FLOODING

Unlike other disasters, you usually have time to prepare for a flood. Take advantage of this time by locating and keeping information on the nearest sandbag distribution center. Take note of the natural flow of water on light-rainy days to map out a sandbag plan. Buy and keep a simple or heavy-duty water pump (and generator). Keep gloves, boots and floatable devices handy, always, in flood plains and high-risk areas.

FIRE

Residents and businesses near the foothills and brush should create and upkeep a "firebreak" line that acts as a road (for emergency responders) and put distance between your home and the fuel for the fire (vegetation). Residents and businesses must keep their smoke detectors working; they are lifesavers! All buildings should keep fire-extinguishing devices with easy instructions on them. Create and keep plans for fire evacuation inside and outside of a building or home.

If you live in in a multi-dwelling unit, apartment, condo, or very close to your neighbor's home, contact your neighbor to help them keep their fire monitoring systems up to date.

TSUNAMI

Extremely rare but potentially devastating, tsunamis' impact can only be mitigated by planning swift evacuation routes. If possible, register for text alerts with the USGS (earthquake notice).

TERRORIST ATTACK

Be a vigilant citizen, report suspicious activity and devices (like unattended packages). Businesses can create strategic security adjustments. The Los Angeles Police Department's iWatchLA program educates the public about terrorist behaviors and activities: http://lapdonline.org/iwatchla

SEVERE WEATHER

Take note of local hardware stores for necessary items (boards for windows, etc.) Locate house utility box control (for turning power off and on). Pre-plan a location in the house when a Wind Storm Warning is issued, and take cover! This area should not have windows and be located in a low area of the home.

EXTREME HEAT AND COLD

If your location gets very hot, as it does in the valley, have an adequate amount of fans and/ or air conditioning, if possible. As resources allow, buy and keep a backup generator (for heat or air conditioning). Keep a location list of nearby stores (for ice, water and other items). Keep chimneys clean and always have fuel (wood) and items to start a fire.

LANDSLIDES

As with flooding, take note of the direction of water-flow as it might indicate. Call authorities to occasionally check the land's foundation after major rain and heat. You can't be too careful! Keep evacuation plans up to date!

CHEMICAL EMERGENCIES

Sign-up to LA City emergency alerts for possible or necessary details on major accidents.



OTHER RESOURCES

NEIGHBORHOOD EMERGENCY BINS

If you would like to establish an emergency supply container for your neighborhood, you can refer to the following for guidance. While not a final recommendation, these guidelines provide a good picture of what should be contained in a Neighborhood Emergency Supply Container, and how it should be maintained.

A NEIGHBORHOOD CONTAINER SHOULD INCLUDE

Storage Container: 20 foot (roll up or cargo) Combination Padlock Multi-person, First Aid Trauma Medical Unit - 500 Person - OSHA Certified 5000 Watt Generator 5 Gallon - Gasoline Containers with Gas 10 x 10 Pop-up Canopy Bottled Water Cases 8 foot folding tables Plastic folding chairs Plastic Container with Basic Office Supplies (note pads, pens, pencils, etc.)





COMMUNICATION EQUIPMENT

Portable Radios AM/FM Hand Crank Radio

LIGHTING

Utility Lamp 500 Watt 7' Tripod Light Power Strip 12/3-50' Extension Cords



SEARCH & RESCUE PORTABLE KITS

(Accommodates 4 persons each)

- 1 Saw
- 1 Pair of Pliers
- 1 Roll Caution Tape
- 1 Steel Pulley Block/Tackle
- 1 Flathead Screwdriver
- 1 Phillips Screwdriver
- 1 Tarp 10' X 12'
- 4 Safety Goggles
- 4 Safety Vests
- 1 Hammer/Hatchet
- 1 Roll Duct Tape
- 1 Vise Grip
- 1 Folding Shovel
- 1 Pry/Crow Bar 24"
- 1 Nylon Cord 50 ft.
- 4 Triage Tags
- 4 Whistles
- 4 Pair Work Gloves leather palmed
- 4 Pair Latex Gloves
- 4 Shake Lights
- 4 Hard Hats
- 4 Green Light Sticks 12-hour
- 4 Yellow Light Sticks 12-hour
- 1 AM/FM Solar & Hand-Crank Powered Radio, Flashlight, & Cell Phone Charger
- Survival Knife Kit 6" stainless steel blade with jagged edge, survival contents in handle (waterproof matches and fishing hooks/weights/ line) compass, sheath, & sharpening stone
- 1 Durable duffel bag with hand & shoulder straps





COUNTY OF LOS ANGELES





FORMS



NEIGHBORHOOD DISASTER PLAN TEMPLATE

[INSERT NEIGHBORHOOD NAME]

[INSERT PLAN VERSION NUMBER]

[INSERT DATE OF LAST REVISION]





This Neighborhood Disaster Plan Template is meant to serve as a framework for planners to build or refine a disaster plan for your neighborhood. This helpful resource provides direction **[in brackets]** where you can add neighborhood specific information.

For best results download this template from **www.espfocus.org** and fill in the required information electronically. The template can be changed to meet the needs of your neighborhood and sections can be added or deleted as necessary. The completed plan may contain confidential information and every effort should be taken to keep the plan secure.

PLAN MAINTENANCE

PLAN MAINTENANCE AND UPDATE

______ is responsible for maintenance and update of the plan. The plan will be updated annually and in response to lessons learned from exercises or actual disasters. The contact person for plan updates is ______.

PLAN DISTRIBUTION

Printed copies of the initial plan and any future updates will be provided to all residences in the planning area. The plan will also be posted on the ______ website.

PLAN MODIFICATION REGISTER

Changes made to the plan are reflected below.

DESCRIPTION OF CHANGE	PAGE NUMBER	DATE OF CHANGE	AUTHORIZED SIGNATURE



[INCLUDE INFORMATION REGARDING THE PEOPLE, AGENCIES, AND ORGANIZATIONS THAT WERE INVOLVED IN THE DEVELOPMENT OF YOUR NEIGHBORHOOD DISASTER PLAN.]

THIS PLAN WAS DEVELOPED BY MEMBERS OF THE (Name neighborhood council, or other group(s):

THE FOLLOWING PEOPLE PARTICIPATED IN DEVELOPMENT OF THE PLAN (List Name & Organization):

NAME ORGANIZATION

THE PLAN WAS COMPLETED ON:

(MONTH, YEAR)

(SIGNATURE OF CHAIR, OR LEADER OF PLAN DEVELOPMENT TEAM)



[At minimum the Plan should include the following information. When complete, insert your own Table of Contents]

- 1. Map of the neighborhood with property numbers and hazards marked
- 2. The threats this plan is designed to address
- 3. The people that have agreed to be leaders or on teams
- 4. Documentation on how we will communicate with each other in a disaster.
- 5. Locations for a Gathering Place and Care Centers
- 6. Actions that residents will take in a disaster.

INTRODUCTION

1.1 ♦ BACKGROUND

[Insert information about the area covered by the plan, the name of the community, district or other location information. Include location of the nearest fire station, police station, and hospital.]

1.2 • HOW THE PLAN WAS DEVELOPED

[Discuss how the plan was developed (e.g. through a series of meetings), when it was developed, who it was developed by (general descriptions of those who worked on it, or specific names), and who led the project.]

1.3 • ABOUT OUR NEIGHBORHOOD

[Insert specific descriptive information about your neighborhood, to include its location in the County, general addresses or blocks of the area, square mileage, the date the neighborhood was founded, the number of homes covered by the plan, the number of people residing in the neighborhood, its ethnic and cultural makeup, languages commonly spoken, and any community centers or significant landmarks.]







STEP 1 DEFINE YOUR AREA

Refer to the *5 Step Neighborhood Action Kit* for guidance and tips in filling out this template.

The scope of our plan includes

[Describe the geographic area covered by the plan using street names or other easily-understood features. If you are building a plan for units of a multi-story building, list the floors and unit ranges. Make a map or sketch of the area that you can add information to later.]



List the people in the neighborhood who have skills and are willing to help in a disaster. [This information would have been captured in the Neighborhood Survey.]

NAME	SKILL OR EXPERIENCE	ADDRESS & TELEPHONE



STEP 3 SCOUT YOUR NEIGHBORHOOD

THREATS AND RISKS

The threats and risks that our neighborhood is most susceptible to are listed here in order of likelihood.

[Include information that you prepared as part of the Threats and Risks section in step 3 of the *5 Step Neighborhood Action Kit*. List threats and risks and by likelihood of occurrence.]

THREAT	LIKELIHOOD OF OCCURRENCE ¹	LEVEL OF IMPACT ²

¹Almost Certain: Greater than 90% chance \diamond Likely: 50 – 90% chance \diamond Moderate: 10 – 50% chance \diamond Unlikely: 3 – 10% chance \diamond Rare: 3% chance or less

²Minor: Some disruption of service possible. Little or no property damage, personal injury, or loss of life, injuries, and fatalities Moderate: Disruption of some services. Minimum property damage, injury, and loss of life Major: Many services disrupted and/or structures severely damaged. Multiple personal injured and significant loss of life Midespread property damage. Many Injuries and fatalities

KEY ASSETS

List assets in our neighborhood that may be available to team members in a disaster. [This information would have been captured in the Neighborhood Survey.]

[Include information that you prepared as part of the Neighborhood Assets section in Step 3 of the *5 Step Neighborhood Action Kit*.]

ASSET TYPE	ASSET DESCRIPTION	ASSET LOCATION OR CONTACT INFORMATION

~ / A //

100

MAKE A MAP

(1)

11

[Insert map agreed on in planning meetings. Include locations for proposed Gathering Place, Triage Area and Care Centers.]





STEP 5 PLAN YOUR APPROACH

[Detail how your neighborhood will respond. Write it down.]

Individual and Family Disaster Response Actions. Discuss the responsibilities of individuals and families in disaster response. Make sure to emphasize that the first priority is to ensure the safety of families, pets, property, and neighborhoods. Consider discussing such things as:

- The need to check for unsafe conditions, including downed power lines and gas leaks;
- The impact of rescue operations performed by individuals with little or no training;
- The procedure for shutting off as valves that are not automatic (by turning the valve so that the "bar" is perpendicular to the gas line; also keeping a wired wrench to the gas meter);
- The importance of tuning into the radio to emergency frequencies to obtain information and instructions;

- The importance of donning protective gear such as a hard hat or bicycle helmet, steel-toe or other sturdy shoes, and leather or sturdy gloves.
- During earthquake incidents, individuals should "drop, cover, and hold on." Individuals who are unable to drop should cover their head and neck with their arms.
- Will your neighborhood use the Emergency Door Hanger? Households would place the OK/Help hanger on their front door or window so that it can be easily seen from the sidewalk or street. The red side means that help is needed; the green side means that everyone is OK.

If your neighborhood plans to use the Emergency Door Hangers they should be displayed after ensuring personal safety. It is for use only after a disaster when 9-1-1 help is unavailable. Families that are OK should lock their doors, secure their belongings, and proceed to the Neighborhood Gathering Place.



Neighborhood Response. Once the neighborhood has gathered at the designated Neighborhood Gathering Place, the first task is to get organized. Then, a leader will be selected to direct the overall effort. An Action Plan will be developed to help the neighborhood decide what to do, how to do it, and what timeframe to do it in. Finally, the neighborhood should organize into teams, with a Team Leader for each team. Each team should have 3-7 people and a Team Leader.

- [List the communications systems you plan to use. For radios, be sure to list the frequencies. Designate one person to collect all radios once response efforts have concluded.]
- [Prepare a notification chart and "call down" procedures, as shown in the Notification Annex on the following pages. There should be a "master" notification chart to make sure the leaders you have identified are notified, and each Block Captain should develop and maintain a notification chart for residents in his/her area. It is a good idea to include email addresses, too.]
- [Create a list of capabilities needed for each area of response, and designate people to fill those roles. For example, the Triage and Treatment area will need people who are trained in first aid , and the Animal Evacuation Site will need someone to conduct a formal check-in with written documentation and photographs. Roles should be reviewed and confirmed at every other neighborhood meeting to accommodate for new people and to maintain preparedness for disasters.]
BASIC PLAN

LIST KEY LOCATIONS:
Our Neighborhood Gathering Place is:
Alternate
Our Neighborhood Care Center is:
Alternate
our mage area is:
Alternate
Other Care Center:
Other Care Center:

FUNCTIONAL ANNEXES

[Planners should ensure that specific concerns of population segments, such as children and individuals with disabilities or access and functional needs, are addressed.]

A functional Annex documents the planning done by Teams before the disaster. Each team named on the organization chart should have a detailed plan on how to carry out their function. The following annexes to our plan document those plans:

[Insert Team Plans]

Survey and Assist Materials and Supplies Transportation Communications Neighborhood information Care Teams Triage Reassurance Treatment

.0.0.

FUNCTIONAL ANNEXES



A.1.1 ♦ SUMMARY OF SURVEY RESULTS

[Use this section to record useful information collected by the Neighborhood Survey] This might include lists of people who anticipate needing extra assistance, lists of pets and their needs, or languages spoken and other information useful when activating the plan.]

EXAMPLE: COMMUNICATIONS ANNEX

A.2.1 PURPOSE

The purpose of this annex is to outline the ways that neighbors will communicate with residents after a disaster.

A.2.2 NOTIFICATION PROCEDURE

[Detail who is responsible for contacting who, and the method and alternate method(s) of contact, such as phone, radio, and/or door-to-door contact.]

Consider the following:

- 1. The person at the top will start the notification process. It may be helpful to have a brief script complete with the specific action
- 2. Ask the person to get paper and pencil to write specifics
- 3. Give facts about the event

- 4. Be sure that you have alternative phone numbers and radio frequencies, so you can reach a person if he/she is out of home/office
- 5. If nobody is answering, leave a message and then try using the alternate method of contact. If contact is still not made, contact the next person. This should ensure that everyone gets the information in a timely fashion
- 6. Confirm they will be making contact with the next person(s) on the chart
- 7. Prearrange with staff at the end of the list to contact the person at the top once they receive the message. The LAST person on the notification chart should contact the FIRST person to ensure that the chart is completed and that the message was accurate

EXAMPLE: SURVEY & ASSIST ANNEX



A.3.1 PURPOSE

The purpose of this annex is to detail procedures that will be followed once it is determined that there is a need to perform a Survey and Assist mission in the area following a disaster or emergency incident. This Annex is not intended to take the place of training provided in programs like CERT and it should be repeatedly emphasized that there may be conditions where it is not safe for anyone except trained first responders to attempt entry into damaged buildings or rescue trapped individuals.

A.3.2 GENERAL PROCEDURES

Survey and Assist is really two separate activities. During the Search phase, the team systematically inspects the area for injured or trapped people. In the Rescue phase, the team aims to free lightly trapped persons from confinement.

THE OBJECTIVES OF SURVEY AND ASSIST INCLUDE:

- Conduct after a damage assessment establishes there are no immediate threats
- Ensuring that there are enough members to form teams
- Maintain safety of neighborhood team members
- Rescue the lightly trapped people first

If the neighborhood has members trained in CERT, then CERT teams will be responsible for initiating Survey and Assist procedures and assigning teams to specific areas.

KEY STRATEGIES AND THEMES INCLUDE:

- Designate rescuer safety as a priority
- Be alert for hazards
- Wear safety equipment (hard hats, goggles, sturdy shoes)
- Never enter an unstable structure

Following a disaster or during an emergency, the CERT team or other designated leaders will assemble at the Neighborhood Gathering Place and designate Survey and Assist Teams. One or two Disaster Animal Rescue Team (DART) members should accompany each Search & Rescue team to ensure that animals are rescued and cared for. Consider assigning a scribe to each Survey and Assist Team to ensure that the proper forms are completed and that important information is documented.



EXAMPLE: SURVEY & ASSIST ANNEX

SIMPLE STEPS FOR CONDUCTING A SURVEY

- If your neighborhood is using the Emergency Door Hangers check for red or green tags. Red tags mean that residents are requesting assistance.
- Use the lists of "persons needing assistance" created by the neighborhood.
- Conduct an initial damage assessment to identify and document hazard areas. Prioritize Survey and Assist operations. Neighborhood Survey and Assist teams should notify people they pass during the damage assessment that they will return to help them.
- Call out. Begin by shouting "If you can hear my voice, come out!"
- Be systematic. Use a search pattern to ensure that all areas of a building are covered. For example, start searching on the bottom floor and work up, or move from the right to left across a house.
- Listen carefully. Stop frequently and listen for voices or tapping sounds.
- Use the buddy system. Work together– two responders can survey a structure more effectively and safely.
- Identify surveyed areas on the structure. Make a single diagonal slash on or next to the door just before entering. Make an opposite slash (creating an "X") when all occupants have been removed and the search of that area is finished.
- Document all results. Keep records of removed victims and victims who remain trapped to report to professional responders.

Effective rescue operations have three functions: (1) Create a safe rescue environment, (2) Triage and stabilize victims and (3) Remove victims to safe rescue zone.

SIMPLE STEPS FOR CONDUCTING AN ASSIST

- Gather necessary tools and equipment. This can be anything that will be helpful to move debris and large objects.
- Remove debris and lift objects out of the way. Wear gloves to protect your hands. Clear the path for a safe escape.
- Before you remove the injured clear the area.
 Discuss the plan to move (how, who and where).
 Some will be able to move on their own once the path is cleared. Others will need assistance.

THE FOLLOWING PROCEDURES SHOULD BE FOLLOWED REGARDING DECEASED VICTIMS

- Deceased victims found in unoccupied residences should be left undisturbed, and information as to the number of deceased victims and location marked on the front entry.
- Deceased victims in residences that will continue to be occupied should be moved to a separate area of the dwelling.
- Treat with respect, wrap tightly, note and identify valuables, write description if name unknown and address/location found and contact numbers for known family on the outside of the wrapped body.

EXAMPLE: CARE CENTER ANNEX

A.7.1 ♦ PURPOSE

The purpose of this annex is to detail procedures for activating and operating a Neighborhood Care Center.

DEFINITION

A Neighborhood Care Center is a neighborhood location established during/after a disaster where children, older adults, people with disabilities and other functional needs or those needing non-clinical care can be provided a safe, secure environment and car

LOCATION CRITERIA

While it is understood that emergencies create an imperfect environment, emergency response leadership should choose the Care Center location with the following general criteria in mind:

- The Care Center should be physically separated from areas housing the general population.
- Since HV/AC systems may not be operable following an emergency, Care Center locations should have natural light and ventilation.
- Locations should meet Americans with Disabilities Act (ADA) access requirements and have the capacity to accommodate access and functional needs populations.
- If possible, children should be separated from adults.
- Neighborhoods should strive to create a safe atmosphere within the Care Center to promote relationship building.



EXAMPLE: CARE CENTER ANNEX

STAFFING CRITERIA

Ideally, Care Centers should be staffed with trained professionals. However, in a disaster situation, Centers will have to be staffed with people who are local and available. In selecting the people who will staff the centers, response leadership should look for the following:

- Use the list of personnel assets from CERT leaders and Block Captains to identify people with experience in child care, older adult care, and care for persons with disabilities and other functional needs.
- If trained/experienced personnel are not available, select people who are known to the neighborhood.
- Assign at least one person to provide constant supervision to the children's area and at least one person to the adult area. If a supervisor needs to take a break, another person must be temporarily assigned to fill his/her role. Without constant supervision, children in particular could wander

from the Center and become lost, could put themselves in danger to exposed hazards, or could make themselves vulnerable to other dangers.

- Assign observers with no care responsibilities to observe operations and report any concerns or issues.
- Designate 1 entry/exit for the Center and assign someone to provide security at the door. A display board should be placed near the entry/ exit that lists the names of people inside the Center so relatives can locate their loved ones.
- Consider assigning someone with a mental health or psychology background to the Care Center for those inside the Center that might need comfort and support.
- Assign a liaison to ensure that the Command Post and the Care Center understand what might be needed at the Center and the status of those inside the Center.



[The contents of hazard-, threat-, or incident-specific annexes focus on the special planning needs that exist because of specific hazards. Include information that you prepared as part of the Put it in Writing section in step 5 of the 5 Step Neighborhood Action Kit. Consider hazards such as a power outage, wildfire, flood, earthquake, and any other hazard that threatens your community.]



NEIGHBOR SURVEY Are you really **prepared?**

How we prepare **now** for a disaster will determine our future.

Help us build a Neighborhood Disaster Plan! To complete the plan, we need to know what extra help you might need in a disaster, and what special skills or supplies you have that can help all of us. Please complete one form per household, business, or organization and return it to your neighborhood contact. The information you provide is voluntary basis, but we urge you to share a bit so we know how to plan for a disaster that affect us all. All information will be kept confidential by the neighborhood and is only for neighborhood disaster planning.



NEIGHBORHOOD DISASTER PLAN Are you really prepared?

How we prepare now for a disaster will determine our future.

[Insert Neighborhood Logo or Image Here]

Neighborhood Name:

Working with guidance provided by the County of Los Angeles we are preparing a disaster plan for this neighborhood and need your participation. Please be a part of the plan by attending planning meetings and filling out the attached survey. The information you provide will help us to understand what we have and what we need to be resilient after a disaster. The information you provide will not be shared outside our neighborhood except in planning.

Please complet	the survey by:	
-	(Date)	
Your neighbor,	, will return to colle	ect it.
	(Name)	

Information provided will be kept confidential and used only to write an emergency plan and to use in an actual emergency.

• 1 What is your name, telephone, e-mail, and address?

Name:		
Mobile Telephone: _		
Home Telephone (op	ional):	
E-mail:		
Address:		
What is the name	and telephone number for or	ne out of area emergency c
Does anyone at yo	ur address need translation	? If so, what languages?
Spanish	Japanese	☐ Khmer
Korean	Tagalog	🗆 Thai
Chinese	Vietnamese	🔲 Hindi
Other:		
Nhat animals or p	ets do you have at this addre	ess and how many?
Dogs:	Name(s):	
Cats:	Name(s):	
Birds:	Name(s):	
Other:	Name(s):	
Other: Are the animals friction	Name(s): endly?	

e, first aid, electrical, plu lingual)? If so, what kind	Team, Red Cross, military umbing, telephone lines, I or type?
 medical care first aid electrical plumbing 	multi-lingual multi-lingual other
gas company	
r supplies that help our r	neighborhood?
tents	□ other
other	other
└ other	□ other
	AL PLACE
	ENCECT
	re, first aid, electrical, plu lingual)? If so, what kind medical care first aid electrical plumbing telephone lines gas company r supplies that help our r tents chairs/tables other other



As a resident of our community, you are invited to a

DISASTER PLANNING MEETING

DATE: _	
TIME:	
PLACE:	

WE NEED YOUR HELP TO PREPARE A NEIGHBORHOOD DISASTER PLAN

In a disaster, emergency responders will be overwhelmed. Are you ready? Are we ready in this neighborhood for the disaster we know will happen?

Join us at this meeting to start planning how our neighborhood will come together and help one another after a disaster.

Questions? Please contact:







READY SETIGOL

YOUR PERSONAL WILDFIRE ACTION PLAN

fire.lacounty.gov

MESSAGE FROM FIRE CHIEF DARYL L. OSBY

Dear Residents,

Los Angeles County is one of the most beautiful places to live, but for those living in "wildland urban interface areas," it does not come without risks. With a yearround fire season and ever-growing number of wildfires, firefighters and residents alike are now constantly on heightened alert for the threat of wildfires.

The Los Angeles County Fire Department, along with our partnering agencies, stand ready to quickly respond to contain wildfires, utilizing our firefighting resources from the air and ground to help protect you and your property from wildfire.



But, we can't do this without your cooperation. Preparation and prevention go hand-in-hand. This *Ready! Set! Go!* brochure was designed to provide you with critical information on creating defensible space around your home, retrofitting your home with fire-resistant materials, and preparing you to safely evacuate well ahead of a wildfire. Please protect yourself, your family, and your property from a devastating wildfire by taking the time to learn about *Ready! Set! Go!*

In Los Angeles County, wildfires will continue to be fueled by a build-up of seasonal dry vegetation and driven by dry conditions and locally strong winds, making them extremely dangerous and challenging for firefighters to control. Yet, many homeowners don't consider how a wildfire could affect them, and very few residents have properly prepared for evacuation until it is too late.

You play the most important role in protecting yourself, family, and property. Through planning and preparation, we can all be ready for the next wildfire. I hope you find the information in this brochure helpful as you prepare your home and family for a wildfire.

As always, if you need additional information about preparing for a wildfire or any other natural disaster, please contact your nearest fire station or visit us at fire.lacounty.gov.

Doyle og

Daryl L. Osby Los Angeles County Fire Chief

COUNTY OF LOS ANGELES BOARD OF SUPERVISORS



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Preparing for a wildfire starts with three simple steps:



Please keep this plan on hand as a quick reference for helping your family and property be safe in the event of a wildfire.



Living in the Wildland Urban Interface

Ready! Set! Go! begins with a house that firefighters can defend.

Defensible Space

Creating and maintaining defensible space is essential for increasing your home's chance of surviving a wildfire. It's the buffer homeowners are required to create between their structure and the native landscape. This space slows the spread of wildfire and improves the safety of firefighters defending your home. Defensible space composition varies, depending on vegetation type and topography. Three zones make up the required 200 feet of defensible space.



Zone 1

Extends 30 feet out from the structure

- Remove all dead or dying vegetation.
- Remove dead or dry leaves and pine needles from your yard, roof, and rain gutters.
- Trim trees regularly to keep branches a minimum of 10 feet from other trees.
- Remove dead branches hanging over your roof. And, keep branches 10 feet away from your chimney.
- Relocate exposed woodpiles outside of Zone 1 unless they are completely contained in a fire-resistant enclosure.
- Remove vines and climbing plants from combustible structures (e.g., bougainvillea, wisteria).
- Remove or prune vegetation near windows (you should be able to see out the windows).
- Remove vegetation and items around and under decks that could catch fire.
- Create separations between trees, shrubs, and items that could catch fire, such as patio furniture, swing sets, etc.
- Irrigation is recommended to maintain vegetation moisture content.

Zone 2

Extends from the outer edge of Zone 1 to 100 feet from the structure

- Cut or mow annual grass down to a maximum height of three inches.
- Create vertical and horizontal spacing between trees and shrubs (the distance between trees should be three times the height).
- Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, a mulch layer may be permitted to a depth of four inches, if erosion control is an issue.
- Irrigation is recommended to maintain vegetation moisture content.







HAZARDOUS

Preventing conditions where fire can travel from adjacent fuels, through an ornamental landscape to your structure, is the key to creating defensible space. Fire spreads through convection, conduction, radiation, or embers. Proper maintenance of ornamental vegetation reduces ember production, fire propagation, intensity, and duration of the approaching flames.

This home provides a good example of defensible space.

Defensible Space

70 FEET

(ZONE 1 + ZONE 2 + ZONE 3 = 200 FEET)

Zone 3

Zone 3

100 FEET

Extends from the outer edge of Zone 2 to 200 feet from the structure

Zone 3 consists of mostly native plants appropriately thinned and spaced by 30 to 50 percent. The objective is to reduce vegetation density and overall fuel load. This slows the rate of fire spread, reducing flame lengths and fire intensity before it reaches irrigated zones or structures.

- Irrigation systems are not required.
- Vegetation consists of modified existing native vegetation.
- Additional ornamental shrubs and trees are generally not recommended due to water conservation goals.
- Existing native vegetation is modified by thinning and removing plants constituting a high fire risk, including, but not limited to, laurel sumac, chamise, ceanothus, sage, sage brush, buckwheat, and California juniper.
- Remove the lower ¹/₃ of large shrubs and all dead wood to reduce fuel loads.

- Trees should be limbed up to at least six feet above grade and a minimum of three times the height of underlying plants.
- As the distance from structures increases, native plants may be removed in reduced amounts.
- Spacing for large native shrubs or groups of native shrubs is 15 feet between the edge of their canopies.
- Spacing for existing native trees or small groups of trees is 30 feet between the edge of canopies. This depends on the species, topography, and orientation on the site.



Note: Special attention should be given to the use and maintenance of ornamental plants known or thought to be high-hazard plants when used in close proximity to structures. Examples include acacia, cedar, cypress, eucalyptus, Italian cypress, juniper, palms (remove all dead fronds), pine (removal within 30 feet of structures), and pampas grass. These plantings should be properly maintained and not allowed to be in mass plantings that could transmit fire from the native growth to any structure.

Fuel Modification

What Is Fuel Modification?

The Fuel Modification Plan Review Program affects new structures and developments built in fire hazard severity zones. A Fuel Modification Plan (or landscape plan) identifies defensible space zones and restricts or limits planting around structures.

For further information, please visit bit.ly/fuelmod or call (626) 969-5205.

Fuel Modification Zones



Ideal Fuel Modification Landscape:

Limited woody plant material, high moisture content, adequate spacing, and inorganic mulch throughout Zone A.



Zone A EXTENDS 30 FEET FROM THE STRUCTURE

- Irrigated area consisting of low-growing, small herbaceous plants with high-moisture content immediately around structures.
- Hedges shall not be within five feet of any structures.
- Occasional accents of woody shrubs or small patio trees 10 feet from structures. Single plants and/ or groups of plants are widely spaced (the distance between plants is three times the height).
- Cut annual grasses to three inches and remove leaf litter.
- Vines and climbing plants are not allowed on combustible structures.
- Use rock or non-combustible mulch within five feet of structures.

Create a Defensible Home

A home with defensible space has the greatest potential of surviving a wildfire. Defensible homes are compliant with the Los Angeles County Fire Department's brush clearance requirements. Homes built after January 1, 1996, have been through the Fire Department's Fuel Modification Program, where strict planting requirements and construction standards improve fire safety in the high and very high fire hazard severity zones.





Zone B

EXTENDS FROM THE OUTER EDGE OF ZONE A TO 100 FEET FROM THE STRUCTURE

- Irrigated with slightly denser planting than Zone A. Avoid woody plants larger than three feet in height at maturity under tree canopies.
- Has zone-appropriate shade trees with adequate spacing.
- Minimize continuous canopy coverage to reduce fire transmission.
- Screening plants may be used; however, continuous hedges are discouraged as this promotes accumulation of dead litter inside the live hedge and creates a continuous fuel ladder to the structure.

Zone C EXTENDS FROM THE OUTER EDGE OF ZONE B TO 200 FEET FROM THE STRUCTURE

- Thin to remove dead vegetation and prevent overgrowth.
- Thin native species to slow the fire's progress and reduce its intensity by decreasing availability of continuous fuels.
- Native vegetation is thinned 30 to 50 percent in Zone C.

✓ READY!

Safeguard or "Harden" Your Home

The ability of your home to survive a wildfire depends on the materials your home is constructed of and the quality of the "defensible space" surrounding it. Windblown embers from a wildfire will find the weak link in your home's fire protection scheme and gain the upper hand because of a small, overlooked, or seemingly inconsequential factor. However, there are measures you can take to safeguard your home from wildfire. While you may not be able to accomplish all of the measures listed below, each will increase your home's and possibly your family's - safety and survival.

Tour a Wildfire-Ready Home

Address 1

• Make sure your address is clearly visible from the road. The address needs to be a contrasting color to the surface that it is mounted on, so it can be seen.

Chimney 2

- Cover your chimney and stovepipe outlets with a nonflammable screen of ¹/₈ inch wire mesh or smaller to prevent embers from escaping and igniting a fire.
- Tree branches must be removed within 10 feet of any chimney (exception: oak trees).

Deck/Patio Cover 3

- Use heavy timber or non-flammable construction material for decks and patio covers, especially within the first 10 feet of the home.
- Enclose the underside of balconies and decks with fire-resistant materials to prevent embers from blowing underneath.
- Keep your deck clear of combustible items, such as baskets, dried flower arrangements, and other debris.

Driveways and Access Roads

- Driveways should be designed to allow fire and emergency vehicles and equipment to reach your home (current fire code requirement is 15 feet wide).
- Access roads should have a minimum 10-foot clearance on either side of the traveled section of the roadway and should allow for two-way traffic.
- Locked or electric gates should have a disconnect or a lock box.



- Ensure that all gates open inward and are wide enough to accommodate emergency equipment.
- Trim trees and shrubs above all roads clear to the sky, with the exception of Oak trees which only need to be cleared to a height of $13\frac{1}{2}$ (or 13.5) feet.

Garage 5

- Have a fire extinguisher and tools, such as a shovel, rake, bucket, and hoe, available for fire emergencies.
- Install a solid door with self-closing hinges between living areas and the garage. Install weather stripping around and under the doors to prevent ember intrusion.
- Store all combustibles and flammable liquids away from ignition sources.
- Keep the garage closed whenever possible.

Home Site and Yard 6

- Ensure you have up to a 200-foot radius of defensible space (cleared vegetation) around your home. If the 200-foot distance is on adjacent property, contact your local fire station for assistance in obtaining adequate clearance.
- Cut dry weeds and grass before noon when temperatures are cooler to reduce the chance of sparking a fire when using metal tools.
- Landscape with fire-resistant plants that are low-growing with high-moisture content.
- Keep woodpiles, propane tanks, and combustible materials away from your home and other structures, such as garages, barns, and sheds (recommended 30 feet).
- Ensure trees and branches are at least four feet away from power lines. Notify your power company if this condition exists; they will complete required work.



8

Inside

• Keep a working fire extinguisher on hand and train your family how to use it. Store in an easily accessible location (check expiration date regularly).



• Install smoke alarms on each level of your home and adjacent to the bedrooms. Test them monthly and change the batteries twice a year.

Non-Combustible Boxed-In (Soffit) Eaves

• Box-in eaves with non-combustible materials to prevent accumulation of embers.

Non-Combustible Fencing 🕤

• Make sure to use non-combustible fencing to protect your home during a wildfire.

Rain Gutters

• Screen or enclose rain gutters to prevent accumulation of plant debris.

Roof ⁸

- Your roof is the most vulnerable part of your home because it can easily catch fire from windblown embers.
- Homes with wood shake or shingle roofs are at a higher risk of being destroyed during a wildfire.
- Build your roof or re-roof with fire-resistant materials that include composition, metal, or tile.
- Block any spaces between roof decking and covering to prevent ember intrusion.
- Clear pine needles, leaves, and other debris from your roof and gutters.
- Cut any tree branches within 10 feet of your roof.

Vents

- Vents on homes are particularly vulnerable to flying embers.
- All vent openings should be covered with ¹/8-inch or smaller metal mesh. Do not use fiberglass or plastic mesh because they can melt and burn.
- Attic vents in eaves or cornices should be baffled or otherwise to prevent ember intrusion (mesh is not enough).

Walls 🧿

- Wood products, such as boards, panels, or shingles, are common siding materials. However, they are combustible and not good choices for fire-prone areas.
- Build or remodel with fire-resistant building materials, such as brick, cement, masonry, or stucco.
- Be sure to extend materials from foundation to roof.

Water Supply 0



• Have multiple garden hoses that are long enough to reach any area of your home and other structures on your property.

Windows 🛈

- Heat from a wildfire can cause windows to break even before the home ignites. This allows burning embers to enter and start internal fires. Single-paned and large windows are particularly vulnerable.
- Install dual-paned windows with an exterior pane of tempered glass to reduce the chance of breakage in a fire.
- Limit the size and number of windows in your home that face large areas of vegetation.

Utilities

• Ensure that your family knows where your gas, electric, and water main shut-off controls are and how to safely shut them down in an emergency.





☑ SET!

Create Your Own Wildfire Action Plan

Now that you have done everything you can to protect your home, it's time to prepare your family. Your Wildfire Action Plan must be prepared with all members of your household well in advance of a wildfire. Each family's plan will be different, depending on their situation. Once you finish your plan, practice it regularly with your family, and post it in a safe and accessible place for quick implementation.



1

Important Phone Numbers

- ☐ A family communication plan that designates an out-of-area friend or relative as a point-of-contact to act as a single source of communication among family members in case of separation.
- ☐ Maintain a list of emergency contact numbers posted near your phone and in your Emergency Supply Kit (see page 12 in this guide).

What to Take

- Assemble an Emergency Supply Kit (see page 12 in this guide).
- ☐ Keep an extra Emergency Supply Kit in your car in case you can't get to your home because of fire.
- Have a portable radio or scanner, so that you can stay updated on the fire.

Prepare to Evacuate

- Designate an emergency meeting location, outside the fire or hazard area. It is critical to determine who has safely evacuated from the affected area.
- □ Have several different travel routes from your home and community identified. Practice these often, so everyone in your family is familiar in case of emergency.
- □ Have all of the necessary supplies and/or boarding options for your pets and large animals identified and/or packed. If trailers are necessary for larger animals, have a plan that is tested and ready to implement.

LOS ANGELES COUNTY FIRE DEPARTMENT



Your Personal WILDFIRE ACTION PLAN



During High Fire Danger days in your area, monitor your local media for information on wildfires and be ready to implement your plan. Hot, dry, and windy conditions create the perfect environment for a wildfire.

1 IMPORTANT PHONE NUMBERS	
EMERGENCY CONTACTS	Papers Photos Cupply Kit
Name () Phone	- O Prescriptions O Documents O
Name () Phone	3 EVACUATION WHEN TO GO
SCHOOLS	WHERE TO GO
Name () Phone	HOW TO GET THERE
Name	DESTINATION WHO TO TELL (BEFORE AND AFTER)
() Phone	
FAMILY & FRIENDS	ANIMAL SHELTER
Name () Phone	Name
Name	LOS ANGELES COUNTY FIRE DEPARTMENT IF YOU HAVE AN EMERGENCY, CALL 9-1-1
Phone	Public Information Office: (323) 881-2411 fire.lacounty.gov



Assemble Your Emergency Supply Kit

Put together your emergency supply kit long before a wildfire or other disaster occurs, and keep it easily accessible, so you can take it with you when you have to evacuate. Plan to be away from your home for an extended period of time. Each person should have a readily accessible emergency supply kit. Backpacks work great for storing these items (except for food and water) and are easy to grab. Storing food and water in a tub or chest on wheels will make it easier to transport. Keep it light to be able to easily lift it into your vehicle.

Essential Supplies

First aid kit Three-day supply of non-perishable food and three gallons of water per person ☐ Flashlight Map marked with at least two evacuation routes Battery-powered radio and extra batteries Prescriptions or special medications □ Sanitation supplies Change of clothing and closed-toe shoes Copies of important documents (e.g., birth certificates, passports, etc.) Extra eyeglasses or contact lenses Don't forget food and water for your pets! An extra set of car keys, credit cards, and cash If Time Allows Personal computer data on hard drives/flash drives Easy-to-carry valuables Family photos and other irreplaceable items Chargers for cell phones, laptops, etc.

Pre-Evacuation Preparation Steps

When an evacuation is anticipated and if time permits, follow these checklists to give your home the best chance of surviving a wildfire:

Animals

- □ Locate your pets and keep them nearby.
- Prepare large animals for transport and think about moving them to a safe location early.

Inside

- □ Shut all windows and doors.
- Remove flammable window shades, lightweight curtains, and close metal shutters.
- Move flammable furniture to the center of the room, away from windows and doors.
- Leave your lights on, so firefighters can see your home under smoky conditions.
- □ Shut off the air conditioning.
- □ Shut off the gas meter and all pilot lights.

Outside

Gather flammable items from the exterior of the house and bring them inside (e.g., patio furniture, children's toys, doormats, etc.) or place them in your pool.

- □ Turn off propane tanks. Move propane BBQ appliances away from structures.
- Connect garden hoses to outside water valves or spigots for use by firefighters.
- Don't leave sprinklers on or water running. They can affect critical water pressure.
- Leave exterior lights on.
- □ Put your emergency supply kit in your vehicle.
- Back your loaded vehicle into the driveway with all doors and windows closed. Carry your car keys with you.
- ☐ Have a ladder available in a conspicuous location for firefighter use.
- Seal attic and ground vents with a non-combustible material or commercial seals, if time permits.
- Monitor your property and your wildfire situation. Don't wait for an evacuation order, if you feel threatened and need to, leave.
- Check on neighbors and make sure they are preparing to leave.





GO!

igashiftharpoonup Take action immediately when wildfire strikesigashiftharpoonup

Go Early

By leaving early, you will give your family the best chance of surviving a wildfire. You also help firefighters by keeping roads clear of congestion, enabling them to move more freely throughout the neighborhood and do their job.

When to Go

Leave early enough to avoid being caught in fire, smoke, or road congestion. Don't wait to be told by authorities to leave. In an intense wildfire, they may not have time to knock on every door. If you are advised to leave, don't hesitate!

The terms "Voluntary" and "Mandatory" are used to describe evacuation orders. However, local jurisdictions may use other terminology such as "Precautionary" and "Immediate Threat." These terms are used to alert you to the significance of the danger. All evacuation instructions provided by emergency personnel should be followed immediately for your safety.

Where to Go

Leave for a pre-determined location. It should be a lowrisk area, such as a well-prepared neighbor or relative's house, a Red Cross shelter or evacuation center, motel, etc.

How to Get There

Have several evacuation routes in case one route is blocked by the fire or by emergency vehicles and equipment. Choose an evacuation route away from the fire.



Follow these steps as soon as possible to get ready to GO!

• Review your Wildfire Action Plan evacuation checklist.



• Ensure your Emergency Supply Kit is in your vehicle.



- Cover up to protect against heat and flying embers. Wear long pants, a longsleeve shirt, heavy shoes/boots, a cap, dry bandana (for face cover), goggles, or glasses. 100% cotton is preferable.
- Locate your pets and take them with you.



GO!

Survival Tips if You Become Trapped

In Your Home

- Stay calm and keep your family together.
- Call 9-1-1 and inform authorities of your location.
- Fill sinks and tubs for an emergency water supply.
- ☐ Keep doors and windows closed, but unlocked.
- Remove curtains from the windows.
- □ Turn your interior and exterior lights on.
- Stay inside your home.
- □ Shelter away from outside walls.

In Your Vehicle

- □ Stay calm.
- □ Park your vehicle in an area clear of vegetation.
- Close all vehicle windows and vents.
- Cover yourself with a wool or cotton blanket or jacket.
- Lie on the vehicle floor.
- Use your cell phone and call 9-1-1 to inform authorities of your location.

On Foot

- □ Stay calm.
- Go to an area clear of vegetation, a ditch or depression on level ground, if possible.
- Lie face down and cover up your body.
- Use your cell phone and call 9-1-1 to inform authorities of your location.

Returning Home After a Wildfire

Do not return home until emergency officials determine it is safe. You will receive proper notification to do so as soon as it is possible, considering safety and accessibility.

When You Return Home

- Be alert for downed power lines and other hazards.
- Check propane tanks, regulators, and lines before turning gas on.
- Check your residence carefully for hidden embers or smoldering fires.









Remember the Six P's





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youtube.com/user/LosAngelesCountyFD

vimeo.com/user4029934

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LACOFD FOUNDATION



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Download the Ready! Set! Go! Wildfire Action Plan at fire.lacounty.gov/rsg or by scanning this QR code with your smart phone.

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LOS ANGELES COUNTY FIRE DEPARTMENT Public Information Office

1320 N. Eastern Avenue Los Angeles, California 90063 323-881-2411 fire.lacounty.gov

Produced by the Communications Section of the Executive Support Division. Revised April 29, 2021.



LOS ANGELES COUNTY FIRE DEPARTMENT FOUNDATION

1320 N. Eastern Ave. Los Angeles, CA 90063 323-793-FIRE

supportlacountyfire.org

The Los Angeles County Fire Department Foundation is a charitable 501(c)(3) nonprofit organization.

Learn more or donate online at SupportLACountyFire.org or donate by texting F-I-R-E-S to 44321.

Appendix B1 through B4

Family Disaster Plan and Personal Survival Guide

Additional Items to Consider Adding to an Emergency Supply Kit:

- Prescription medications and glasses
- □ Infant formula and diapers
- □ Pet food and extra water for your pet
- Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container
- Cash or traveler's checks and change
- Emergency reference material such as a first aid book or information from www.ready.gov
- □ Sleeping bag or warm blanket for each person. Consider additional bedding if you live in a cold-weather climate.
- Complete change of clothing including a long sleeved shirt, long pants and sturdy shoes. Consider additional clothing if you live in a cold-weather climate.
- ❑ Household chlorine bleach and medicine dropper When diluted nine parts water to one part bleach, bleach can be used as a disinfectant. Or in an emergency, you can use it to treat water by using 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.
- **Fire Extinguisher**
- Matches in a waterproof container
- □ Feminine supplies and personal hygiene items
- ☐ Mess kits, paper cups, plates and plastic utensils, paper towels
- Paper and pencil
- Books, games, puzzles or other activities for children

Emergency Supply List



www.ready.gov





Recommended Items to Include in a Basic Emergency Supply Kit:

Water, one gallon of water per person per day for at least three days, for drinking and sanitation

Food, at least a three-day supply of non-perishable food

Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both

Flashlight and extra batteries

First aid kit

Whistle to signal for help

Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place

Moist towelettes, garbage bags and plastic ties for personal sanitation

Wrench or pliers to turn off utilities

Can opener for food (if kit contains canned food)

Local maps

Through its Ready Campaign,

the Federal Emergency Management Agency educates and empowers Americans to take some simple steps to prepare for and respond to potential emergencies, including natural disasters and terrorist attacks. *Ready* asks individuals to do three key things: get an emergency supply kit, make a family emergency plan, and be informed about the different types of emergencies that could occur and their appropriate responses.

All Americans should have some basic supplies on hand in order to survive for at least three days if an emergency occurs. Following is a listing of some basic items that every emergency supply kit should include. However, it is important that individuals review this list and consider where they live and the unique needs of their family in order to create an emergency supply kit that will meet these needs. Individuals should also consider having at least two emergency supply kits, one full kit at home and smaller portable kits in their workplace, vehicle or other places they spend time.



Federal Emergency Management Agency Washington, DC 20472



BE SMART. TAKE PART. CREATE YOUR FAMILY EMERGENCY COMMUNICATION PLAN

Join with others to prepare for emergencies and participate in America's PrepareAthon! | ready.gov/prepare

Creating your Family Emergency Communication Plan starts with one simple question: "What if?"

"What if something happens and I'm not with my family?" "Will I be able to reach them?" "How will I know they are safe?" "How can I let them know I'm OK?" During a disaster, you will need to send and receive information from your family.

Communication networks, such as mobile phones and computers, could be unreliable during disasters, and electricity could be disrupted. Planning in advance will help ensure that all the members of your household—including children and people with disabilities and others with access and functional needs, as well as outside caregivers—know how to reach each other and where to meet up in an emergency. Planning starts with three easy steps:



1. COLLECT.

Create a paper copy of the contact information for your family and other important people/offices, such as medical facilities, doctors, schools, or service providers.



2. SHARE.

Make sure everyone carries a copy in his or her backpack, purse, or wallet. If you complete your *Family Emergency Communication Plan* online at <u>ready.gov/make-a-plan</u>, you can print it onto a wallet-sized card. You should also post a copy in a central location in your home, such as your refrigerator or family bulletin board.



3. PRACTICE.

Have regular household meetings to review and practice your plan.



If you are using a mobile phone, a text message may get through when a phone call will not. This is because a text message requires far less bandwidth than a phone call. Text messages may also save and then send automatically as soon as capacity becomes available.


HOUSEHOLD INFORMATION

Write down phone numbers and email addresses for everyone in your household. Having this important information written down will help you reconnect with others in case you don't have your mobile device or computer with you or if the battery runs down. If you have a household member(s) who is Deaf or hard of hearing, or who has a speech disability and uses traditional or video relay service (VRS), include information on how to connect through relay services on a landline phone, mobile device, or computer.

SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS

Because a disaster can strike during school or work hours, you need to know their emergency response plans and how to stay informed. Discuss these plans with children, and let them know who could pick them up in an emergency. Make sure your household members with phones are signed up for alerts and warnings from their school, workplace, and/or local government. To find out more about how to sign up, see *Be Smart. Know Your Alerts and Warnings* at http://1.usa.gov/1BDloze. For children without mobile phones, make sure they know to follow instructions from a responsible adult, such as a teacher or principal.

OUT-OF-TOWN CONTACT

It is also important to identify someone outside of your community or State who can act as a central point of contact to help your household reconnect. In a disaster, it may be easier to make a long-distance phone call than to call across town because local phone lines can be jammed.

EMERGENCY MEETING PLACES

Decide on safe, familiar places where your family can go for protection or to reunite. Make sure these locations are accessible for household members with disabilities or access and functional needs. If you have pets or service animals, think about animal-friendly locations. Identify the following places:

Indoor: If you live in an area where tornadoes, hurricanes, or other high-wind storms can happen, make sure everyone knows where to go for protection. This could be a small, interior, windowless room, such as a closet or bathroom, on the lowest level of a sturdy building, or a tornado safe room or storm shelter.

In your neighborhood: This is a place in your neighborhood where your household members will meet if there is a fire or other emergency and you need to leave your home. The meeting place could be a big tree, a mailbox at the end of the driveway, or a neighbor's house.

Outside of your neighborhood: This is a place where your family will meet if a disaster happens when you're not at home and you can't get back to your home. This could be a library, community center, house of worship, or family friend's home. *Outside of your town or city*: Having an out-of-town meeting place can help you reunite if a disaster happens and:

- You cannot get home or to your out-of-neighborhood meeting place; or
- Your family is not together and your community is instructed to evacuate the area.

This meeting place could be the home of a relative or family friend. Make sure everyone knows the address of the meeting place and discuss ways you would get there.

OTHER IMPORTANT NUMBERS AND INFORMATION

You should also write down phone numbers for emergency services, utilities, service providers, medical providers, veterinarians, insurance companies, and other services.



Discuss what information you should send by text. You will want to let others know you are safe and where you are. Short messages like "I'm OK. At library" are good.

	Talk about who will be the lead person to send out information about the designated meeting place for the household.
	Practice gathering all household members at your indoor and neighborhood emergency meeting places. Talk about how each person would get to the identified out-of-neighborhood and out-of-town meeting places. Discuss all modes of transportation, such as public transportation, rail, and para-transit for all family members, including people with disabilities and others with access and functional needs.
	Regularly have conversations with household members and friends about the plan, such as whom and how to text or call, and where to go.
	To show why it's important to keep phone numbers written down, challenge your household members to recite important phone numbers from memory— now ask them to think about doing this in the event of an emergency.
	Make sure everyone, including children, knows how and when to call 911 for help. You should only call 911 when there is a life-threatening emergency.
	Review, update, and practice your <i>Family Emergency Communication Plan</i> at least once a year, or whenever any of your information changes.
To he step: <i>It Sta</i> www icon	elp start the conversation or remind your family why you are taking s to prepare and practice, you may want to watch the 4-minute video, <i>arted Like Any Other Day</i> , about families who have experienced disaster, at v.youtube.com/watch?v=w_omgt3MEBs. Click on the closed captioning (CC) on the lower right to turn on the captioning.
After impr reme	you practice, talk about how it went. What worked well? What can be oved? What information, if any, needs to be updated? If you make updates, ember to print new copies of the plan for everyone.
отн	ER IMPORTANT TIPS FOR COMMUNICATING IN DISASTERS ¹
	Text is best when using a mobile phone, but if you make a phone call, keep it brief and convey only vital information to emergency personnel and/or family or household members. This will minimize network congestion, free up space on the network for emergency communications, and conserve battery power. Wait 10 seconds before redialing a number. If you redial too quickly, the data from the handset to the cell sites do not have enough time to clear before you've re-sent the same data. This contributes to a clogged network.
	Conserve your mobile phone battery by reducing the brightness of your screen, placing your phone in airplane mode, and closing apps you do not need. Limit watching videos and playing video games to help reduce network congestion.

Keep charged batteries, a car phone charger, and a solar charger available for backup power for your mobile phone, teletypewriters (TTYs), amplified phones, and caption phones. If you charge your phone in your car, be sure the car is in a well-ventilated area (e.g., not in a closed garage) to avoid life-threatening carbon monoxide poisoning.

If driving, do not text, read texts, or make a call without a hands-free device.
Maintain a household landline and analog phone (with battery backup if it has a cordless receiver) that can be used when mobile phone service is unavailable. Those who are Deaf or hard of hearing, or who have speech disabilities and use devices and services that depend on digital technology (e.g., VRS, Internet Protocol [IP] Relay, or captioning) should have an analog phone (e.g., TTY, amplified phone, or caption phone) with battery backup in case Internet or mobile service is down.
If you evacuate and have a call-forwarding feature on your home phone, forward your home phone number to your mobile phone number.
Use the Internet to communicate by email, Twitter, Facebook, and other social media networks. These communication channels allow you to share information quickly with a widespread audience or to find out if loved ones are OK. The Internet can also be used for telephone calls through Voice over Internet Protocol. For those who are Deaf or hard of hearing, or who have speech disabilities, you can make calls through your IP Relay provider.
If you do not have a mobile phone, keep a prepaid phone card to use if needed during or after a disaster.
Use a pay phone if available. It may have less congestion because these phones don't rely on electricity or mobile networks. In some public places, you may be able to find a TTY that can be used by those who are Deaf or hard of hearing, or who have speech disabilities.

America's PrepareAthon! is a grassroots campaign for action to get more people prepared for emergencies. Make your actions count at ready.gov/prepare.

The reader recognizes that the Federal Government provides links and informational data on various disaster preparedness resources and events and does not endorse any non-Federal events, entities, organizations, services, or products.



FAMILY EMERGENCY COMMUNICATION PLAN

HOUSEHOLD INFORMATION

Home #: Address:
Name:
Name:
Name:
Name:
Name: Address: Emergency/Hotline #: Website: Emergency Plan/Pick-Up:

America's PrepareAthon! Ready

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SCHOOL, CHILDCARE,

CAREGIVER, AND WORKPLACE

EMERGENCY PLANS

SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS	Name: Address: Emergency/Hotline #: Website: Emergency Plan/Pick-Up:
	Name: Address: Emergency/Hotline #: Website: Emergency Plan/Pick-Up:
	Name: Address: Emergency/Hotline #: Website: Emergency Plan/Pick-Up:
IN CASE OF EMERGENCY (ICE) CONTACT	Name:
OUT-OF-TOWN Contact	Name:
EMERGENCY MEETING PLACES	Indoor: Instructions: Neighborhood: Instructions:
	Out-of-Neighborhood: Address: Instructions:
	Out-of-Town: Address: Instructions:

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IMPORTANT NUMBERS OR INFORMATION

Police:	Dial 911 c	or #:	
Fire:	Dial 911 c	or #:	
Poison Control:		#:	
Doctor:		#:	
Doctor:		#:	
Pediatrician:		#:	
Dentist:		#:	
Hospital/Clinic:		#:	
Pharmacy:		#: .	
Medical Insurance:		#:	
Policy #:			
Medical Insurance:		#:	
Policy #:			
Homeowner/Rental	Insurance	9:	
#:			
Policy #:			
Flood Insurance:		#:	
Policy #:			
Veterinarian:		#:	
Kennel:		#:	
Electric Company: .		#:	
Gas Company:		#:	
Water Company:		#:	
Alternate/Accessible	e Transpor	rtatio	n:
#:			
Other:		#:	
Other:		#:	
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r		IN CASE OF EMERGENCY (ICE) CONTACT	
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PrepareAthon! Ready		Address:	
BE SMART. TAKE PART. PREPARE.			
	i i	OUT-OF-TOWN CONTACT	
	i i	Name: Mobile #:	
Mitte vour family's name above		Home #: Email:	
Family Emergency Communication Plan	1 1	Address:	
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HOUSEHOLD INFORMATION	I I	EMERGENCY MEETING PLACES	
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Other # or social media: Email:		· · · · · · · · · · · · · · · · · · ·	
I Important medical or other information:	1 1		
	i i	Neighborhood:	•
Name:Mobile #:	1 1	Instructions:	-
Other # or social media: Email:	1 1		-
Important medical or other information	FOLD		
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I Namo: Mobile #:		Out-of-Neighborhood:	•
		Address:	•
Other # or social media: Email:	1	Instructions:	-
Important medical or other information:	1 1		
1	1 1		
Name:Mobile #:	1 1	Out-of-Town:	•
Other # or social media: Email:	i i	Address:	
Important medical or other information:		Instructions:	
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SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS	<u>i</u> i	Police:Dial 911 or #:	
l Addrose:	i i	Fire:Dial 911 or #:	
	1 1	Poison Control:#:	•
Emergency/Hotline #: Website:	1 1	Doctor: #:	
Emergency Plan/Pick-Up:	į i	Pediatrician:#:	
I Name:		Dentist:	-
I Address:		Medical Insurance:	•
I Emergency/Hotline #: Website:	1	Medical Insurance:	
	i i	Policy #:	
Emergency Plan/Pick-Up:	FOLD	Hospital/Clinic:#:	2
Name:		Pharmacy:#:	
Address:	i i	Homeowner/Rental Insurance:#:	•
Emergency/Hotline #: Website		Policy #:	
		Policy #:	
Emergency Franziscop		Veterinarian:#:	
Name:	i i	Kennei:#: Electric Company:	•
Address:		Gas Company:#:	
Emergency/Hotline #:Website:	1 1	Water Company:#:	
Emergency Plan/Pick-Up:	i i	Alternate/Accessible Iransportation:#:	•
	1 1	Other:	
	a (



Family Disaster Plan

Family Last Name(s) or House	Date:								
Family Member/Household Co	ontact Info (If needed, a	dditional space is provid	ed in #10 below):						
Name	Home Phone	Cell Phone	<u>Email</u> :						
Pet(s) Info:									
Name:	<u>Type:</u>	<u>Color:</u>	Registration #:						

Plan of Action

1. The disasters most likely to affect our household are:

2. What are the escape routes from our home?

3. If separated during an emergency, what is our meeting place near our home?

4. If we cannot return home or are asked to evacuate, what is our meeting place outside of our neighborhood?

 What is our route to get there and an alternate route, if the first route is impassible?

 5. In the event our household is separated or unable to communicate with each other, our emergency

5. In the event our household is separated or unable to communicate with each other, our emergency contact outside of our immediate area is:

<u>Name</u>	<u>Home Phone</u>	<u>Cell Phone</u>	<u>Email</u> :

After a disaster, let your friends and family know you are okay by registering at "Safe and Well" at <u>https://safeandwell.communityos.org/cms//</u> or by calling 1-800-733-2767. You can also give them a call, send a quick text or update your status on social networking sites.

6. If at school/daycare, our child(ren) will be evacuated to:

Child's Name:	Evacuation Site (address and contact info):				
7. Our plan for people in our he	ousehold with a disability or special need is:				
Person's Name:	<u>Plan:</u>				

8. During certain emergencies local authorities may direct us to "shelter in place" in our home. An accessible, safe room where we can go, seal windows, vents and doors and listen to emergency broadcasts for instructions, is:

9. Family Member Responsibilities in the Event of a Disaster

Task	Description	Family Member Responsible
Disaster Kit*	Stock the disaster kit and take it if evacuation is necessary. Include	
	to include medications and eye glasses.	
Be informed	Maintain access to NOAA or local radio, TV, email or text alerts for	
	important and current information about disasters.	
Family	Make sure the household medical information is taken with us if	
Medical	evacuation is necessary.	
Information		
Financial	Obtain copies of bank statements and cash in the event ATMs and	
Information	credit cards do not work due to power outages. Bring copies of	
	utility bills as proof of residence in applying for assistance.	
Pet	Evacuate our pet(s), keep a phone list of pet-friendly motels and	
Information	animal shelters, and assemble and take the pet disaster kit.	
Sharing and	Share the completed plan with those who need to know. Meet	
Maintaining	with household members every 6 months or as needs change to	
the Plan	update household plan.	

*What supplies and records should go in your disaster kit? Visit <u>www.redcross.org</u>

10. Other information, if not able to be included above.

Congratulations on completing your family disaster plan! Please tell others: "We've made a family disaster plan and you can, too, with help from the American Red Cross."

Get the facts about what you should do if an emergency or disaster occurs at <u>www.redcross.org</u>

Appendix C

Evacuation Route Analysis Summary

1 Evacuation Road Network

Wildfire emergencies that would be most likely to include an evacuation of the Modified Project area would be large wildfires approaching from the north or east under extreme fire weather conditions, or from wildfires with potential to spot into the Modified Project area, as discussed further in the Modified Project's Fire Protection Plan (FPP). Wildfires from the west may also occur but would typically occur under less extreme fire conditions. Extreme fires are often wind driven and occur during declared Red Flag Warning periods where low humidity and high winds facilitate fire ignition and spread. If a wildfire ignites to the north or east and is fanned by fire weather conditions with winds from the north/east, an early evacuation of the area may occur as many as several or more hours prior to actual threatening conditions at the Modified Project site, or if ignited close to the Modified Project, may not allow significant lead time. Fires occurring on typical weather days have been very successfully controlled at small sizes due to the slower fire spread and fast response and would not typically trigger a need to evacuate the entire Project site. Fires burning in the open space fuels to the west of the Modified Project site on a typical day would be much lower threat to the Modified Project and would have a reduced evacuation potential.

If a wildfire ignited closer to the Modified Project site during weather that facilitates rapid fire spread, a different evacuation approach would need to be considered. Because it is preferred to evacuate long before a wildfire is near, and in fact, history indicates that most human fatalities from wildfires are due to late evacuations when evacuees are overtaken on roads, it is prudent to consider a contingency option. For example, if a wildfire is anticipated to encroach upon the Modified Project area in a timeframe that is shorter than would be required to evacuate all occupants, then options available to responding fire and law enforcement personnel should include 1) partial relocation where occupants are temporarily relocated to internal areas, or 2) temporary refuge where occupants are instructed to remain in protected on-site structures or at a designated site, while firefighters perform their structure protection function.

As described further in the Modified Project's FPP, as with the 2017 Approved Project, the Modified Project site is located within an area that is subject to wildfires and based on the adjacent land uses and open space in the vicinity, the wildfire potential is considered very high. The fire intensity would be expected to be low to moderate within the Modified Project site due to the design characteristics and moderate to high within the open space areas within and surrounding the Modified Project site. This reduced fire behavior would be expected to facilitate evacuations as well as potential on-site sheltering within designated safe refuge areas, if considered safer than a short-notice evacuation.

Although not a designated shelter-in-place community, Modified Project structures include the same level of ignition resistance (e.g., enhanced construction materials) and landscape maintenance (e.g., annual FMZ inspection), are defensible against the anticipated wildfire exposure, and are designed to require minimal resources for protection, which enables these contingency options.

As with the 2017 Approved Project, the Modified Project roads and adjacent road circulatory system will be able to effectively handle average daily trips generated by the Modified Project. However, as evidenced by mass evacuations in the County of Los Angeles and elsewhere, even with roadways that are designed to the code requirements, it may not be possible, or necessary to move large numbers of persons at the same time. Road infrastructure throughout the United States, and including the County of Los Angeles, is not designed to accommodate a short-notice, mass evacuation (FEMA 2008). The need for evacuation plans, pre-planning, and tiered or targeted and staggered evacuations becomes very important for improving evacuation effectiveness.

Among the most important factors for successful evacuations in urban settings is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, firefighters or other means, potential backups and slowed evacuations can be minimized. Another important aspect of successful evacuation is a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables the subsequent traffic surges on major roadway to be smoothed over a longer time frame and can be planned to result in traffic levels that flow better than when mass evacuations include large evacuation areas at the same time. This Evacuation Plan defers to Law Enforcement and OEM to appropriately phase evacuations and to consider the vulnerability of communities when making decisions. For example, newer development in the area, including the Modified Project, will offer its occupants a high level of fire safety on-site (refer to the Fire Protection Plan for the Entrada South/VCC Project prepared by Dudek (2022)), along with options for firefighter safety zones and temporary on-site refuge as a contingency, as discussed further in this Evacuation Plan.

As with the 2017 Approved Project, the Modified Project's planned interior road network interconnects with the existing regional road system to provide multi-directional primary and secondary emergency evacuation routes consistent with most developments in this area. Consistent with the County of Los Angeles evacuation approach, major ground transportation corridors in the area will be used as primary evacuation routes during an evacuation effort. The road systems were evaluated to determine the best routes for fire response equipment and "probable" evacuation routes for relocating people to designated safety areas. The primary roadways that would be used for evacuation from the Entrada South Planning Area are Magic Mountain Parkway, The Old Road, and Westridge Parkway and Valencia Boulevard. The primary roadways that would be used for evacuation from the VCC Planning Area are Commerce Center Drive, Hasley Canyon Road, The Old Road, Franklin Parkway to Wolcott Way, and Henry Mayo Drive. These roads provide access to urbanized areas and major traffic corridors including the I-5 and in some wildfire scenarios, SR-126.

During an emergency evacuation from the Modified Project, the primary and secondary roadways may be providing citizen egress while responding emergency vehicles are inbound. Because the roadways are all designed to meet or exceed County of Los Angeles requirements, unobstructed travel lane widths, shoulders, vehicle turnouts, adequate parking, turning radius, grade maximums, signals at intersections, and roadside fuel modification zones, potential conflicts that could reduce the roadway efficiency are minimized, allowing for smoother evacuations.

As with the 2017 Approved Project, the Modified Project's primary evacuation routes are accessed through a series of roadways, which connect with the primary ingress/egress roads (Magic Mountain Parkway, Commerce Center Drive, Hasley Canyon Road, The Old Road) that intersect off-site primary and major evacuation routes.

Entrada Planning Area Primary and Secondary Emergency Ingress/Egress

- Primary Route: Magic Mountain Parkway, or to The Old Road or I-5 to the north or south.
- Secondary Route: Westridge Parkway to Valencia Blvd then east to The Old Road or I-5.

VCC Planning Area Primary and Secondary Emergency Ingress/Egress

- **Primary Route:** Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- **Primary Route:** Commerce Center Drive to SR-126 to the east or west.
- Secondary Route: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.

• Secondary Route: Franklin Parkway to Wolcott Way to SR 126. Also potentially available is the existing emergency vehicle access (gated) at the end of Franklin Parkway to Live Oak Road to The Old Road.

Depending on the nature of the emergency requiring evacuation, it is anticipated that the majority of the Entrada South Planning Area traffic would exit the Modified Project site via Magic Mountain Parkway, which is the direct route out of the Modified Project site and onto other down-stream roadways. Another option that may be available in some evacuation scenarios is via Westridge Parkway & Valencia Blvd to The Old Rd/I-5. In a typical evacuation that allows several hours or more time, traffic may be directed in several directions to the north or south to the Old Road or I-5 and away from a west or east/northeast wind driven fire determined mostly by the fire's location, its spread rate and direction, time available before it could threaten evacuation routes, traffic levels, and others. If less time is available, or one or more potential routes are considered unsafe, fire and law enforcement officials may direct all traffic in one direction and may consider directing some Project populations to temporarily refuge in a designated building.

Fire Access Road Maintenance

Maintenance is an important component for the long-term reliability of all Project roadways. Maintenance obligations for the Entrada South and VCC Project will be as follows:

 Routine road and roadside landscape maintenance throughout the Modified Project sites, per the Modified Project's FPP (Dudek 2022).

1.1 Roadway Capacities and Evacuation

Roadway capacity represents the calculated 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, demand surges, number of traffic signals, construction activity, accidents, and obstructions as well as positively by traffic control measures. Each roadway classification has a different capacity based on level of service, with freeways and highways having the highest capacities. Using traffic engineer estimates and industry standard lane capacity information as a conservative approach for the baseline, including a discounting of roadway capacity, roads that would be the most likely available to the Modified Project and their hourly capacities are presented in Table 1.

		#	Estimated Roadway and Freeway Capacity ¹				
Roadway	Segment	Lanes/ Exits	Hour 1	Hour 2	Hour 3	Average	Max
Entrada Planning Area							
Magic Mountain Parkway	Western terminus to I-5	3/3	5,406	5,254	5,616	5,425.33	5,616
The Old Road	Hasley Canyon Road and Valencia Boulevard	2/2*	2,838	130	1,322	1,430	2,838
Exit Capacity		3				1,900	5,616ª

Table 1. Existing Roadway and Freeway Estimated Hourly Vehicle Capacities

Table 1. Existing Roadway and Freeway Estimated Hourly Vehicle Capacities

		#	Estimated Roadway and Freeway Capacity ¹			acity ¹	
Roadway	Segment	Lanes/ Exits	Hour 1	Hour 2	Hour 3	Average	Max
VCC Planning Area							
The Old Road	Hasley Canyon Road and Valencia Boulevard	3/3°	2,838	130	1,322	1,430	2,838
Hasley Canyon Road	Hasley Canyon Road and I-5	3/3	1,830	2,756	1,884	2,156.67	2,756
Commerce Center Drive	Henry Mayo Drive to Hasley Canyon Road	3/3	2,578	1,442	1,456	1,825.33	2,578
Henry Mayo Drive	Commerce Center Drive and The Old Road	3/3°	6,994	5,414	3,646	5,351.33	6,994
Exit Capacity		2				1,900	1,825.33 ^b

Source: CR Associates 2022

^a Although the maximum exit capacity for Entrada South is 5,700, it is limited by Magic Mountain Parkway's overall capacity of 5,616.

^b Although the maximum exit capacity for VCC is 3,800, it is limited by Commerce Center Drive's overall capacity of 1,825.33.

^c The Old Road includes 3 lanes in each direction from approximately 1,000 feet north of Magic Mountain Parkway to Stevenson Ranch Parkway and 2 lanes in each direction north and south of this road section.

Using these averages, the length of time it will take for an area to evacuate can be estimated by dividing the population by the average vehicle occupancy and then dividing by the roadway capacity (Figure 4). Tables 2 and 3 provides a summary of the calculated vicinity populations including existing residents of Westridge, Mission Village, Hasley Hills, Hasley Canyon and North Bluffs communities and the Modified Project's population. Under the Modified Project, the Entrada Planning Area includes 1,574 dwelling units, 730,000 square feet of non-residential development, a public park and potential school site, a spineflower preserve, and trails and infrastructure, and the VCC Planning Area includes the development of up to 3.4 million square feet of non-residential development.

Figure 4. Evacuation Time Calculation

(Evacuation Population Average Vehicle Occupancy Evacuation Time =

Roadway Capacity

For purposes of this evacuation analysis,¹ the existing population is estimated to include 3.15 persons per dwelling unit, which equals approximately 17,859 existing residents within the Entrada Planning Area. The Modified Project proposes a total of 1,574 residential units within the Entrada Planning Area with a projected population of 4,958

¹ Population, employee and similar estimates in this evaluation analysis were conservative in nature to account for the worst case level of analysis provided and are not necessarily intended to account for anticipated typical conditions.

and 730,000 sq/ft of non-residential/commercial/office space with a projected population of 2,500 employees². The combined population of the existing land uses and the Modified Project would be approximately 44,663 persons. During an evacuation, it is assumed the average vehicle occupancy is 2 persons per vehicle, resulting in up to 22,332 vehicles potentially evacuating in a major incident that required full evacuation of the surrounding land uses and the Entrada South Planning Area. However, to continue this CWEP conservative approach, the evacuation travel time calculation is based on every residence evacuating two vehicles. This results in up to 11,338 vehicles generated from existing residential units and 3,921 vehicles from proposed residential uses for the Entrada South Planning Area, totaling up to 15,259 vehicles. There are also several non-residential land uses that could potentially contribute to evacuation traffic in the Entrada South Planning Area build-out, including Six Flags Magic Mountain (11,000 parking spaces³), commercial and industrial-office (7,412 parking spaces), Rancho Pico Junior High (15 busses and 19 vehicles), Oak Hills Elementary School (9 busses and 26 vehicles) and West Ranch High School (35 busses and 178 vehicles).

There are several communities (North Bluffs, Hasley Hills, Hasley Canyon) within the vicinity of the VCC Planning Area with an approximate population of 4,763 residents. Additionally, the Mission Village community, which is within the vicinity of the Modified Project and south of SR-126, is approved to construct up to 4,055 residential units and 1,555,100 square feet of commercial uses at buildout with an anticipated population of 12,774 residents and 4,571 employees. This evacuation analysis assumes 40% of the total Mission Village population (17,345) would use N Commerce Center Drive to SR-126 to evacuate, approximately 5,110 residents and 1,828 employees or 5,234 vehicles. The Modified Project proposes 3.4 million sq/ft of non-residential/industrial park/business park/commercial space at the VCC Planning Area, which would add an estimated population of 10,200 employees and an estimated 8,293 parking spaces within the VCC Planning Area. Within the VCC Planning Area, the Modified Project does not propose any additional residential development. There are also several non-residential land uses that could potentially contribute to evacuation traffic in the VCC Planning Area, including commercial and industrial-office uses (14,688 parking spaces) and Live Oak Elementary School (8 busses and 19 vehicles).

For commercial and industrial-office uses, it is assumed that some portion of these populations would be individuals from the surrounding communities; therefore, the total number of vehicles each use is generating can be reduced to avoid redundancy in calculating the evacuation conditions. For the purposes of this CWEP, based on an educated assumption using the estimated study area population density, the total number of parking spaces will be reduced 20% (1,548 parking spaces for Entrada South and 2,938 for VCC⁴) to account for individuals working or visiting commercial or industrial-office uses from within the surrounding communities; therefore the population of these uses from outside of the surrounding residential communities would be 18,314 for the Entrada South Planning Area and 9,447 for the VCC Planning Area.

This increases the estimated total population to 44,663 persons and number of evacuating vehicles to 28,550 for the Entrada South Project Area and 29,011 persons and number of evacuating vehicles to 20,199 for the VCC Planning Area, as depicted in Tables 2 and 3, respectively.

The number would likely be lower, as some 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

Resident and worker population estimates for the Modified Project were based on the land use assumptions for purposes of this analysis.

³ The parks capacity is 65,000 guests, and the parking lot has an estimated 11,000 parking spaces; however, the average number of daily guests is approximately 9,647 (AECOM 2020). For this analysis, the average number of daily guests is used to calculate the evacuation scenario.

⁴ This is the number of parking spaces reduced for the estimated number of spaces for the commercial/office spaces.

typical work hours or if after hours, schools and industrial/office spaces would not be at maximum capacity. Additionally, while the stay-at-home order is no longer in effect, the COVID pandemic initially required most all employees work from home. While not all employees have continued to work from home, many have continued to telecommute full- or part-time. Therefore, the number of individuals commuting from outside the region are likely lower than the estimated total number of vehicles presented in Tables 2 and 3.

Table 3. Entrada South Planning Area Population Estimates^m

	Westridge Community Existingª	Mission Village ⁶	Entrada South (2017 Approved Project)	Entrada South (Modified Project)	Six Flags Magic Mountain	Commercial- Office/ Industrial	Rancho Pico Junior High School	Oak Hills Elementary School	West Ranch High School	
Population by Land Use	Residential 1,614 units Commercial/ Office 199,199 sq/ft	Residential 4,055 units Commercial 1,555,100 sq/ft	Residential 1,725 units Commercial/ Office 480,000 sq/ft	Residential 1,574 units Commercial/ Office 730,000 sq/ft	_	Valencia Crossings 15,695 sq/ft Entrada Gateway Center 200,000 sq/ft Hilton Garden Inn 152 rooms Other Commercial 19,000 sq/ft	-	-	_	_
Persons per Unit	3.15	3.15	3.15	3.15	-	-	-	-	-	_
Calculated Population	Total 5,625 Residents 5,085 Employees 703	Total 17,345 Residents 12,774 Employees 4,571	Total 6,994 Residents 5,434 Employees 1,560	Total 7,458 Residents 4,958 Employees 2,500	Total 9,744 Guests ^e 9,647 Employees ^f 97	Total 703 ^h Valencia Crossings 63 Entrada Gateway Center 500 Hilton Garden Inn 40 Other Commercial 100	Total 902 Students 853 Staff 49	Total 549 Students 505 Staff 44	Total 2,337 Students 2,209 Staff 128	Approved 44,199 Modified 44,663

Table 3. Entrada South Planning Area Population Estimates^m

	Westridge Community Existingª	Mission Village ^b	Entrada South (2017 Approved Project)	Entrada South (Modified Project)	Six Flags Magic Mountain	Commercial- Office/ Industrial	Rancho Pico Junior High School	Oak Hills Elementary School	West Ranch High School	
Vehicles per Unit	2	2	2	2	N/A	N/A	15 Busses and 19 staff vehicles ^{jk}	9 Busses and 26 staff vehicles ^{jk}	35 Busses and 178 staff/student vehicles ^{iki}	-
Parking Spaces	703	6,220	1,560°	1,795 ^d	11,000	815	-	-	-	—
Number of Vehicles Evacuating Approved Project	Total 3,790 Residential 3,228 Commercial ⁱ 562	Total 13,086 Residential 8,110 Commercial ⁱ 4,976	Total 4,698 Residential 3,450 Commercial ⁱ 1,248	NA	4,921 ^g	652 ⁱ	34	35	213	27,429
Number of Vehicles Evacuating Modified Project	Total 3,790 Residential 3,228 Commercial ⁱ 562	Total 13,086 Residential 8,110 Commercial ⁱ 4,976	NA	Total 4,584 Residential 3,148 Commercial ⁱ 1,436	4,921 ^g	652 ⁱ	34	35	213	27,315

^a Westridge community population estimated using ariel data from Google Maps and available information on LoopNet regarding square footages for commercial properties within this area.

b Mission Village community population estimated for buildout using information from the certified Mission Village EIR available on CEQANet.

Parking calculated at 50 percent commercial (250 sq/ft per parking space) and 50 percent office (400 sq/ft per parking space) uses, per LA County Code Section 22.408.150
 Parking Regulations.

^d This is the total number of parking spaces for the Entrada South Planning Area, as detailed in the Project's site plan.

e TEA/AECOM, 2020. Theme Index and Museum Index: Global Attractions Attendance Report 2020.

f Employee data was unavailable for Six Flags, the report assumes 1 employee:100 guests, the estimated # of employees at Magic Mountain is 186 (<u>https://bearsofficialsstore.com/company/six flags magic mountain</u>) and the estimated number working at any point is approximately 52 percent, resulting in the total estimated employee population of 97.

^g The total number of vehicles was calculated by taking the average daily guests and average daily employees and assuming 2 persons per guest vehicle (9,647/2=4823.5) and 1 person per employee vehicle (97). This is the most conservative approach to calculating number of vehicles, it is likely that some employees would carpool, or take public transportation, or get dropped off and that it is likely that there would be some vehicles that had 3 or more persons, reducing the overall number of cars that would be evacuating than is considered in this analysis; therefore, also reducing overall evacuation times.

- ^h The population for the Commercial-Office/Industrial uses was estimated using an average of 250 sq/ft per employee for commercial uses and 400 sq/ft per employee for office uses. This assumes that all parking provided for each use would be occupied in a mass evacuation scenario of the area, which continues the conservative assumptions of this analysis.
- ¹ The estimated number of evacuating vehicles for Commercial-Office uses was estimated by taking the total number of estimated parking spaces, less 20% to account for individuals from surrounding neighborhoods working and shopping in the area.
- Number of staff was estimated using the respective school's School Accountability Report Card and may not include all maintenance or cafeteria staff. Oak Hills Elementary Rancho Pico Junior High: https://www.newhallschooldistrict.com/Page/112 and West Ranch High School: https://www.hartdistrict.org/apps/pages/accountability-reports /
- ^k It is estimated that 60 individuals per bus (58 students and 2 staff), all other staff are assumed to evacuate in personal vehicle¹ It is assumed that a small portion of students would evacuate in a personal vehicle. To calculate the number of students evacuating in a personal vehicle, this analysis assumes 10% of the driving age population (juniors and seniors) would be commuting to school. There are approximately 1,197 juniors and seniors; therefore, it is estimated that 120 students would evacuate in a personal vehicle.
- The population estimates utilized for this analysis are reasonable worst case estimates based on available parking spaces to account for the potential residents that could be onsite during a theoretical mass evacuation and do not necessarily represent the actual estimated Project population.

Table 4. VCC Planning Area Population Estimates⁹

	North Bluff, Hasley Hills, Hasley Canyon Communities Existing ^a	VCC (2017 Approved Project)	VCC (Modified Project)	Existing VCC Industrial Business Park ^d	Rancho Pico Junior High School	
Population by Land Use	Residential 1,512 units	Industrial/ Business Park 3.4 million sq/ft	Industrial/ Business Park 3.4 million sq/ft	Industrial/ Business Park 6.1 million sq/ft	_	_
Persons per Unit	3.15	-	_	_	_	_
Calculated Population	Residents 4,763	Employees 10,200	Employees 10,200	Employees 6,600	Total 510 Students 475 Staff 35	22,073
Vehicles per Unit	2	2	2	N/A	8 Busses and 19 staff vehicles ^{ef}	_
Parking Spaces	-	8,293 ^b	8,293	12,200	—	_
Number of Vehicles Evacuating Approved Project	3,024	6,634°	NA	5,280°	27	14,965
Number of Vehicles Evacuating Modified Project	3,024	NA	6,634°	5,280°	27	14,965

^a Existing communities populations were estimated using ariel data from Google Maps.

^b Because the Modified Project remains unchanged for the VCC Planning Area compared to the 2017 Approved Project, it is assumed the total number of parking spaces provided would be the same as the Modified Project, which details the number of parking spaces in the Site Plan.

• The estimated number of evacuating vehicles for Commercial-Office uses was estimated by taking the total number of estimated employees, less 20% to account for individuals from surrounding neighborhoods working in the area.

d Information regarding the existing VCC Industrial business park was found here: https://www.sikand.com/valencia

e Number of staff was estimated using the respective campus website and does not include all maintenance or cafeteria staff.

- f It is estimated that 60 individuals per bus (58 students and 2 staff), all other staff are assumed to evacuate in personal vehicle.
- ^g The population estimates utilized for this analysis are reasonable worst case estimates based on available parking spaces to account for the potential residents that could be onsite during a theoretical mass evacuation and do not necessarily represent the actual estimated Project population.

1.1.1 Evacuation Time Discussion

For purposes of determining an appropriate discount on the travel time vehicle capacity estimate, it is important to know the potential evacuation population (number of vehicles) that could occur. Discounting the maximum vehicle capacity essentially slows down the calculated travel times, imitating congested roadways and/or bottleneck intersections. The evacuation analysis includes the existing extension of Magic Mountain Parkway through the northern portion of the Entrada South Planning Area as well as the extension of Hancock Parkway and Franklin Parkway in the VCC Planning Area. Although Commerce Center Drive between the SR-126 and Magic Mountain Parkway will be available for evacuations from VCC and Entrada South at some future date, it was not factored into the modeling as an available route, consistent with the conservative approach to evacuation time evaluation provided in this plan.

1.1.2 Modified Project Evacuation Compared to 2017 Approved Project

The potential occurrence of a large evacuation event including evacuation of existing populations is minimal, but possible. In this case, the existing populations for Entrada South would be associated with residences of surrounding Westridge and Mission Village communities, Six Flags Magic Mountain, Rancho Pico Junior High School, Oak Hills Elementary School, West Ranch High School, and Commercial-Office and Industrial uses and the existing populations for VCC would be associated with residences of surrounding communities, Live Oak Elementary School, and Commercial-Office and Industrial uses.

As mentioned, this analysis caps the evacuation route traffic capacity at 1,825 vehicles per hour on internal roads and 5,425 vehicles per hour on the major evacuation route roadways (Magic Mountain Parkway, Commerce Center Drive/Hasley Canyon Road) in each direction. This capacity is lower than each travel lane could support under ideal conditions but is utilized as a method to reflect evacuation conditions, where there may be a traffic surge that slows vehicle speeds. Understanding the speed vehicles would travel to support 1,000 or 3,000 vehicles per hour provides additional supporting context. If the average vehicle is approximately 16 feet long and allowing approximately 10 feet between vehicles (26 total feet per vehicle) for 1,000 vehicles per hour and 15 feet between vehicles (31 total feet per vehicle) for 3,000 vehicles per hour, an average travel speed of approximately 10 or 15 mph would enable 2,000 or 3,000 vehicles to pass a given point every hour, respectively. This is calculated by the following:

- 1,900 vehicles per hour = 31.6 vehicles per minute = 1 vehicle every 1.97 seconds
- 9.3 mph = 13.68 feet per second (1 mph = 1.47 feet per second)

Therefore, at 7.35 feet/second x 3.6 seconds = 26.5 feet. Each vehicle (16 feet + 10 feet = 26 feet) is allotted 3.6 seconds to pass a given point. In order for 1,000, 2,000, or 3,000 vehicles to pass that given point, a speed of 4.9, 9.8 and 14.8 mph is necessary, respectively, per Table 4. The average human walking speed is around 3 mph.

Vehicles per hour	Vehicles per minute	Seconds for a vehicle (26') to pass a given point	Feet per second for a vehicle to pass a given point	mph for a vehicle to pass a given point
1000	16.67	3.60	7.35	4.9
1500	25.00	2.40	11.03	7.4
1900	31.67	1.90	13.68	9.3
2000	33.33	1.80	14.70	9.8
3000	50.00	1.20	22.05	14.8
5425	90.42	0.66	39.39	26.9

Table 4. Vehicle Speeds Based on Road Capacity

Therefore, the following travel time and evacuation estimates are not reliant on unrealistic vehicle speeds in order to achieve the use of 1,900 and up to 5,425 vehicles per hour capacity and are representative of congested roadways that can occur during evacuations, especially the initial phase where traffic surges are common. It is likely that more vehicles per hour would be possible on Magic Mountain Parkway, The Old Road and Commerce Center Drive/Hasley Canyon Road with law enforcement traffic control.

Based on the factors and assumptions previously detailed regarding evacuation routes, and incorporating standard pre-evacuation timeframes and the evacuation route estimates detailed in Tables 5 and 6, it is estimated that the existing condition for the Entrada South Planning Area would see all evacuating traffic from surrounding communities, commercial-office and industrial uses, Rancho Pico Junior High, Oak Hills Elementary School and West Ranch High School via Magic Mountain Parkway, Westridge Parkway, The Old Road, N Commerce Center Drive, and Valencia Boulevard. The VCC Planning Area would see all traffic evacuating from surrounding communities, commercial-office and industrial uses, Live Oak Elementary School via Commerce Center Drive, Hasley Canyon Road, Live Oak Road, The Old Road, Henry Mayo Drive, and N Commerce Center Drive. With the Modified Project, the same traffic conditions are expected, but the Modified Project's traffic would also be added to the formula.

To facilitate a comparison of evacuation times between the 2017 Approved Project and the Modified Project, this analysis provides an estimate of the 2017 Approved Project's evacuation times based on the mix of residential and non-residential uses provided in the State-certified EIR. Then, using the mix of residential and non-residential uses associated with the Modified Project, this analysis provides an estimated evacuation times comparison with the 2017 Approved Project. Tables 5 and 6 proved evacuation route usage for the 2017 Approved Project and Modified Project based on the following evacuation scenario, which provides a conservative estimation of how traffic would disperse in a mass-evacuation event:

Entrada South Planning Area

Table 5. Entrada South Planning Area Evacuation Route Usage

	Existing Conditions		Existing Conditions + 2017 Approved Project		Comparing Existing Conditions + 2017 Approved Project to the Existing Conditions + Modified Project*	
Evacuation Routes:	Percent of Vehicles	Total Vehicles	Percent of Vehicles	Total Vehicles	Percent of Vehicles (Change from the 2017 Approved Project)	Total Vehicles (Change from the 2017 Approved Project)
Valencia Boulevard to I-5	15.4	3,510	14.5	3,510	12.8	3,510 (+0)
Magic Mountain Parkway to I-5	58.7	13,343	65.0	15,692	57.2	15,635 (-57)
The Old Road to Valencia Boulevard to I-5	2.5	562	2.3	562	2.1	562 (+0)
Westridge Parkway to Valencia Boulevard to I-5	17.2	3,926	26.0	6,275	22.8	6,218 (-57)
Magic Mountain Parkway to Commerce Center Drive to SR-126	3.2	738	3.1	738	2.7	738 (+0)
Old Road to Magic Mountain Parkway to I-5	1.4	326	1.4	326	1.1	326 (+0)
Entertainment Drive to Skyview Lane to The Old Road to Magic Mountain Parkway to I-5	0.72	163	0.01	163	0.01	163 (+0)
Entertainment Drive to Media Center Ln to Magic Mountain Parkway to I-5	0.72	163	0.01	163	0.01)	163 (+0)
Total		22,731		27,429		27,315 (-114)

* The numbers in parenthesis provide the change from the 2017 Approved Project and Modified Project.

Existing Conditions + 2017 Approved Project: In this evacuation scenario, 14.5% of the evacuation traffic would use Valencia Boulevard to the I-5, 65% of evacuation traffic would use Magic Mountain Parkway to I-5, 26% would use Westridge Parkway to Valencia Boulevard to I-5, 2.1% would use The Old Road south to Valencia Boulevard to I-5, 3.2% Magic Mountain Parkway to N Commerce Center Drive to SR-126, 1.4% Old Road to Magic Mountain Parkway to I-5, 0.01% Entertainment Drive to Skyview Lane to The Old Road to Magic Mountain Parkway to I-5, 0.01% Entertainment Drive to Magic Mountain Parkway to I-5 to evacuate.

Existing Conditions + Modified Project: In this evacuation scenario, 12.8% of the evacuation traffic would use Valencia Boulevard to the I-5, 57.2% of evacuation traffic would use Magic Mountain Parkway to I-5, 22.8% would use Westridge Parkway to Valencia Boulevard to I-5 and, 2.1% would use The Old Road south to Valencia Boulevard to I-5, 2.7% Magic Mountain Parkway to N Commerce Center Drive to SR-126, 1.1% Old Road to Magic Mountain Parkway to I-5, 0.01% Entertainment Drive to Skyview Lane to The Old Road to Magic Mountain Parkway to I-5, 0.01% Entertainment Drive to Magic Mountain Parkway to I-5 to evacuate.

VCC Planning Area

Table 6. VCC Planning Area Evacuation Route Usage

	Existing Conditions		Existing Conditions + 2017 Approved Project		Comparing Existing Conditions + 2017 Approved Project to the Existing Conditions + Modified Project*	
Evacuation Routes:	Percent of Vehicles	Total Vehicles	Percent of Vehicles	Total Vehicles	Percent of Vehicles (Change from the 2017 Approved Project)	Total Vehicles (Change from the 2017 Approved Project)
Sedona Way to The Old Road to I-5	12.3	1,028	6.9	1,028	6.9	0 (0)
Hasley Canyon Road to I-5	24.3	2,023	13.5	2,023	13.5	0 (0)
Commerce Center Drive to Hasley Canyon Road to I-5	41.2	3,432	45.1	7,852	45.1	0 (0)
Commerce Center Drive to SR-126	0.10	792	27.5	5,212	27.5	0 (0)
The Old Road to I-5	6.3	528	3.5	528	3.5	0 (0)
Henry Mayo Drive to Commerce Center Drive toto SR-126	1.8	264	1.8	264	1.8	0 (0)
Franklin Parkway to Wolcott Drive to SR- 126	1.8	264	1.8	264	1.8	0 (0)
Total		8,331		14,965		14,965 (0)

* The number in parenthesis is the change from the 2017 Approved Project and Modified Project.

Existing Conditions + 2017 Approved Project: In this evacuation scenario, approximately 6.9% would use Sedona Way to I-5 via The Old Road, approximately 13.5%, would use Hasley Canyon Road to I-5, approximately 45.1% of evacuation traffic would use Commerce Center Drive to Hasley Canyon Road to I-5, approximately 27.5% would use N Commerce Center Drive to SR-126, approximately 3.5% would use The Old Road to I-5, approximately 1.8% would use Henry Mayo Drive to Commerce Center Drive to SR-126, and the remaining 1.8% would use Franklin Parkway to Wolcott Drive to SR-126 to evacuate.

Existing Conditions + Modified Project as compared to Existing Conditions + 2017 Approved Project: In this evacuation scenario, the number and percentage of vehicles along each of the evacuation routes did not change as a result of the Modified Project as compared to the 2017 Approved Project.

Based on the preceding assumptions and the travel time formula, the time estimates for the 2017 Approved Project and the Modified Project scenario are summarized in Tables 7 and 8. As noted, planning efforts by Los Angeles County and the City of Santa Clarita, which established the long-term land use and circulation framework for the area, took in account the need to provide adequate emergency access and evacuation as the Santa Clarita Valley area is built out overtime. The Modified Project is consistent with the land use designations and circulation framework established by the Santa Clarita Area Plan, including the Area Plan's transportation policies related to emergency access and evacuation (Stantec 2022).

Table 7. Entrada South Evacuation Travel Timeframes 2017 Approved Project v Modified Project

Evacuation Route: Scenario	Existing Condition + 2017 Approved Project Evacuation Traffic	Modified Project Evacuation Traffic (Change from the 2017 Approved Project)*	Minimum Road Capacity (vehicles per hour)	Existing Cond. + 2017 Approved Project Estimated Evacuation Travel Timeframe	Modified Project Estimated Evacuation Travel Timeframe	Difference in Travel Time Approved Project v Modified Project
Valencia Boulevard to I-5	3,510 (EC) 0 (AP)	0 (0)	5,425	3,510 vehicles 0.65 hrs or 39 min	3,510 vehicles 0.65 hrs or 39 min	0 hrs or 0 min
Magic Mountain Parkway to I-5	13,343 (EC) 2,349 (AP)	2,292 (-57)	5,425	15,692 vehicles 2.89 hrs or 173.4 min	15,635 vehicles 2.88 hrs or 172.8 min	-0.01 hrs or -0.6 min
The Old Road to Valencia Boulevard to I-5	562 (EC) 0 (AP)	0 (0)	1,430	562 vehicles 0.39 hrs or 23.6 min	562 vehicles 0.39 hrs or 23.6 min	0 hrs or 0 min
Magic Mountain Parkway to Commerce Center Drive to SR-126	738 (EC) AP (O)	0 (0)	1,825	738 vehicles 0.40 hrs or 24.3 min	738 vehicles 0.40 hrs or 24.3 min	0 hrs or 0 min
The Old Road to Magic Mountain Parkway to I-5	326 (EC) AP (0)	0 (0)	1,430	326 vehicles 0.23 hrs or 13.8 min	326 vehicles 0.23 hrs or 13.8 min	0 hrs or 0 min
Westridge Parkway to Valencia Boulevard to I-5	3,926 (EC) 2,349 (AP)	2,292 (-57)	1,825	6,275 vehicles 3.44 hrs or 206.4 min	6,218vehicles 3.41 hrs or 204.6 min	-0.03 hrs or -1.8 min
Total Vehicles:	27,429	27,315 (-114)	N/A	N/A	N/A	N/A

* The number in parenthesis is the change from the 2017 Approved Project and Modified Project.

Table 8. VCC Planning Area Evacuation Travel Timeframes

Evacuation Route: Scenario	Existing Condition + 2017 Approved Project Evacuation Traffic	Modified Project Evacuation Traffic (Change from the 2017 Approved Project)*	Minimum Road Capacity (vehicles per hour)	Existing Cond. + 2017 Approved Project Estimated Evacuation Travel Timeframe	Modified Project Estimated Evacuation Travel Timeframe	Difference in Travel Time Approved Project v Modified Project
Sedona Way to The Old Road to I-5	1,028 (EC) 0 (AP)	0 (0)	1,430	1,028 vehicles 0.72 hrs or 43.2 min	1,028 vehicles 0.72 hrs or 43.2 min	0 hrs or 0 min
Hasley Canyon Road to I-5	2,023(EC) 0 (AP)	0 (0)	2,157	2,023 vehicles 0.94 hrs or 56.3 min	2,023 vehicles 0.94 hrs or 56.3 min	0 hrs or 0 min
Commerce Center Drive to Hasley Canyon Road to I-5	3,432 (EC) 3,317 (AP)	(0)	1,826	7,852 vehicles 4.30 hrs or 258.0 min	7,852 vehicles 4.30 hrs or 258.0 min	0 hrs or -0 min
Commerce Center Drive to SR-126	792 (EC) 3,317 (AP)	0 (0)	1,826	5,212 vehicles 2.85 hrs or 171.3min	5,212 vehicles 2.85 hrs or 135.0 min	-0 hrs or 0 min
The Old Road to I-5	528 (EC) 0 (AP)	0 (0)	1,430	528 vehicles 0.37 hrs or 22.2 min	528 vehicles 0.37 hrs or 22.2 min	0 hrs or 0 min
Henry Mayo to Commerce Center Drive to The Old Road to I-5	264 (EC) 0 (AP)	0 (0)	1,430	264 vehicles 0.19 hrs or 11.1 min	264 vehicles 0.19 hrs or 11.1 min	0 hrs or 0 min
Franklin Parkway to Wolcott Way to SR-126	264 (EC) 0 (AP)	0 (0)	1,430	264 vehicles 0.19 hrs or 11.1 min	264 vehicles 0.19 hrs or 11.1 min	0 hrs or 0 min
Total Vehicles:	14,965	14,965 (0)	N/A	N/A	N/A	N/A

* The number in parenthesis is the change from the 2017 Approved Project and Modified Project.

The Modified Project evacuation scenario results would decrease evacuation time by approximately 1.8 minutes for the Entrada South Planning Area, with no change anticipated along most evacuation routes, and no change anticipated along any evacuation routes for the VCC Planning Area, as compared to the 2017 Approved Project's estimated evacuation time (Table 7 and Table 8). For purposes of this analysis, it was assumed that a mass evacuation would occur where all Project and vicinity populations would evacuate at the same time. This assumption presents a conservative scenario, which assumes all traffic would be directed to the evacuation roadways at once. This travel time calculation is conservative in both the number of vehicles evacuating and the number of vehicles per hour that can be accommodated.

In an actual evacuation scenario, as discussed above, a phased evacuation would be implemented where orders are given to evacuate based on vulnerability, location, and/or other factors, which enables the subsequent traffic surges on major roadways to be smoothed over a longer time frame and improve traffic flow. A phased strategy can also be used to prioritize the evacuation of certain communities that are in proximity to the immediate danger. The limitations of the model used for this analysis are such that it cannot accurately reflect phased evacuation conditions, although a phased evacuation scenario would result in lower evacuation times than a mass evacuation scenario; hence, a conservative mass evacuation scenario was assumed.

Based on the above analysis, the Modified Project would not result in a significant change in evacuation times as compared to the 2017 Approved Project.



Entrada South and Valencia Commerce Center - Modified Project

Construction Fire Prevention Plan

JULY 2022

Prepared for:

EYESTONE ENVIRONMENTAL

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AMSL	Above Mean Sea Level
CAL FIRE	California Department of Forestry and Fire Protection
CFC	California Fire Code (2016)
CFD	Community Facilities District
CFPP	Construction Fire Prevention Plan
CFR	Code of Federal Regulations
FAHJ	Fire Authority Having Jurisdiction
IC	Incident Command or Incident Commander
Modified Project	Entrada South and Valencia Commerce Center Project
NFPA	National Fire Protection Association
0&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
RFW	Red Flag Warning
LACoFD	Los Angeles County Fire Department
SSO	Site Safety Officer/Fire Safety Coordinator
TBD	To be determined
USGS	U.S. Geological Survey

Definitions

- 1. Activity Risk: Activity risks include those actions that present a risk of igniting a wildfire.
- 2. Fire Patrol: A Newhall Ranch or designated contractor individual will be assigned as "Fire Patrol" specifically to monitor work activities when an Activity Risk exists for fire compliance. The Fire Patrol personnel shall regularly monitor the area for any signs of fire or unsafe practices.
- 3. Fire Season: Fire season is no longer officially designated by the wildland fire agencies. Southern California is considered to be in fire season on a yearlong basis. CALFIRE adjusts their staffing patterns as fire conditions moderate or escalate and this can be used as an indicator of potential fire activity.
- 4. Fire Tools: Essential firefighting tools to be staged near work activities are a 46-inch round point shovel, Pulaski, McLeod, 5-gallon "Indian" Backpack hand pump or water fire extinguisher, and a minimum 10-pound 4A:80BC Dry Chemical Fire extinguisher.
- 5. Incident Commander (IC): The Incident Commander is the agency representative in the leadership role for a wildfire event that reaches the level of establishment of the Incident Command system. This is not a responsibility of the Project and is implemented by the applicable agencies responding to a particular incident.
- 6. Incident Command System (ICS): The Incident Command System is "a systematic tool used for the command, control, and coordination of emergency response" according to the United States Federal Highway Administration. A more detailed definition of an ICS according to the United States Center for Excellence in Disaster Management & Humanitarian Assistance is "a set of personnel, policies, procedures, facilities, and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities. This is not a responsibility of the Project and is implement by the applicable agencies responding to a particular incident.
- 7. Plan: The Construction Fire Prevention Plan (CFPP).
- 8. Red Flag Warning (RFW): A Red Flag Warning is issued for a stated period of time by the National Weather Service using pre-determined criteria to identify particularly critical wildfire danger in a particular geographic area. See Section 8 for construction and maintenance measures that must be implemented during RFWs.
- 9. Site Safety Officer (SSO): The Site Safety Officer or Fire Safety Coordinator is a Project representative that serves as a liaison to the emergency service agencies and all contractors or inspectors on the jobsite for the utilities on emergency incidents and construction-related activities. The SSO has the authority to stop any project work that appears to pose a particular fire risk or hazard.

1 Summary

This Construction Fire Prevention Plan (CFPP) provides direction for fire safety awareness on the Entrada South and Valencia Commerce Center Project (Modified Project) sites during construction. CFPPs do not anticipate every potential fire scenario that may occur during construction, but aim to educate site personnel to potential risks associated with fire ignitions and the procedures that when implemented consistently will minimize the potential for a vegetation ignition. This CFPP provides standard protocols and approaches for reducing the potential of ignitions for typical construction site activities. When consistently employed, the concepts discussed herein will help minimize and avoid ignitions as well as extinguish any ignitions while they are small and controllable.

2 Introduction

This Construction Fire Protection Plan (CFPP) provides detailed guidance on construction phase fire safety with a goal of minimizing the likelihood of fire ignitions within the construction area through mandated protocols and prevention measures to be employed by all on-site personnel during construction. This CFPP has been prepared for the Entrada South and Valencia Commerce Center project (Modified Project) and considers its fire environment (locations, weather, fuels, and ignition sources) in development of the specific measures to be implemented during construction.

The Modified Project Site is located in an unincorporated portion of Santa Clarita Valley in northwestern Los Angeles County (Figure 1). The development proposed by the Modified Project within the Entrada Planning Area includes 1,574 dwelling units and 730,000 square feet of non-residential development, as compared to 1,725 dwelling units and 450,000 square feet of non-residential development for the 2017 Approved Project. The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of Interstate 5 (I-5) and north of Henry Mayo Drive and the Santa Clara River. The State-certified EIR analyzed the environmental implications of 3.4 million square feet of industrial/commercial space.

The Entrada and VCC planning areas are located within State Responsibility Areas designated as Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2007). The State-certified EIR analyzed wildfire impacts as part of Section 4.17 Hazards, Hazardous Materials, and Public Safety.

The Project's region is located in a broad ecological and biogeographic transition zone for the coastal and mountain ecoregions. This alluvial Santa Clara River Valley also provides access via the Santa Clara River to the edges of the Mojave Desert and the foothills of the San Gabriel Mountains. While much of the region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steepwalled canyons, is south of the Modified Project Site.

The Project Site is within the planning boundary of the State-approved Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP), which was the subject of a State-certified Environmental Impact Report (EIR) (SCH No. 2000011025; hereafter referred to as the State-certified EIR). In the State-certified EIR for the RMDP/SCP, the Project Site is identified as the "Entrada Planning Area" and the "VCC Planning Area." The Entrada Planning Area is also sometimes referred to as Entrada South. The State-certified EIR determined that the Project would have a less than significant impact on adopted emergency response plans or emergency evacuation plans based on the location of fire states, a system of improved roads, and fire flows for the Project. The State-certified EIR also determined the Project would result in less than significant impacts related to wildfire with regulatory compliance and incorporation of mitigation measures.

Entrada Planning Area: The Entrada Planning Area consists of approximately 382 acres located west of I-5 and the City of Santa Clarita and south of the Santa Clara River and the Six Flags Magic Mountain theme park (Figure 1). The Entrada Planning Area is located in the U.S. Geological Survey (USGS) 7.5-minute Newhall quadrangle map, Township 4 North, Range 16 West, and generally in Sections 19, 20, and 30.



3

VCC Planning Area: The VCC Planning Area consists of approximately 321 acres of an undeveloped portion of the partially completed VCC industrial park/commercial center located west of I-5 and north of Henry Mayo Drive (State Route-126 [SR-126]) and the Santa Clara River (Figure 1). The VCC Planning Area is located in the U.S.G.S. 7.5-minute Newhall quadrangle map, Township 4 North, Range 17 West, and generally in Sections 11 and 12.



SOURCE: ESRI 2022; Hunsaker 2021

1 Miles

FIGURE 1 Modified Project Location Map

Construction Fire Protection Plan for the Entrada South and Valencia Commerce Center Project

3 Emergency Notification Procedures

Any fire event at or near the site will trigger the emergency notification procedures identified in this section. Fire reporting is critical for tracking where, when, how, and why fire ignitions occur and will help the fire agencies develop protocols for reducing their occurrence.

3.1 First Call = 9-1-1

Reporting fires and other emergencies: The first call should be to 9-1-1 so that appropriate apparatus can be dispatched.

Technical Staff Contact: Project contact information will be provided to Los Angeles County Fire Department local stations to assist responding firefighters during an emergency.

The first call should be to 9-1-1 so that emergency responders can be dispatched. Travel times to the site require notification of 9-1-1 as early as possible after the fire or other emergency has been observed.

For Non-Emergencies, contacts near the site include:

- Fire/Emergency Medical (Los Angeles County Fire Department, Battalion 6) 661.753.9710
- Santa Clarita Police and Sheriff (Santa Clarita Office) 661.255.1121
- California Highway Patrol (Valencia Office) 661.600.1600
- Hospital Henry Mayo Santa Clarita 23845 McBean Parkway: 661.200.2000

To facilitate the arrival of fire services during construction, an emergency response meeting point will be established with the local Los Angeles County Fire Department (LACoFD) personnel. The Site Safety Officer (SSO) or designee will meet the emergency response team at the meeting point, likely the Project's main entrance, to lead them into the site. The meeting point will be selected with fire agency input.

3.2 Evacuation Procedures

During significant emergency situations at or near the Project site during construction, the site manager and/or SSO, in consultation with law or fire authorities, as possible, may issue an evacuation notice to construction personnel. When an evacuation has been called, all site employees will gather at a designated assembly area and the SSO will account for all personnel, as time allows. Once all employees are accounted for, or sooner if dictated by the emergency, the vehicles will safely convoy from the site to safe zones, which are generally areas off-site away from the threat. Should there still be persons within the site after the evacuation has been called, the SSO will send convened personnel off site to safe zones and the SSO and supervisors will perform a sweep of the project site to locate persons and reconvene at the assembly area. Once all personnel are accounted for, they will exit the site. Should a structure or wildland fire (or other emergency) occur that threatens the primary assembly area; other locations may be designated as secondary assembly areas by the SSO or supervisors, as dictated by the situation. The SSO and/or Site Supervisors should be prepared to be available to the Incident Commander (IC) throughout the Incident to facilitate information exchange.



3.2.1 Evacuation Routes

Depending on the type and severity of the emergency, along with weather and/or localized site conditions, roadways designated on Figures 2a and 2b for Entrada and VCC Planning Areas, respectively, and will be used for evacuating the area during construction.

The Modified Project's primary evacuation routes are accessed through a series of roadways, which connect with the primary ingress/egress roads (i.e., Magic Mountain Parkway, Commerce Center Drive, Hasley Canyon Road, and The Old Road) that intersect off-site primary and major evacuation routes.

Entrada Planning Area Primary and Secondary Emergency Ingress/Egress

- **Primary Route:** Magic Mountain Parkway, or to The Old Road or I-5 to the north or south.
- Secondary Route: Westridge Parkway to Valencia Blvd then east to The Old Road or I-5.

VCC Planning Area Primary and Secondary Emergency Ingress/Egress

- **Primary Route:** Commerce Center Drive to Hasley Canyon Road to The Old Road or I-5 to the north or south.
- **Primary Route:** Commerce Center Drive to SR-126 to the east or west.
- Secondary Route: Hancock Parkway to Turnberry Lane or Muirfield Lane to The Old Road to the north or south.

Depending on the nature of the emergency requiring evacuation, it is anticipated that the construction personnel in the Entrada Planning Area traffic would exit the Modified Project Site via Magic Mountain Parkway, which is the direct route out of the Modified Project Site and onto other down-stream roadways. In a typical evacuation that allows several hours or more time, traffic may be directed in several directions to the north or south to I-5 and away from a west or east/northeast wind driven fire determined mostly by the fire's location, its spread rate and direction, time available before it could threaten evacuation routes, traffic levels, and others. If less time is available, or one or more potential routes are considered unsafe, fire and law enforcement officials may direct all traffic in one direction.

The SSO and site managers are primarily responsible for evacuations. They will employ procedures to determine the emergency, talk with fire officials, as possible, and declare the emergency status. Foreman level supervisors shall assist in accounting for personnel.

8



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK 💩 0_____000 2,000

FIGURE 2a Entrada South Community Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK



SOURCE: ESRI; COUNTY OF LOS ANGELES GIS 2021

DUDEK 💩 0______ Feet

FIGURE 2b Valencia Commerce Center Evacuation Map Fire Evacuation Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK

4 Modified Project Roles and Responsibilities

All employees should know how to prevent and respond to fires, and are responsible for adhering to policies regarding fire emergencies. In particular, the following sections detail general responsibilities, by position.

4.1 Project Applicant

The Supplemental Environmental Impact Report for the Modified Project includes a site-specific Fire Protection Plan (FPP) and a Wildfire Evacuation Planto determine overall fire risk and a Wildfire Evacuation Plan to assist future residents, were prepared and approved for the Project. The Project is required to implement measures to reduce the risk and comply with federal, state, and local fire safety/protection policies. Additionally, the SSO or a designated Site Fire Safety Coordinator will conduct training and make equipment available to provide a safe working environment for employees and contractors.

4.2 Site Safety Officer

The SSO or a designated Site Fire Safety Coordinator will manage the Project's FPP and this CFPP during construction. Among the other responsibilities of the SSO are:

- Understanding the CFPP and its mandates for training, fire prevention, fire suppression, and evacuation.
- Understanding the fire risk associated with the site and with activities that will occur on site.
- Developing and administering the fire prevention and safety training program.
- Ensuring that fire control equipment and systems are properly maintained and in good working condition.
- Monitoring combustibles on the site and managing where they are stored.
- Conducting fire safety surveys and making recommendations.
- Posting fire rules on the project bulletin board at the contractor's field office and areas visible to employees.
- Stopping project work activities that pose a fire hazard or are not in compliance with this CFPP.
- Reporting all fires ignited on the site, whether structural, vegetation, electrical, or other to LACoFD.

Construction Fire Prevention Plan / Entrada South and Valencia Commerce Center - Modified Project

5 Fire Safety Plan Goals

The primary goals of this CFPP are to address the identified ignition sources and risks so that the personnel involved with constructing the Project have clearly defined protocols and procedures for reducing fire risk and maintaining a fire safe worksite. Among the goals developed for the Project site are:

- Prevent/minimize fires during construction, operation and decommissioning
- Provide a safe work-site for all employees, contractors, visitors and emergency personnel
- Prevent shock to emergency responders, workers, and unauthorized trespassers
- Prevent arcing or sparking, which could ignite vegetation on site
- Prevent or minimize dollar loss to the equipment
- Prevent or minimize potential for a fire starting on site to spread off site
- Provide water, appropriate fire extinguishers and access for firefighters
- Provide adequate signage and shut off devices to stop power feed into power lines in the event of a line failure, or fire in right of way
- Provide water trucks equipped with fire extinguishers, hoses, shovels, and Pulaski's (fire fighting hand tool) when work involves the use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and/ or explosives.
- Provide the ability to report a fire or other emergency to 9-1-1 without delay and to make contact with internet websites and personnel
- Report all fire ignitions, regardless of size, to the LACoFD

6 Site and Project Description

6.1 Location

The Project's region is located in a broad ecological and biogeographic transition zone for the coastal and mountain ecoregions. This alluvial Santa Clara River Valley also provides access via the Santa Clara River to the edges of the Mojave Desert and the foothills of the San Gabriel Mountains. While much of the region has been subject to rapid urbanization and historical agricultural and oil development practices, large areas of open space and natural lands border the region. The Los Padres National Forest is located to the north of the Project Site and the Angeles National Forest lies to the north and east. The Santa Susana Mountains, a region of gently rolling hills and sharp, steep-walled canyons, is south of the Modified Project Site.

6.2 Vegetation and Topography

6.2.1 Vegetation

Extensive vegetation type mapping is useful for fire planning because it enables each vegetation community to be assigned a fuel model, which is used in a software program to predict fire behavior characteristics, as discussed in Section 4 Modeling: Anticipated Fire Behavior for Worst-Case Fire Conditions. Generally, wildland-urban interfaces with shrubland-dominated vegetation are found to be more fire-prone than those with grasslands or other natural spaces (Elia et al., 2019). The Modified Project Site's vegetative fuels are primarily annual grassland, scrub and chaparral habitat, and riparian forest. Man-made land cover types, such as agriculture and disturbed land were also previously mapped on the Entrada and VCC Planning Areas. These vegetation community and land cover types were confirmed by Dudek fire protection planners in the field and the dominant vegetation types were assigned fuel models for use during fire behavior modeling (see Section 4.1.1 Fire Behavior Modeling Analysis). The vegetation communities are shown in Figure 3a for the Entrada Planning Area and Figure 3b for the VCC Planning Area.

Post-development vegetation composition proximate to the Entrada and VCC Planning Area footprints is expected to be significantly different than current conditions. Following build-out, irrigated landscape vegetation associated with fuel modification zones (FMZ) A and B are expected to cover the immediate area surrounding the Modified Project Site, extending 100 horizontal feet from each of the structures. Consistent with requirements, native and naturalized vegetation occurring within FMZ Zone C is not expected to be irrigated, although overall fuel volumes will be reduced by removing dead and dying plants, non-natives, highly flammable species, and thinning the remaining plants so they would not readily facilitate the spread of fire on an ongoing basis. The provided FMZ areas will be maintained in order to comply with County Fire Fuel Modification Plan guidelines.

6.2.2 Topography

The Modified Project Site is located in the Santa Clara River Valley, between the Santa Susana Mountains to the south and the Topatopa Mountains to the north. The Modified Project Site is topographically diverse with slope gradients ranging from moderate to steep on the hillsides to very gentle in the Santa Clara River floodplain and major tributary canyons.



The Entrada Planning Area is located south of the Santa Clara River on rugged terrain dominated by steep slopes. It is dissected by four south–north-trending tributaries to the Santa Clara River, including one along Magic Mountain Canyon and three unnamed tributaries (Figure 4a, Topography). All four tributaries exit the Entrada Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the southern portion of the site is dominated by north–south-trending ridges. A narrow panhandle (roughly 330 feet wide) extends along the western portion of the site to a fairly level former pasture area.

The VCC Planning Area is located north of the Santa Clara River and is dissected by two south-north-trending tributaries to the Santa Clara River: Castaic Creek and Hasley Creek (Figure 4b). Both tributaries exit the VCC Planning Area through natural drainages before eventually discharging into the Santa Clara River. Topographically, the site is situated in relatively flat areas along Castaic Creek and within the lower elevations of Hasley Canyon. The remaining portions of the site have greater topographic relief. Site elevations range from approximately 990 feet amsl along the Castaic Creek bottom to approximately 1,210 feet amsl at the top of the north-central ridge (Dudek 2020).





SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 3a Entrada Planning Area's Vegetation Communities and Land Cover Types Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK

Modified Project

Off-Site Project Impact Area

C Valencia Commerce Center Tract Boundary

General Vegetation Communities and Land Cover Types

Coastal Scrub

Grass and Herb Dominated Communities

Oak woodland

Riparian

Man-made land cover

□ Specific Vegetation Communities and Land Cover Types

AGR = Agriculture

BES = Blue elderberry stands

CGL = California annual grassland

CSB = California sagebrush scrub

CSB-CB = California sagebrush scrub-California buckwheat

DEV = Developed

DL = Disturbed land

MFS = Mulefat scrub

ORN = Ornamental

RW = River wash

SCBR = Scale broom scrub

SCWRF = Southern cottonwood-willow riparian forest

SPM = Short-podded mustard stand

TAM = Tamarisk scrub

VOW = Valley oak woodland

dCB = Disturbed California buckwheat

dCSB-CB = Disturbed California sagebrush scrub-California buckwheat

dRRBS = Disturbed rubber rabbitbrush scrub

dSCBR = Disturbed scale broom scrub



SOURCE: ESRI 2019; Hunsaker 2019

FIGURE 3b VCC Planning Area's Vegetation Communities and Land Cover Types Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Projects

DUDEK



SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL QUADRANGLE

FIGURE 4a Entrada South Topography Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Project



SOURCE: USGS, 7.5 MINUTE SERIES, NEWHALL AND VAIL VERDE QUADRANGLES

800 Beet

FIGURE 4b Valencia Commerce Center Topography Construction Fire Prevention Plan for the Entrada South and Valencia Commerce Center Project

7 Project Specific Risk Summary

7.1 Fire Risk

Fire risks must be assessed based upon the potential frequency (probability of an incident occurring) and consequence (potential damage should an event occur). The evaluation of fire risks must take into account the frequency and severity of fires.

The Project's fire risks are associated with the following:

7.1.1 Construction Phase Risks

- Earth-moving equipment have potential to create sparks, heat sources, fuel or hydraulic leaks, etc.
- Chainsaws and small combustible engines have the potential to result in vegetation ignition from overheating, spark, fuel leak, etc.
- Vehicles have the potential for heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders have the potential to create an open heat source may result in metallic spark coming into contact with vegetation
- Wood chippers have the potential to include flammable fuels and hydraulic fluid that may leak and spray onto vegetation with a hose failure
- **Compost piles** have the potential to create large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders have the potential for sparks from grinding metal components may land on a receptive fuel bed
- **Torches** have the potential to act as a heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- **Dynamite/blasting** if necessary, blasting has the potential to cause vegetation ignition from open flame, excessive heat or contact of heated material on dry vegetation
- Other human-caused accidental ignitions have the potential for ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others

Fire Prevention Measures for all Construction Activities:

- Minimize combustible and flammable materials storage on site.
- Store any combustible or flammable materials that need to be on site away from ignition sources.
- Parking areas shall be cleared of all grass and brush to a distance of at least 10 feet beyond the parking area.
- Keep evacuation routes free of obstructions.
- Label all containers of potentially hazardous materials with their contents and stored in the same location as flammable or combustible liquids.



- Perform "hot work" according to fire safe practices in a controlled environment and with fire suppression equipment at the job site. A fire watch person (Fire Patrol), with extinguishing capability (e.g., fire extinguishers), should be in place for all 'Hot Work" and heavy machinery activities during construction. Ensure hot work adheres to the guidelines provided.
- Dispose of combustible waste promptly and according to applicable laws and regulations.
- Report and repair all fuel leaks without delay.
- Do not overload circuits or rely on extension cords where other options would be safer.
- Turn off and unplug electrical equipment when not in use.
- Direct contractors on site to restrict use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives during RFW in accordance with Section 8, below. When the above tools and equipment are used near substantial fuel sources, water trucks/tenders (per project design feature (PDF-WF-1 as identified in the SEIR for the Modified Project)) (4,000 gallon capacity) equipped with hoses, shovels, Pulaski's, and McLeod's shall be accessible to personnel.
- Equip all construction-related vehicles located near substantial fuel sources with a 10 pound 4A:80 BC Dry Chemical Fire Extinguisher, a 5-gallon backpack pump or water fire extinguisher, a 46-inch round point shovel, and a first-aid kit.
- When an evacuation has been called, all site personnel will gather at the designated assembly area and the SSO will account for all personnel to the extent practicable. Once all personnel are accounted for, the vehicles will safely convoy from the site to safe zones to the extent practicable.

7.1.2 Consultants and Contractor On-site Risk

Consultants and contractors should know how to prevent and respond to fires, and are responsible for adhering to fire safety standards and best practices.

Fire Prevention Measures for Consultants/Contractors:

- All vehicles brought onto the site and located near substantial fuel sources shall be equipped with fire prevention equipment:
 - 10 pound, 4A:80BC dry chemical fire extinguisher
 - 46-inch round point shovel
 - 5-gallons of water or a 5-gallon water backpack
 - First-aid kit
- No driving (cars, trucks, ATVs or similar) over unmaintained and dry vegetation.
- Vehicles to be parked a minimum of 10 feet from nearest vegetation within an area devoid of any vegetation.
- Site activities limited during Red Flag Warning Weather periods in accordance with Section 8, below; stay
 alert to fire and weather conditions and evacuate employees, if safe to do so.
- Consultants/Contractors will conduct operations safely to limit the risk of fire
- Hot Work shall adhere to the guidelines provided below in Section 7.5.
- During significant emergency situations, an evacuation notice may be issued by the site manager/supervisor or SSO to the extent practicable. When an evacuation has been called, all consultant or contractor employees will gather at the designated assembly area and the SSO will account for all



personnel. Once all employees are accounted for, the vehicles will safely convoy from the site to safe zones to the extent practicable, which are generally areas off-site away from the threat.

7.3 Best Practices to Reduce Construction Risks

The SEIR includes measures to be employed as PDFs and mitigation measures (MMs). The following constitute best practices during construction that are Fire Code required measures or recommended as part of this plan during construction to reduce the risk of ignitions. These measures may be monitored through the SSO and ongoing worker safety training.

- Fire rules posted on the project bulletin board at the contractor's field office and areas visible to employees. This shall include all consultants, contractors and subcontractors if more than one.
- Fires ignited on site reported to LACoFD.
- The engineering, procurement, and construction contracts for the project identify fire safety requirements.
- All internal combustion engines used at the Modified Project Site should be equipped with spark arrestors that are in good working order.
- Once initial two-track roads have been cut, light trucks and cars are recommended only on roads where the roadway is substantially cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- During construction, the Project should be equipped with at least one water tender. Each truck should be equipped with 50 feet of 0.25-inch fast response hose w/fog nozzles. Any hose size greater than 1¹/₂" shall use National Hose (NH) couplings.
- A cache of shovels, McLeod's, and Pulaski's is recommended to be available at staging sites. Additionally, on-site pickup trucks should be equipped with first-aid kits, fire extinguishers and shovels if located near high fuel areas.
- Equipment parking areas and small stationary engine sites to be cleared of all extraneous flammable materials.
- The on-site contractor must restrict use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives during RFW conditions in accordance with Section 8. When the above tools and equipment are used, water tenders equipped with hoses, shovels, McLeod and Pulaski shall be accessible to personnel.
- A fire watch (person responsible for monitoring for ignitions) will be provided during hot works and heavy machinery activities and is recommended to monitor for a minimum of 30 minutes following completion of the hot work activities.
- Smoking and vaping should not occur in wildland areas or within 50 feet of combustible materials storage, and shall be limited to designated areas or areas cleared of all vegetation.
- Each project construction site (if construction occurs simultaneously at various locations) to be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires.
- Construction workers at the site to receive training on the proper use of firefighting equipment and procedures to be followed in the event of a fire. Training records shall be maintained and be available for review by the LACoFD.



7.4 Daily Fire Prevention Measures

To limit the risk of fires, all site staff, employees, and contractors are recommended to take the following precautions:

- Fire safety to be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis.
- No Smoking or vaping allowed on site except in designated smoking areas which include cleared area with
 no combustible vegetation or materials and approved butt receptacles (noncombustible containment of
 cigarette butts). Smoking or vaping inside closed vehicles at the site may be allowed in designated areas
 away from vegetation, at the discretion of the SSO.
- Combustible materials to be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation.
- Evacuation routes to be maintained free of obstructions that would block evacuations. Unavoidable evacuation route blockages shall be coordinated such that a secondary route is identified and available.
- Disposal of combustible waste in accordance with all applicable laws and regulations.
- Use and store flammable materials in areas away from ignition sources.
- Proper storage of chemicals, such that incompatible (i.e., chemically reactive) substances would be separated appropriately, shall be required.
- Performance of hot work (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch shall be required. Hot work permits are required and will be reviewed and granted by the SSO for all hot work.
- Equipment shall be kept in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease.
- Immediate reporting of fuel or petroleum leaks to be required. The site mechanic shall ensure that all leaks are repaired immediately upon notification.
- Immediate repair and cleanup of flammable liquid leaks to be required.
- Extension cords not to be relied on if wiring improvements are needed, and overloading of circuits with multiple pieces of equipment shall be prohibited.
- Turning off and unplugging electrical equipment when not in use.

7.4.1 Fire Prevention/Protection System Maintenance

The SSO (or trained specialist, when necessary) is recommended to ensure that fire suppression and related equipment is maintained according to manufacturers' specifications. National Fire Protection Association (NFPA) guidelines shall be implemented for specific equipment.

Per Fire Code, the following equipment is subject to ongoing maintenance, inspection, and testing procedures:

- Portable fire extinguishers;
- Fire alarm and suppression systems;
- Water trucks and associated equipment; and
- Emergency backup generators/systems and the equipment they support.



7.5 Hot Work

These requirements are primarily from 2019 California Fire Code (CFC) Chapter 35, Welding and other Hot Work, and NFPA 51B, Fire Prevention During Welding, Cutting and other Hot Work. Hot work is defined in the CFC as operations involving cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, or other similar operations. Hot work areas are defined as the areas exposed to sparks, hot slag, radiant heat, or convective heat because of the hot work.

A Hot Work Permit shall be obtained for all hot work regardless of location from the SSO, following guidelines from the LACoFD. In accordance with NFPA 51B and the CFC Chapter 26, hot work shall only be done in fire safe areas designated by the SSO and shall comply with the following:

- All personnel involved in Hot Work shall be trained in safe operation of the equipment by the SSO. This will include providing training at "tailgate safety meetings". They shall also be made aware of the risks involved and emergency procedures, such as how to transmit an alarm and who is responsible to call 9-1-1.
- Signage required in areas where workers may enter indicating "Caution; Hot Work in progress; Stay Clear" would be posted on site.
- Hot work would not be done on any containers which contain or have contained flammable liquids, gases, or solids until containers have been thoroughly cleaned, purged, or inerted.
- A dry chemical fire extinguisher with a minimum rating of 4A:80BC, a 5-gallon backpack pump or water fire extinguisher, and a 46-inch round point shovel, shall be readily accessible within 25 feet of hot work area.
- The SSO or safety manager shall inspect the hot work area before issuing a permit and shall then make daily inspections.
- Welding and cutting would comply with 2019 CFC) Chapter 35- welding and Hot Work.
- Electric arc hot work would comply with CFC Chapter 35.
- Piping manifolds and Hose Systems for Fuel Gases and Oxygen would comply with CFC Section 3509.
- Cylinder use and storage shall comply with 2019 CFC Chapter 53, "Compressed Gases."
- Equipment to be consistent with LACoFD guidance for construction equipment, including torches, manifolds, regulators, or pressure reducing valves, and any acetylene generators.
- Personal Protective Clothing would be selected to minimize the potential for ignition, burning, trapping hot sparks, and electric shock.
- A fire watch will be in place for a minimum of 30 minutes, or longer as considered necessary by the SSO, following any hot work.
- Any ignitions would be immediately extinguished (as possible) by site personnel and LACoFD would be notified of the incident.

The SSO shall have the responsibility to assure safe Hot Work operations and shall have the authority to modify hot work activities associated with construction and/ maintenance activities, and to exceed the requirements in NFPA 51B and 2019 CFC, to the degree necessary to prevent fire ignition. Workers must be trained on the hot work information and criteria in this CFPP.


8 Red Flag Warning Protocol

Red Flag Warnings are issued by the National Weather Service and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. To ensure compliance with Red Flag Warning restrictions, the National Weather Service website would be monitored at the site (http://www.srh.noaa.gov/ridge2/fire/briefing.php). During Red Flag Warnings, construction related activities would be limited and precautions may be taken on site during periods of a Red Flag Warning, when conditions such as low humidity and high winds are present. Upon announcement of a Red Flag Warning, red flags will be prominently displayed at the entrance gate and main office, indicating to employees and contractors that restrictions are in place. Any hot work (work that could result in ignition sources or increase fire risk), grading in native vegetated areas, or any other work near native or unmaintained vegetation that could result in heat, flame, sparks, or may cause an ignition to vegetation shall be prohibited during Red Flag Warning conditions unless the result would be less safe without completing the task. If vehicles are required to be used during Red Flag Warning conditions, vehicles shall remain only on designated access roads on the site or areas of the site not located near native or unmaintained vegetation.

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Construction Fire Prevention Plan / Entrada South and Valencia Commerce Center - Modified Project

9 Fire Safety Briefings, Inspections, and Training

9.1 Briefings and Inspections

The SSO would conduct routine, unannounced inspections a minimum of once, weekly. The SSO would develop an inspection check list to document these inspections.

Prior to Project construction, Project personnel would receive training on the contents of this CFPP, along with additional fire safety and fire prevention information provided by an informed SSO (or designee). As possible, firefighters from LACoFD will attend these meetings and provide input, which has a dual benefit of informing site personnel and providing Project familiarity for the firefighters.

Site supervisors/foremen will be responsible for sharing CFPP content with consultants and construction personnel throughout the duration of the Project. A review of the content of this CFPP would take place at a formal safety briefing at a minimum of once per month.

Each daily safety tailgate session should include an assessment of the day's fire-related risks or hazards and the mitigation for each.

Compliance, including monitoring compliance, with this CFPP is mandatory. All levels of project management have the authority to shut down any operation that presents an inappropriate amount of fire risk or hazard until it can be properly mitigated.

Violations of any of the requirements of this CFPP would be addressed by the SSO or other supervisory personnel, immediately. Appropriate consequences for repeated or serious negligence in respect to this CFPP would be dealt with accordingly. All Project-related vegetation fires, regardless of size, shall be promptly reported to the SSO and LACoFD to determine if appropriate mitigation measures are being taken.

9.2 Training Requirements

9.2.1 Basic Fire Safety Training

The SSO and or site supervisors/foremen would present basic fire prevention training to employees upon employment, and shall maintain documentation of the training, which includes the following:

- The Project-specific FPP
- Review of the Occupational Safety and Health Administration (OSHA) Fire Protection and Prevention (29 CFR 1926.24)
- Proper response and notification in the event of a fire;
- Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan), and hand tools, such as shovels, and recognition of potential fire hazards.



The SSO would train persons entering the site on the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees would receive this training at the following times:

- Upon first entering the facility
- Annually during a pre-planned meeting
- When changes in work processes necessitate additional training

Upon returning to the site after having been gone longer than 90 days

9.2.2 Site Supervisor Fire Safety Training

Prior to Project construction, site supervisors would receive a minimum of 1 hour training on wildland fire prevention and safety. This training would be provided by the SSO or qualified designee. This training would then be shared with all construction personnel by the site supervisor or the SSO.

Each site supervisor would be trained on the following:

- Fire reporting
- Extinguishing small fires in order to prevent them from growing into more serious threats.
- Fire prevention
- Identifying work activities that may result in a fire hazard

9.2.3 Communication

The ability to communicate with personnel working on the Modified Project Site is mandatory. Construction crews would be required to have a cell phone or satellite phone, and/or radios that are operational within the area of work to report an emergency. Contact information for lead construction personnel would be provided to respective agencies. Communication pathways and equipment would be tested and confirmed operational each day prior to initiating construction activities. Fires and medical emergencies would be immediately reported to LACoFD via 9-1-1.

Each on-site worker would carry at all times a laminated, CFPP card listing 24-hour contact information, including telephone numbers for reporting an emergency and immediate steps to take if an incident occurs. Information on the CFPP card would be updated as needed and redistributed to all workers before the initiation of any construction activities. The Project's compliance monitor would provide the CFPP cards to the site's SSO prior to construction kick-off so that all site staff can be provided training and receive their cards.

10 Project Personnel Fire Fighting Limitations

Responding to fires at the Modified Project Site, whether structural, wildland, or other, is the responsibility of LACoFD. Because their response to the site may require several minutes or more, Project employees and contractors should provide only initial firefighting efforts, and only if they have had appropriate training. No employee shall fight a fire beyond the incipient stage and the arrival of professional fire suppression personnel. Involvement in firefighting is voluntary and should only be attempted by trained, qualified individuals.

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То:	File	From:	Daryl Zerfass
			Irvine
Project/File:	2042604600	Date:	April 20, 2022

1 Introduction and Executive Summary

This memorandum analyzes the Entrada South and Valencia Commerce Center Modified Project's consistency with the circulation, emergency access, and evacuation framework established by Los Angeles County for the Santa Clarita Valley area. For context, this analysis summarizes relevant information and policies related to circulation, emergency access, and evacuation from the:

- Los Angeles County Westside Bridge and Major Thoroughfare District
- Santa Clarita Valley Area Plan (One Valley One Vision)
- State-Certified EIR
- Initial Study for the Modified Project

As summarized below, Los Angeles County has engaged in extensive planning for the circulation and transportation framework of the Santa Clarita Valley area. These efforts include the Santa Clarita Valley Area Plan (One Valley One Vision), jointly approved by Los Angeles County and the City of Santa Clarita in 2012, which established the long-term land use and circulation framework for the area, which took in account the need to provide adequate emergency access and evacuation as the Santa Clarita Valley area is built out over time. The Modified Project is consistent with the land use designations and circulation framework established by the Santa Clarita Area Plan, including the Area Plan's transportation policies related to emergency access and evacuation.

2 Discussion

2.1 Los Angeles County Westside Bridge and Major Thoroughfare District

The Los Angeles County Westside Bridge and Major Thoroughfare District was approved in 2011 for the purpose of financing for specific improvements in the westside area of the Santa Clarita Valley. Improvements include, but are not limited to new and improved roadways, bridges, intersections, and interchanges. An illustration of the District boundaries and key facilities is attached for reference. The

District helps ensure that infrastructure, roadways, bridges, intersection and interchange are funded and constructed in a manner to ensure the orderly development of the Santa Clarita Valley area. The circulation system contemplated by the District is consistent with applicable Los Angeles County long-range plans for the area. The Modified Project would comply with the District's fee requirements and would be consistent with the purpose of the District.

2.2 Santa Clarita Valley Area Plan (One Valley One Vision)

In 2012, Los Angeles County and the City of Santa Clarita jointly approved the Santa Clarita Valley Area Plan, One Valley One Vision (OVOV) to ensure the orderly development of the Santa Clarita Valley. OVOV established area-wide circulation and transportation framework and took into account emergency access and evacuation during wildfires and other emergencies. An illustration of the OVOV circulation plan is attached for reference.

OVOV provides "[p]olicies to ensure that the circulation system is safe, such as provision of emergency access and maintenance of evacuation routes, [which] are consistent with provisions of the Safety Element."¹ The OVOV EIR determined that the circulation framework, emergency access, and evacuation planning for the OVOV area would result in less than significant impacts, as follows:

"[OVOV] policies are designed to maintain adequate emergency access throughout the County's [OVOV] Planning Area. They would promote mobility to allow for acceptable response times by emergency vehicles, and ensure emergency access to various types of properties. Additionally, the County would maintain a current evacuation plan. Since the proposed [OVOV] Area Plan would provide the framework to ensure adequate emergency access, impacts would be less than significant."²

Further, the OVOV EIR analyzed the impact of wildland fires on emergency access and evacuation related to buildout of the OVOV area.³ The OVOV EIR concluded that OVOV's plans and policies would ensure that the buildout of the OVOV area would be consistent with existing and future LA County evacuation plans and procedures, ensuring safe egress and evacuation during emergencies, including emergencies caused by fires or wildfires.⁴

¹ Santa Clarita Valley Area Plan, One Valley One Vision, 2012, Circulation Element, p. 72.

² OVOV Draft EIR, Nov. 2010, Chapter 3.2, Circulation and Transportation, p. 3.2-66, available at <u>https://planning.lacounty.gov/ovov</u>.

³ OVOV Draft EIR, Nov. 2010, Chapter 3.11, Hazards and Hazardous Materials, pp. 3.11-28 to 3.11-29, available at <u>https://planning.lacounty.gov/ovov</u>.

⁴ *Id*. at 3.11-30.

Relevant transportation-related policies in OVOV and the Modified Project's consistency assessment is provided as follows:

OVOV Policy	Modified Project Consistency Assessment
Objective C-2.1: Implement the Circulation Plan (as shown on [OVOV] Exhibit C-2) for streets and highways to meet existing and future travel demands for mobility, access, connectivity, and capacity.	"[OVOV] contains several policies intended to ensure that adequate emergency access is maintained throughout the Santa Clarita Valley. In order to promote mobility within the roadway network, the proposed Area Plan seeks to limit excessive cross traffic, access points, and turning movements on arterial highways; and enforce the appropriate spacing of traffic signals (Policy C 2.1.1), enhance connectivity of the roadway network through such methods as grade separations and bridges (Policy C 2.1.2), enhance the capacity of the roadway system by upgrading intersections when necessary (Policy C 2.1.3), ensure that the future dedication and acquisitions of roadways are based on projected demand (Policy C 2.1.5), and implement the construction of paved crossover points through medians for emergency vehicles (Policy C 2.2.9)." ⁵ The Modified Project is designed to implement and be consistent with the circulation system established by OVOV. The State-certified EIR determined that the 2017 Approved Project would not significantly interfere with an emergency access or evacuation with mitigation. As stated below, the Initial Study for the Modified Project determined that the Modified Project would not impair implementation of the County's evacuation plan. The Modified Project is consistent with this objective and the related policies.
Policy C 2.1.1: Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile.	See above discussion for Objective C.2.1.
Policy C 2.1.2: Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis.	See above discussion for Objective C.2.1.

⁵ *Id*. at 3.2-65.

OVOV Policy	Modified Project Consistency Assessment	
Policy C 2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate.	See above discussion for Objective C.2.1.	
Policy C 2.1.4: Ensure that future dedication and acquisition of right-of-way is based on the adopted Circulation Plan, proposed land uses, and projected demand.	See above discussion for Objective C.2.1.	
Policy C 2.2.9: Medians constructed in arterial streets should be provided with paved crossover points for emergency vehicles, where deemed necessary by the Fire Department.	See above discussion for Objective C.2.1.	
Objective C-2.5: Consider the needs for emergency access in transportation planning.	"[OVOV] would facilitate consideration of the needs for emergency access in transportation planning. The County would maintain a current evacuation plan (Policy C 2.5.1), ensure that new development is provided with adequate emergency and/or secondary access, including two points of ingress and egress for most subdivisions (Policy C 2.5.2), require visible street name signage (Policy C 2.5.3), and provide directional signage to the I-5 and SR-14 freeways at key intersections to assist in emergency evacuation operations (Policy C 2.5.4)." ⁶ In addition, as discussed below, the Initial Study for the Modified Project determined that the Modified Project would not impair implementation of the County's evacuation plan. The Modified Project is consistent with this objective and the related policies.	
Policy C-2.5.1: Maintain a current evacuation plan as part of emergency response planning.	See above discussion for Objective C.2.5	
Policy C-2.5.2: Ensure that new development is provided with adequate emergency and/or secondary access for purposes of evacuation and emergency response; require two points of ingress and egress for every subdivision or phase thereof, except as otherwise approved for small subdivisions where physical constraints preclude a second access point.	See above discussion for Objective C.2.5	
Policy C 2.5.3: Require provision of visible street name signs and addresses on all development to aid in emergency response.	See above discussion for Objective C.2.5	

⁶ Id.

OVOV Policy	Modified Project Consistency Assessment
Policy C 2.5.4: Provide directional signage to Interstate 5 and State Route 14 at key intersections in the Valley, to assist emergency evacuation operations.	See above discussion for Objective C.2.5

The Modified Project is consistent with the land use plan and buildout contemplated by OVOV. The Modified Project is largely surrounded by existing development, roadways, and infrastructure. Emergency access and evacuation associated with the Modified Project would be consistent with the area-wide circulation, access and evacuation framework established by the County's evacuation plans and OVOV.

2.3 Summary: State-Certified EIR – Emergency Access and Evacuation

The State-certified EIR concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. The following summarizes the State-certified EIR's conclusions related to emergency access or evacuations.

The State-certified EIR (page 4.17-62 of the Final EIR) concluded that the circulation system will serve the safety needs of the community by providing adequate access in the event of fire or other emergencies and that impacts related to emergency response would be less than significant with mitigation:

The roadway network of the Newhall Ranch Specific Plan's Mobility Plan has been designed as an extension of the regional circulation element. The circulation system will also serve the safety needs of the community by providing adequate access in the event of fire or other emergencies. In addition, all applicable safety standards pursuant to Los Angeles County codes would be met at the time of the building permit issuance. An illustration of the Newhall Ranch Specific Plan's circulation plan is attached for reference.

Through the expansion of the on-site highway system and the provision of three additional fire stations as required by Section 2.5.3 (Public Services and Facilities Plan -- Public Facilities/Services), the Newhall Ranch Specific Plan ensures that emergency response will be expanded in conjunction with the additional demands placed on the emergency response personnel. In addition, the proposed Project would comply with Mitigation Measure PH-7, which requires the provision of secondary route access where necessary. With implementation of these Project-incorporated mitigation measures, impacts to public safety related to emergency response services would be less than significant relative to Significance Criterion 4.

The State-certified EIR (page 4.17-62 of the Final EIR) determined that project-related impacts related to offsite emergency services would be reduced to a less-than-significant level with the implementation of identified road improvements:

Development provided on the Specific Plan site may occasionally require emergency services from Los Angeles County fire stations located beyond the project site boundaries. As described in Subsection 4.8.9 (Traffic Mitigation), project-related impacts to off-site roadways would be reduced to a less-than-significant level with the implementation of identified road improvements. In addition, the Specific Plan development would be required to comply with applicable Los Angeles County secondary access/evacuation requirements (Mitigation Measure PH-7). With the implementation of proposed roadway operation and access requirements, the circulation system in the project region

would be adequate to provide emergency response services to the Specific Plan site. Therefore, secondary emergency response or evacuation impacts would not be significant and no additional mitigation measures are required.

With the implementation of mitigation measures provided in Subsection 4.8.9, roadways located beyond the boundary of the Project site would provide adequate capacity to accommodate anticipated traffic volumes generated by facilitated development located on the Specific Plan, VCC, and Entrada project sites. With implementation of the identified measures, the off-site roadway system would operate at acceptable levels, provide adequate emergency vehicle access, and not result in significant impacts to emergency vehicle response times. No additional mitigation measures are required.

2.4 Summary: Initial Study for the Modified Project – Emergency Access and Evacuation

The Initial Study for the Modified Project concluded that the Modified Project does not include any modifications to the 2017 Approved Project that would impair implementation of, or physically interfering with, an adopted emergency response plan or emergency evacuation plan. The following summarizes the Initial Study's conclusions.

Specifically, in response to Question 9(f) of the Initial Study, the Initial Study determined:7

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The State-certified EIR found that impacts to public safety related to emergency response were not significant for the Entrada and VCC Planning Areas. The Modified Project does not include any modifications to the 2017 Approved Project that would increase interference with an adopted emergency response plan or emergency evacuation plan. The Modified Project includes the same mix of uses as the 2017 Approved Project, with only changes to the residential and non-residential allocations for Entrada South that do not have the potential to impair an adopted emergency response plan or emergency evacuation plan. Like the 2017 Approved Project, Modified Project development in the Entrada and VCC Planning Areas would address fire and emergency access needs through the implementation of Mitigation Measure RMDP/SCP-PH-7, which requires compliance with Los Angeles County Code, Title 21, Chapter 21.24 regarding secondary evacuation access. Further, the Modified Project's circulation system would be designed and constructed in accordance with all applicable Los Angeles County Fire Department (LACFD) requirements. Therefore, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts for this topic area; no additional analysis in the Supplemental EIR is required.

Additionally, PDF-HM-1, set forth in Section 17, Transportation, of this Initial Study, provides additional benefits for the Modified Project. PDF-HM-1 would require the submission of a detailed Construction Traffic Management Plan which would include provisions for adequate emergency access to all residences and businesses during construction activities. PDF-HM-1 is beneficial and

⁷ Initial Study, Entrada South and Valencia Commerce Center Project, October 7, 2021, p. 73.

is not relied upon to reach the conclusion that no additional analysis in the Supplemental EIR is required.

Further, the Initial Study determined in response to Question 17(d) that the Modified Project would not have the potential to cause new significant impacts related to emergency access:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

Similarly, the Initial Study in response to Question 20(a) determined that the Modified Project would not have the potential to substantially impair an adopted emergency response plan or emergency evacuation plan:

Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR. The Modified Project would not increase impacts related to emergency response or evacuation as compared to the 2017 Approved Project. Please refer to Response to Question 9.f, above. As discussed therein, the Modified Project would not result in new significant impacts or increase the severity of previously identified significant impacts with respect to emergency access. No additional analysis in the Supplemental EIR is required.

As shown by the information above, planning efforts by Los Angeles County and the City of Santa Clarita, which established the long-term land use and circulation framework for the area, took in account the need to provide adequate emergency access and evacuation as the Santa Clarita Valley area is built out over time. The Modified Project is consistent with the land use designations and circulation framework established by the Santa Clarita Area Plan, including the Area Plan's transportation policies related to emergency access and evacuation.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Daryl Zerfass PE, PTP Principal, Transportation Planning & Traffic Engineering Mobile: (949) 302-8995 daryl.zerfass@stantec.com

Attachments: Westside Bridge and Major Thoroughfare District - Links, Bridges, and Interchanges Santa Clarita Valley Area Plan - Circulation Plan of Streets and Highways Newhall Ranch Specific Plan - Master Circulation Plan Newhall Ranch Specific Plan - Regional Access







SPECIFIC PLAN Prepared For: Newhall Ranch Company
LEGEND state highway Major highway
COLLECTOR
BUS PULL-IN
STREET SECTIONS SECTIONS A1 & A2 EXHIBIT 2.4-3 SECTIONS B, C & D EXHIBIT 2.4-4
English 0 2000' Metric 0 225m 450m 900m NORTH
EXHIBIT 2.4-2 MASTER CIRCULATION PLAN MAY 2003 m: \newhall1\sp-revise-0403\circ.dwa

SPECIFIC PLAN Prepared For: Newhall Ranch Company

EXHIBIT 2.4-1 REGIONAL ACCESS

Computer Mapping by IORM Systems