Wildfire Evacuation Technical Report

Centennial Project

MARCH 2025

Prepared for:

TEJON RANCH
P.O. Box 1000 | 4436 Lebec Road
Lebec, CA 93243
Contact: Nathan Keith, Sr. VP Real Estate

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Mike Huff

Mike Huff
Discipline Director, Urban Forestry + Fire Protection

Lisa Maier
Fire Protection Planner

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CAL FIRE	California Department of Forestry and Fire Protection
CBC	California Building Code
CEQA	California Environmental Quality Act
CERT	Community Emergency Response Team
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FMZ	Fuel Modification Zone
FPP	Fire Protection Plan
HFHSZ	High Fire Hazard Severity Zone
HOA	Homeowner's Association
IC	Incident Command
IFC	International Fire Code
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
MFHSZ	Moderate Fire Hazard Severity Zone
OA	Operations Area
OEM	Office of Emergency Management
Project	Centennial Project
SEIR	Supplemental Environmental Impact Report
TEP	Temporary Evacuation Point
TRA	Temporary Refuge Areas
WETR	Wildfire Evacuation Technical Report
WUI	Wildland Urban Interface
VHFHSZ	Very High Fire Hazard Severity Zone

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1 Purpose

This Wildfire Evacuation Technical Report (WETR) has three primary purposes. First, this WETR provides future Centennial populations with an evacuation resource that provides wildfire preparedness information and details procedures they may be asked to follow. Second, this WETR provides information that informs the Supplemental Environmental Impact Report (SEIR), providing an overview of evacuation procedures and protocols that are utilized by emergency management agencies during evacuation events. Finally, this WETR provides a Project-specific scenario evacuation time and potential impact modeling analysis to address California Environmental Quality Act (CEQA) and California Attorney General's Office Guidance.

2 Wildfire Preparedness

The Centennial Quick Reference Guide provides helpful tips and educational resources, so on-site populations are prepared in the event of a wildland fire evacuation.

Figure 1 illustrates the emergency evacuation routes potentially available to future developments of the Centennial Project. Figure 2 displays the Project vicinity and Figure 3 is the Project's site plan. In most wildfire evacuations, routes and destinations will be provided through emergency notifications. Occupants should know available routes, stay informed, and follow directions provided by law enforcement or fire agencies, news media and other credible sources. Occupants should not rely on navigation apps that may inadvertently lead persons toward the approaching wildfire.

2.1 Nearest Medical Facilities

At the time this plan was written the facilities listed below are the nearest medical facilities to project, however the Project has included a land incentive for a hospital as well as plans for clinics and urgent care centers.

Henry Mayo Newhall (35 miles)

23845 McBean Parkway,
Valencia, California 91355

Directions from Project:

- Start west on CA-138
- Merge onto I-5 South
- Take exit 168 for McBean Parkway
- Turn left onto McBean Parkway
- Hospital is on the left

Antelope Valley Medical Center (39 miles)

1600 West Avenue J

Lancaster, CA 93534

Directions from Project:

- East on CA-138 East toward 300th Street West
- Turn right to merge onto CA-138 East / CA-14 South toward Los Angeles / Lancaster / San Bernardino
- Take exit 45 for Avenue H toward Antelope Valley / Fairgrounds
- Turn left onto West Avenue H
- Turn right onto 15th Street West
- Turn right into medical center
- Hospital on right

Olive View UCLA Medical Center (44 miles)

14445 Olive View Drive,
Sylmar, CA 91342

Directions from Project:

- Start west on CA-138
- Use the left two lanes to merge onto the I-5 South
- Take exit 161A toward I-210 East toward Pasadena
- Take exit 2 toward Roxford Street
- Turn left onto Roxford Street
- Continue onto Olive View Drive
- Turn left onto Kennedy Road
- Hospital will be on the right.

Palmdale Regional Medical Center (45.2 miles)

38600 Medical Center Drive
Palmdale, CA 93551

Directions from Project:

- East on CA-138 East toward 300th Street West
- Turn right to merge onto CA-138 East / CA-14 South toward Los Angeles / Lancaster / San Bernardino
- Take exit 37 for 10th Street West
- Turn right onto 10th Street West
- Continue onto Tierra Subida Avenue
- Hospital on left

See also local Urgent Care facilities:

Concentra Urgent Care	AFC Urgent Care Valencia	High Desert Medical Group
25733 Rye Canyon Road Valencia, California 91355	27550 Newhall Ranch Road Valencia, California 91355	43839 15th Street West Lancaster, California 93534

2.2 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 one's preferred language for notifications.

In the event of a wildfire or similar emergency within the proximity of the Project site, the Incident Commander[1] (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 Project's occupants 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 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 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

Social Media provides another outlet for news:

- County of Los Angeles
  - Facebook: https://www.facebook.com/countyofla
  - Twitter: https://twitter.com/CountyofLA/
- Los Angeles County Fire Department
  - Facebook: https://www.facebook.com/LACoFD/

[1] The individual responsible for the command of all function at the field response level, as defined by the Los Angeles County EOP.

  - Twitter: https://twitter.com/LACoFDPIO
- Los Angeles County Sheriff's Department
  - Facebook: https://www.facebook.com/LosAngelesCountySheriffsDepartment/
  - Twitter: https://twitter.com/LASDHQ

2.3 Get Involved in Community Readiness

Each of the Project's future developments is encouraged to form a volunteer Community Emergency Response Team (CERT) through the LACoFD CERT program. LACoFD offers free, 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, participants 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 Project's HOA will organize annual evacuation public outreach, engage directly with organizations such as the California Fire Safe Council, and maintain a fire safe page on all websites for future developments of the Centennial Project, which will include this Wildfire Evacuation Technical Report (WETR) as well as links to important citizen preparedness information.

This WETR is prepared specifically for the Project and focuses on wildfire evacuations, although many of the concepts and protocols will be applicable to other emergency situations. Ultimately, this WETR will be used by the Project's community and HOA to educate occupants on their evacuation approach during wildfires and other similar emergencies. It is critical for Project occupants 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 study. Some actions Project occupants can complete in advance include:

- Follow the "Ready, Set, Go!" model developed for wildfire evacuations (Appendix A). "Ready, Set, Go!" is a program providing residents with the pre-planning needed to facilitate a fast and efficient evacuation.
- Become familiar with potential evacuation routes out of the area, as shown in Figure 1. Familiarity with evacuation routes will facilitate evacuation when messaging is provided regarding where to go and which routes to take.
- 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 personal property by locking all doors and windows, and unplugging electrical equipment, such as appliances and electronics.

Sample emergency preparedness resources available to occupants 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, Project occupants are encouraged to become familiar with the concepts detailed at the following websites:

- LACoFD Emergency Preparedness Guide: https://fire.lacounty.gov/emergency-disaster-preparedness-safety-tips/
- "Ready, Set, Go!" Wildland Fire Action Guide: https://www.fire.lacounty.gov/rsg/
- Family Communication Plan: https://www.ready.gov/sites/default/files/2020-03/family-emergency-communication-planning-document.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

2.4 Evacuation Analysis Limitations

Wildfires and other emergencies are often fluid events and the need for evacuations are typically determined by on-scene first responders or by a collaboration between first responders and designated emergency response teams, including OEM and the IC established for larger emergency events. As such, and consistent with all emergency evacuation plans, this WETR is to be considered a tool that supports existing pre-plans and provides for occupants, who are familiar with the evacuation protocol, but is subservient to emergency event-specific directives provided by agencies managing the event.

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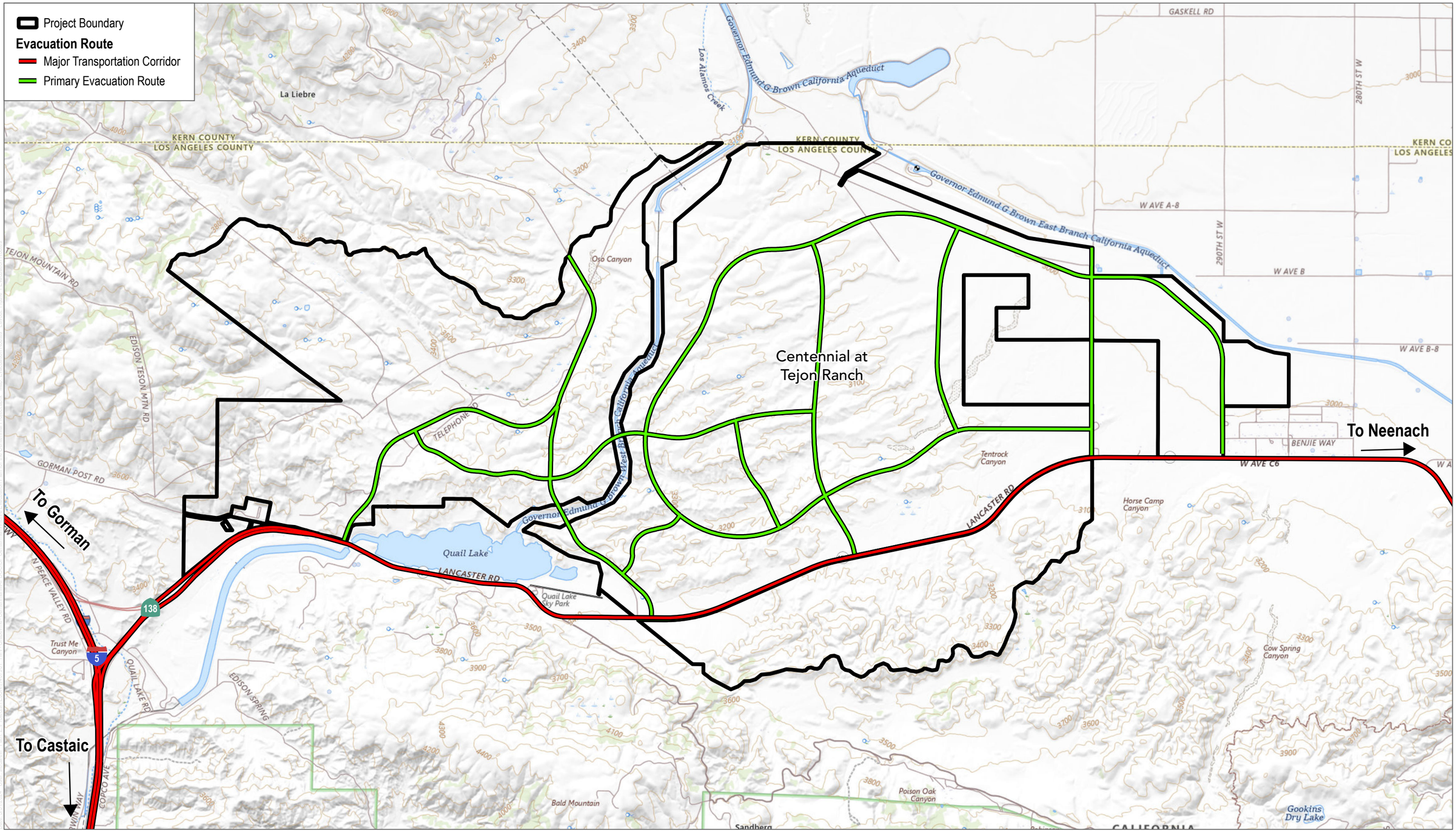

SOURCE: USGS National Map 2024

DUDEK

0 1,500 3,000 Feet

FIGURE 1

Evacuation Routes

Wildfire Evacuation Study for the Centennial Project

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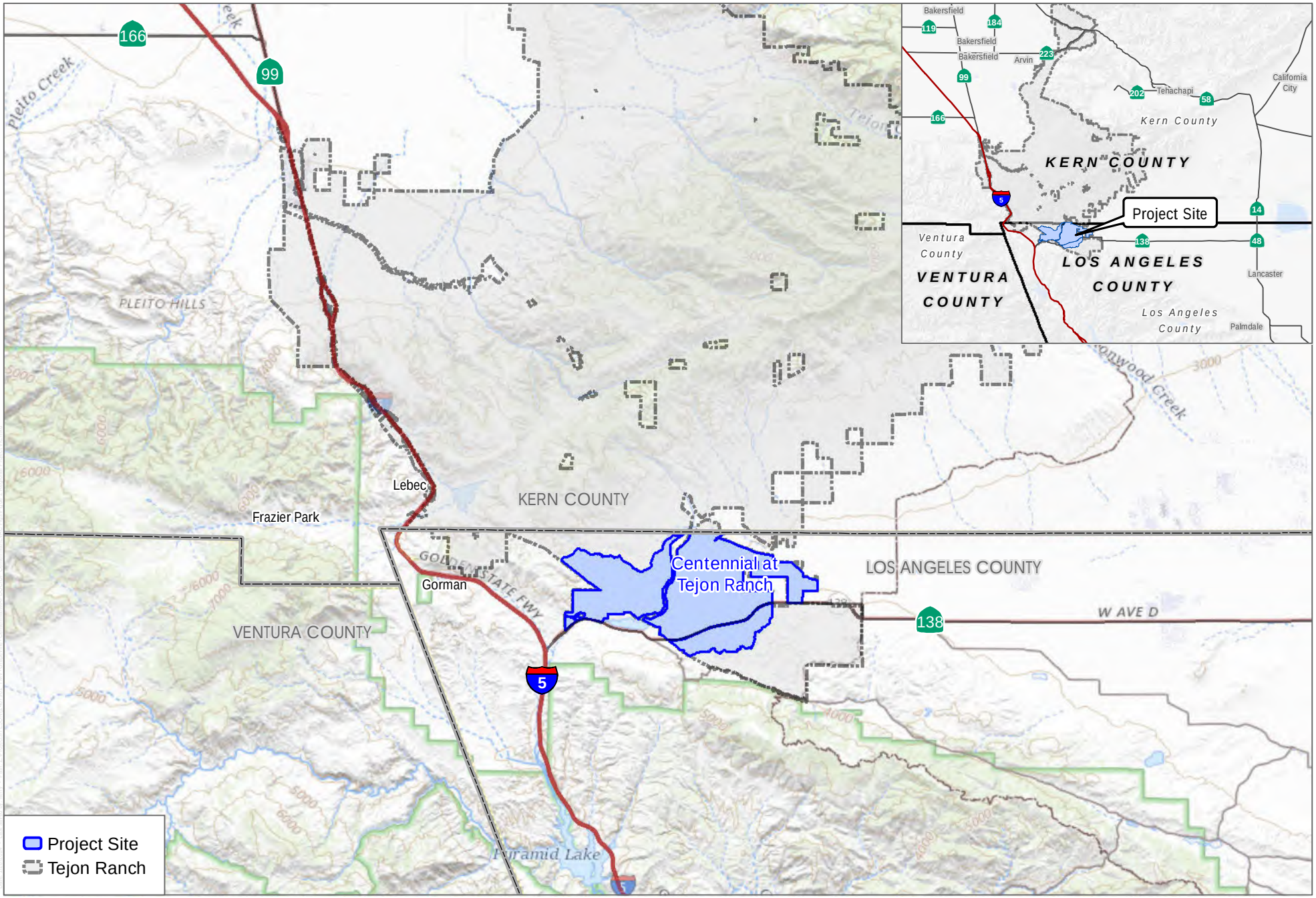

SOURCE: AERIAL-NAIP 2020

DUDEK

0 55,000 110,000 Feet

FIGURE 2

Regional Project Vicinity

Wildfire Evacuation Study for the Centennial Project

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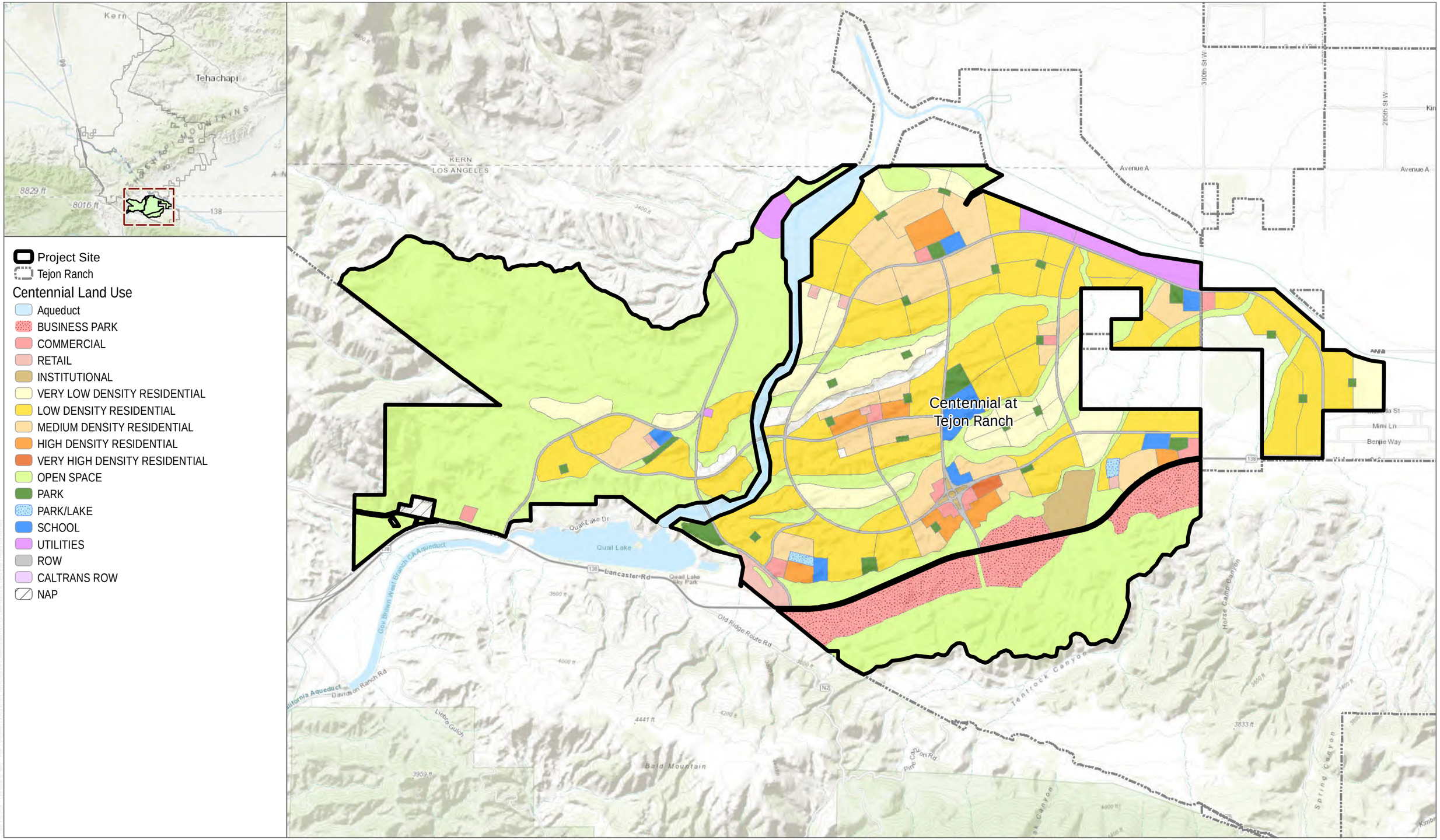

SOURCE: BASEMAP-ESRI MAPPING SERVICE 2023; LAND USE-TEJON RANCH 2023

DUDEK

0 1,950 3,900 Feet

FIGURE 3

Centennial Project Site Plan

Wildfire Evacuation Study for the Centennial Project

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3 Introduction

This Wildfire Evacuation Technical Report (WETR) was prepared based on the County of Los Angeles Operational Area Emergency Operations Plan (2023). The format and content of this report is consistent with the recommendations of the County's EOP. A complete copy of the County's EOP can be downloaded here:

County EOP:

https://ceo.lacounty.gov/wp-content/uploads/2023/11/County-of-Los-Angeles-OAEOP-2023-Final-for-Website.pdf

Evacuation is a process by which people are moved from a place where there is immediate or anticipated danger, to a place of safety, and offered appropriate temporary shelter facilities. When the threat to safety is gone, evacuees are able to return to their normal activities, or to make suitable alternative arrangements. The overarching goal of evacuation planning is to maximize the preservation of life while reducing the number of people that must evacuate and the distance they must travel to seek safe refuge.

This WETR for the Centennial Project will outline strategies, procedures, recommendations, and organizational structures that can be used to implement a coordinated evacuation effort in the case of a wildfire or similar emergencies that require movement of people out of the area or temporary sheltering in place in protected structures.

3.1 Project Description

The Centennial Specific Plan is a large-scale master-planned community, resulting in roughly 54% of the site converted to urbanized uses while approximately 46% of the site is either left undisturbed or will be active recreation open areas. The Project would develop many on-site infrastructure and utility improvements to support the various housing, business, and institutional uses. In summary, the proposed 12,323-acre Project area would include the following land uses at build out

- Up to 19,333 residential units
- 1,034,550 square feet of commercial
- 7,363,818 square feet business park
- 1,568,160 square feet institutional/Civic uses on 110 acres
- 146 acres for schools
- 75 acres of commercial recreation
- 163 acres of parks
- 5,624 acres of open space
- 327 acres for streets
- 191 acres for utilities

As described in the Supplemental Environmental Impact Report (SEIR) the Project will make minor adjustments to the previously approved 2019 Centennial Specific Plan, which includes: (1) allowing utility-scale battery storage and microgrids to improve the resilience of the Project's onsite renewable energy electricity program in support of the Net-Zero GHG program, and (2) modifying internal roadway design standards to improve evacuation capacity for future subdivision maps.

With regard to wildfire risk on the Project site, an important component is the planned wildland urban interface nature of this community. Planned development resembles a clustered design with continuous edges between development areas and undeveloped vegetation. Large expanses of open space in the extreme northwest and southeast as well as in the far western portions of the project include wildland fuels. These open space areas represent potential exposed interfaces to the wildland with the remainder of the interior project areas represented by built and maintained landscape. In addition to these perimeter open space areas, minor and major greenways are planned for integration within the Centennial communities. In most cases, these interior greenways will be fully disturbed and graded during construction and then reseeded and will include managed landscapes presenting minimal wildfire hazard. Nonetheless, the structures planned adjacent to these areas are providing fuel modification, interior sprinklers and ignition resistant construction that is appropriate for the types of wildfires that may occur in these areas. Other large expanses of open space in the extreme northwest and southeast as well as in the far western portions of the project include wildland fuels. These open space areas represent potential exposed interfaces to the wildland with the remainder of the interior project areas represented by built and maintained landscape.

The proposed land use improvements previously described will be completed according to the then current California Fire Code and Building Codes (as adopted by the County, per Title 32) as well as the 2021 International Fire Code. At the time of this report, the current California Fire and Building Codes require that land use improvements include ignition-resistive construction, interior sprinklers, structure set-backs, and required fire flow, along with a designated fuel modification area which varies throughout the Project based on modeled fire intensity and site features such as vegetation and topography (Dudek 2024). The following descriptions provide additional detail regarding the proposed land uses.

Residential

Residential units will be provided within land use categories ranging from very low to very high residential. As such, densities will range from as low as 2 dwelling units per acre to as high as 50 dwelling units per acre. There will be detached as well as attached units.

Public Uses

The Centennial Specific Plan Project public uses include recreation areas, parks, golf courses, library, and hospital, amongst others.

Schools

Seven public school sites will be constructed within the project. Five of the school sites will be designated K–8, one K- 5 and there will be one high school.

Public Safety Sites

The Centennial Specific Plan Project also includes proposed public facilities locations including three fire stations, with an option for a fourth if determined necessary by LACoFD, and a temporary sheriff sub-station open day one of the Project that will be upgraded to a full sheriff station as the community builds out. Details related to final location, funding, phasing, specific fire station facility components, equipment, and staffing will be determined with LACoFD direction.

Project Open Space

The largest component of open space in the overall Centennial Specific Plan Project area is comprised of the areas outside the individual residential lots. The development concept is described in detail in the Centennial Specific Plan.

Additionally, proposed off-site improvements include:

- Widening SR-138, one of the primary access roads to the Project site
- Undergrounding an existing off-site powerline
- Providing connections to existing off-site utility systems

3.2 Applicable Emergency Evacuation Regulations, Standards and Planning Tools

3.2.1 Federal

3.2.1.1 Disaster Mitigation Act

The Disaster Mitigation Act of 2000 requires that a state mitigation plan, as a condition of disaster assistance, add incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Disaster Mitigation Act also established a new requirement for jurisdictions to prepare local mitigation plans.

3.2.1.2 National Incident Management System (NIMS)

The NIMS guides all levels of government, nongovernmental organizations and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents. NIMS provides community members with a shared vocabulary, systems and processes to successfully deliver the capabilities described in the National Preparedness System. The National Preparedness System is a Presidential Policy Directive establishing a common goal to create a secure and resilient nation associated with prevention, protection, mitigation, response and recovery to address the greatest risks to the nation. One core area is fire management and suppression.

NIMS defines operational systems that guide how personnel work together during incidents.

3.2.2 State

3.2.2.1 Fire Hazard Severity Zones

To assist each fire agency in addressing its responsibility area, California Department of Forestry and Fire (CAL FIRE) uses a severity classification system to identify areas or zones of severity for fire hazards within the state. CAL FIRE is required to map these zones for State Responsibility Areas and identify Very High Fire Hazard Severity Zones (VHFHSZ) for Local Responsibility Areas. The Specific Plan is located within a Moderate Fire Hazard Severity Zone (MFHSZ), High Fire Hazard Severity Zone (HFHSZ), and Very High Fire Hazard Severity Zone (VHFHSZ).

3.2.2.2 California Wildland-Urban Interface Code

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Building Code (CBC) (California Code of Regulations [CCR] Title 24, Part 2). Section 701A of the CBC includes regulations addressing materials and construction methods for exterior wildfire exposure and applies to new buildings located in State Responsibility Areas or Very High Fire Hazard Severity Zones in Local Response Areas.

3.2.2.3 California Fire Code

The 2022 California Fire Code (CCR Title 24, Part 9) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. The County has adopted the California Fire Code as Chapter 15.56, as amended, including appendices addressing fire-flow requirements for buildings.

Note: The Project will be compliant with the then current California Fire and Building Codes. This WETR is written to include current code standards including Chapter 7A of the 2022 California Building Code (CBC); the 2022 California Residential Code, Section 327; and the 2018 Edition of the International Fire Code as adopted by the County. The Project would currently also be subject to the provisions of Section 4291 of the Public Resources Code; Chapter 12-7A of the CA Reference Standards Code, Title 14, Division 1.5, Chapter 7, Subsection 2, Articles 1-5 and Title 14, Division 1.5, Chapter 7, Subsection 3, Section 1299 of the CA Code of Regulations; Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07 of the CA Code of Regulations; and Sections 51175-511829 of the CA Government Code, or the then current versions of each code.

3.2.2.4 California Emergency Services Act

The California Emergency Services Act (California Government Code §8550, et seq.), provides for the creation of an Office of Emergency Services, assign and coordinate functions and duties to be performed during an emergency, facilitate mutual aid, and assign resources (including manpower and facilities) throughout the state for dealing with any emergency that may occur.

3.2.2.5 California Office of Emergency Services

The California Office of Emergency Services (OES) is responsible for the coordination of overall state agency response to disasters. Assuring the state's readiness to respond to, recover from all hazards and assisting local governments in their emergency preparedness, response, recovery and mitigation.

3.2.2.5.1 Standardized Emergency Management System (SEMS)

SEMS is the cornerstone of California's emergency response system and the fundamental structure for the response phase of emergency management. The system unifies all elements of California's emergency management community into a single integrated system and standardizes key elements. SEMS incorporates:

- Incident Command System (ICS) - A field-level emergency response system based on management by objectives
- Multi/ Inter-agency coordination - Affected agencies working together to coordinate allocations of resources and emergency response activities
- Mutual Aid - A system for obtaining additional emergency resources from non-affected jurisdictions.
- Operational Area Concept - County and its sub-divisions to coordinate damage information, resource requests and emergency response.

3.2.2.6 Attorney General 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 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. Importantly, the Guidance does not impose additional legal requirements on local governments, nor does it alter any applicable laws or regulations.

The Guidance states that evacuation modeling and planning should be required for all projects located in HFHSZ/ VHFHSZ that present an increased risk of ignition and/or evacuation impacts. It further states that local jurisdictions should require evacuation modeling and planning to be developed prior to project approval to provide maximum flexibility in design modifications necessary to address wildfire risks and impacts. The Project is in an area partially within an area designated as high and very high fire hazard severity zone and adjacent to open space areas, which is why this WETR was prepared for the Project and includes the analysis of several scenarios, including existing and with Project conditions. The Project would provide important road network improvements including widening SR 138. These improvements assist Project access as well as provide a public benefit for existing occupants of adjacent developed areas.

The Guidance further states that evacuation modeling and analysis must augment existing information when necessary to include adequate analysis of the following:

- Evaluation of the capacity of roadways to accommodate project and community evacuation and simultaneous emergency access. Existing and future roadway capacities are analyzed in Section 4 of this Emergency WETR.
- Assessment of the timing for evacuation. Analysis of evacuation timing is detailed in Section 4.3.

- Identification of alternative plans for evacuation. Alternative plans for evacuation would be feasible due to the designated on-site sheltering in the Institute Building as well as other buildings.
- Evaluation of the Project's impacts on existing evacuation plans. Published and publicly available existing evacuation plans were not available to Dudek during the preparation of this plan. The Project would utilize primary evacuation routes that would be available to other evacuees, but with improved capacities, new connections and better flexibility and options. This Evacuation Study is based on the County's EOP.

Consideration of the adequacy of emergency access, including the project's proximity to existing fire services and the capacity of existing services. Emergency access is provided that is consistent with the fire code requirements. As further discussed in the Project's Fire Protection Plan (Dudek 2024), per LACOFD response targets the first responding engine should be within 1.5 miles of the Project Site and the first due truck company should be within 2 miles. Based on these criteria, the Project is out of compliance with the LACOFD response target due to the distance from the closest fire station. However, the Project plans to build a minimum of three fire stations on site, which will result in compliance with response time standards and a potential forth is response time is not met.

- Traffic modeling to quantify travel times under various likely scenarios. The Emergency Wildfire Evacuation Travel Time Technical Analysis (Appendix C) utilizes VISSIM, a microscopic, multimodal traffic flow modeling software used to simulate different traffic conditions under several different scenarios including Existing, Existing + Project, Existing + Cumulative, and Existing + Cumulative + Project.

3.2.3 Local

3.2.3.1 Los Angeles County Multi-Jurisdictional Local Hazard Mitigation Plan

The purpose of the County's Multi-Jurisdictional Hazard Mitigation Plan (2020) is to identify the County's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and human-made hazards.

3.2.3.2 Los Angeles County Operational Area Emergency Response Plan

The 2012 Los Angeles County Operational Area Emergency Response Plan describes a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents within the County of Los Angeles. These plans delineate operational concepts relating to various emergency situations, identify components of the Emergency Management Organization, and describe the overall responsibilities for protecting life and property and providing for the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies, and the private sector.

3.2.3.3 County of Los Angeles Fire Code

The County of Los Angles Fire Code adopts the 2022 California Fire Code with additions, deletions and amendments. Provisions of the California Fire Code are described under State Regulations, above.

3.2.3.4 County of Los Angeles Building Code

The County Building Code is intended to regulate the construction of applicable facilities and encompasses (and formally adopts) associated elements of the 2022 California Building Code. Specifically, this includes regulating the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, use, height, area and maintenance of all structures and certain equipment therein.

4 Los Angeles County Evacuation Procedures - Background

This WETR has been prepared based on the Los Angeles County Office of Emergency Management's Operations Area (OA) Emergency Operations Plan (EOP).

To establish a framework for implementing well-coordinated evacuations, the OEM addresses evacuations as part of the County's OA EOP. Large-scale evacuations are complex, which often require multi-departmental and/or multi-jurisdictional 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. 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 EOP.

For mass evacuations several Los Angeles County departments have primary agency responsibility and authority for providing services. These departments include OEM, LACoFD, 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 Section 5 of the OA EOP – Roles and Responsibilities.

- **OEM:** Will activate the OA Emergency Operations Center (EOC) 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 OA EOC 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 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 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 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 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 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:** The Department of Public Social Services 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 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, the Department of Public Social Services 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 Project area that may impact how evacuation is accomplished. This WETR is consistent with the County's evacuation planning standards and will remain current through regular updates to the Project's Emergency Response Plan.

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 needs. 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.

4.1 Evacuation Response Operations

An evacuation of any area requires considerable coordination among numerous public, private, and community/non-profit organizations. Wildfire evacuations will typically allow time for responders to conduct evacuation notification in advance of an immediate threat to life safety; giving occupants 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.

4.1.1 Evacuation Points and Shelters

When the LACSD or IC implements an evacuation order, each would coordinate with Los Angeles Department of Public Social Services, the OA EOC, 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 occupants of the Project might include:

- Hungry Valley State Vehicular Recreation Area North Kiosk & Visitor Center, 5301 Ralphs Ranch Rd, Gorman, CA 93243 (10.2 miles)
- Outlets at Tejon, 5701 Outlets at Tejon Pkwy, Arvin, CA 93203 (25.9 miles)
- Del Sur School, 9023 W Avenue H, Lancaster, CA 93536 (28.8 miles)
- Diamond Jim's Casino, 118 20th St W, Rosamond, CA 93560 (34.9 miles)

Potential evacuation shelters and assembly areas that could provide a longer stay for refuge are:

- AV Fair & Event Center, 2551 W Avenue H, Lancaster, CA 93536 (36.1 miles)

- Palmdale Regional Airport, 41000 20 St E, Palmdale, CA 93550 (49.1 miles)

These potential shelters and assembly areas are what currently exist around the proposed Project area. The areas that may ultimately serve as evacuation shelters will likely be built as part of the Project.

If there are occupants 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.

5 Standard Evacuation Procedures

5.1 Relocation/Evacuation

Wolshon and Marchive (2007) simulated traffic flow conditions in the 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, more lead-time 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 Project to urban areas further from an encroaching wildfire 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). The second type of evacuation is a short-notice evacuation, which from a public safety perspective is highly undesirable. This type of evacuation occurs when fire ignites close to vulnerable communities. 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 future development of the 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.

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.

5.2 Evacuation Baseline

For purposes of this WETR, the first and most logical choice for all occupants within the boundaries of the 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, each household should develop a plan that is clearly understood by all individuals, as well as participating in the educational and training programs sponsored by OEM, and LACoFD. In addition, the "READY! SET! GO!" information should 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.

Occupants 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, occupants will proceed according to known available routes away from the encroaching fire as detailed in Section 1 of this plan. Occupants are cautioned not to rely on navigation apps which may inadvertently lead them toward an oncoming fire.

5.3 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 all future developments of the 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.

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.

5.3.1 Safety Zones

The International Fire Service Training Association (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, Glossary of Wildland Fire Terminology provides the following definitions for Safety Zone and Escape routes:

> **Safety Zone.** An area cleared of flammable materials used by trained firefighters 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. As described in the Project's Fire Protection Plan, a 200-foot Fuel intg provide the necessary separation from fuel beds. Additionally, all future developments of the Project will provide areas of temporary refuge on-site.

The ignition resistant and maintained landscaping within each of the Project's future developments, 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 Project's future developments would provide Safety Zones available to

responding firefighters, such as interior roads, large parking lots, Quail Lake, structures. The Safety Zones associated with each of the Project's future developments can be part of the County's pre-planning 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.

5.3.2 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 short-term 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 pre-planned 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 self-defense 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 future developments of the Project, TRAs would likely include navigating to the interior roadways of neighborhoods where 200-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 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, occupants. 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.

The Project's residential and commercial structures and areas can be considered for TRA because they include the following features:

- Ignition Resistant Construction
- Annual landscape inspections
- 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 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 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 onsite will be made by responding law enforcement and/or fire personnel.

5.4 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 WETR, 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 pre-planned 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 Project. Further, in all but the rarest circumstances, evacuees will be receiving information from credible sources during an evacuation. Further, it would be anticipated that law enforcement and/or fire personnel would be onsite 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.

5.4.1 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, elderly 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 for the Project 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 occupants 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.

Senior citizens face unique challenges during wildfire evacuations. Mobility problems and chronic health conditions are more likely to impact older individuals. Further, care providers and support services may be temporarily unavailable during a wildfire emergency. Evacuation concerns are exacerbated through the presence of vision and hearing problems and cognitive impairment, all of which are more likely to impact senior citizens and limit the ability to understand and respond to emergency evacuations.

Project Approach:

The Fire Safety Coordinator(s) for each of the future developments should provide information to occupants regarding how to notify the County OEM and Health and Human Services of special needs residents so that accommodations for their notification (Accessible Alert LA County, CERT programs, or other), transportation or other special requirements can be provided during an emergency evacuation. Occupants will be advised of their options during an emergency by law enforcement or fire officials.

5.4.2 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 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 Section 5 – Roles and Responsibilities of the OA EOP, Animal Care and Control, 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.

The Project would not accommodate livestock; however, household pets would be a common occurrence.

Project Approach:

Develop a strong outreach program for pet owners so they understand their responsibilities and the fact that they will not likely be allowed re-entry once evacuated.

Develop a registration for owners of animals who cannot evacuate them without assistance so that volunteer organizations or individuals can provide resources.

5.4.3 Re-Entry Procedures

An important component of evacuations is the occupant 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 OA EOC Director, and the Operations Section Chief at the OA EOC. In most cases, the OA EOC will remain activated until full re-entry is complete. In the event the OA EOC 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 OA EOC Director, and the Operations Section Chief at the OA EOC is 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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6 Centennial Evacuation Scenario Modeling Analysis

This section provides a summary of an evacuation scenario modeling analysis completed by Chen Ryan Associates (CRA) and Dudek for the Centennial Project. The complete analysis is provided in Appendix C. The purpose of the analysis was to determine evacuation times for the Project's population at phased construction completion milestones and whether there would be impacts on the surrounding communities' population evacuation times. This analysis was performed in accordance with the requirements of the County of Los Angeles Operational Area Emergency Operations Plan November 2023 for the calculation of evacuation times.

Phased Evacuation

Although mass evacuation events have become less common as wildfire evacuation technology and capabilities have improved dramatically in the last 15 years, it can still serve as a conservative scenario under which to analyze evacuation impacts. The roadway network and vehicle input assumptions also have been selected to simulate a "worst-case" evacuation scenario that would occur during a weekend day (Saturday) when the Project's residents are home, and nearby homes are likely to be fully occupied. While evaluation of the "worst-case" scenario is not required by law, out of an abundance of caution, the Project has opted to consider this scenario. The assumption that an evacuation would occur when the Project is in operation at full buildout and all residents in the surrounding community are at home when the evacuation order is provided represents an extreme, worst-case condition. In an actual wildfire event, it is most likely that phased evacuation orders would be given to provide for a more orderly evacuation. It is also likely that fewer residents would be present nearby if the evacuation happened during a time that the Project was not at full occupancy such as a weekday afternoon. Phased Evacuation, by targeting the area in immediate danger allows for better evacuation operations, reduces gridlock, and reserves sufficient travel way for emergency vehicles. Under this approach, first responders or law enforcement personnel will direct traffic at all major intersections during the evacuation process.

Based on the review of the County of Los OA EOP, the County All-Hazards Mitigation Plan (2020), recent wildfire evacuation efforts, and other relevant information, the current evacuation practices are led by the local incident commander or the incident command post (ICP). These practices involve collaboration between fire departments and various law enforcement agencies. Depending on the nature of the emergency, multiple departments may work together during the evacuation process. The responsibilities of these departments are detailed in the County OA EOP and summarized below:

Fire Department Responsibilities

- Establish command of the Incident
- Conduct a situation assessment and evaluate the need for evacuations
- Establish an Incident Command Post (ICP) with sufficient room for representatives from other assisting agencies and announce its location
- Request Agency Representative from Law Enforcement to respond to the ICP.

Law Enforcement Responsibilities

- Assign supervisor of the rank of Sergeant or above to the Incident Command Post and request a Deputy to locate with Operations Section Chief
- Maintain ingress and egress routes for emergency vehicles
- Establish perimeter control, keeping unauthorized vehicles and pedestrians out of the involved area. Conduct evaluations, if required, at the direction of the Incident Commander
- Establish anti-looting security patrols, when safe to do so, for evacuated areas within the perimeter
- Maintain a Unit log

Joint Fire and Law Enforcement Responsibilities

- Evaluate and determine whether Law Enforcement role will be as an Agency Representative or Unified Incident Commander, depending on the scope of the Incident
- Assign a Law Enforcement supervisor to work closely with the Operations Section Chief or Incident Commander, whomever is determining the areas to be evacuated
- Assess and validate the need for an Evacuation Warning, Evacuation Order, and/or Shelter in Place — Determine the location, potential size, and direction of Incident travel or spread
- Unified Commanders determine potential for Incident spread and request the appropriate resources to complete the evacuation and mitigate the Incident concurrently

Methodical and strategic evacuation orders ensure that resources are deployed where needed and ensure a manageable traffic flow out of the area under threat. This approach is demonstrated through several recent wildfires where evacuation orders were issued. One example is the Border Fire 32, which was detected at 2:15 p.m. on August 31, 2022. At 2:57 PM, the San Diego County Sheriff's Department shut down SR-94 within the vicinity of the fire and issuing an evacuation order at 3:28 p.m. Systematic approaches such as those taken for the Border Fire 32 allow for a more orderly evacuation and prioritize those in higher risk area, while maintain clear pathways for law enforcement, first responders, and firefighting equipment.

Another example is the Lilac Fire, which was detected at 11:15 a.m. on December 7, 2017, by applying strategic evacuation and closed down crucial roadway to non-essential traffic, San Diego County law enforcement and fire fighters was able to evacuate more than 14 different areas within San Diego County via 14 separate evacuation campaigns (notifications sent to affected areas) – sequencing of evacuation areas occurring between 12/7/2017 at 1:52 pm to 12/7/2017 10:17 pm. Thanks to the orderly evacuation, efforts from law enforcement and fire fighters, there was zero reported fatality during the Lilac Fire.

Another example of a systematic approach and strategic evacuation order can be observed during the Thomas Fire in 2017 in Ventura County. Selective evacuation orders were issued only for areas in immediate danger. Law enforcement first issued evacuation orders near the Carpinteria area, emphasizing that the order was specific to this region to minimize the number of evacuees on the road. Similarly, the timeline of significant events for the Woolsey Fire, as documented in the Woolsey Fire After Action Report, demonstrates the same strategic evacuation approach. In some instances, the Incident Command Post (ICP) issued voluntary evacuation notices instead of orders for areas deemed to be at higher risk.

The Department of Homeland Security (2019) provides supporting data for why jurisdictions have moved to the targeted evacuation approach that leverages the power of situational 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.

Additionally, targeted evacuation order/warning aims to ensure proper traffic flow and reduce stress at evacuation sites, some people may still choose to evacuate even if they are not facing an immediate threat. These individuals are known as shadow evacuees, and they increase the demand on the roadway network. The number of shadow evacuees varies from incident to incident, depending on their proximity to the actual fire, though it can be assumed that approximately 30% of evacuees fall into this category.

While the amount of time needed to evacuate the Project would vary by the type of incident, the number of evacuation routes utilized, the amount of mobilization time taken by occupants, actual areas at risk, and other factors, the targeted approach would minimize the size of the area being evacuated and use a phased approach, which would likely reduce evacuation time below the above evacuation time estimates. Accordingly, roadway capacity would remain adequate to undertake safe and effective evacuations with development of the Project and would not expose people or structures to a significant risk of loss, injury or death.

Shelter In Place as a Contingency Plan

Sheltering-in-place 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. Sheltering-in-place also has many advantages because it can be implemented immediately, allowing people to remain in their familiar surroundings, and providing individuals with everyday necessities such as telephone, radio, television, and food. However, the amount of time people can stay sheltered-in-place is dependent upon availability of food, water, medical care, utilities, and access to accurate and reliable information.

The decision on whether to evacuate or shelter-in-place is carefully considered with the timing and nature of the incident. Sheltering-in-place 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 that have been directed to evacuate by police or fire personnel. Like all new master planned communities that incorporate ignition-resistant construction and provide defensibility throughout, responding fire and law enforcement personnel have the option to direct existing residents to temporarily refuge in Project structures.

Options when evacuation is not considered feasible or when occupants are not in direct threat that may be available to responding fire and law enforcement personnel may include temporary refuge/sheltering on site where residents are instructed to remain in their homes while firefighters perform their structure protection function if it is considered unsafe to evacuate. Given the scale of the Project, fire environment, and ignition resistant construction,

it is likely that only populations along the perimeter of the Project site would be required to evacuate, while remaining populations would be directed to remain onsite.

6.1 Evacuation Modeling Methodology, Assumptions, and Scenarios

The following provides a summary of the methodology, assumptions and scenarios considered in the evacuation time analysis presented herein.

Worst-Case Evacuation Scenario- Saturday Afternoon Evacuation; Full Project Operation

The Project at buildout will be an urban area with residential, commercial and open spaces. Accordingly, to evaluate a "worst-case" scenario, the model assumes that the evacuation would transpire on a Saturday afternoon, a time when commercial uses on the Project would likely still be in operation and residents from the villages are home, meaning all residential vehicles would be required to evacuate. In an actual evacuation scenario, the total number of vehicles needing to evacuate may actually be less. The IC would prioritize evacuation of land uses located closest to the area with immediate risk, depending on the location of the fire. However, by assuming a "worst case scenario," the modeling accounts for any other vehicles that may be on the road and/or voluntarily evacuating from other areas. For example, shadow evacuees may leave regardless of a threat to their location. The model accounts for this by assuming that all populations are on-site and would be evacuating.

Primary Evacuation Routes and Capacity

CRA assumed that traffic evacuating from both the Project and nearby communities/land uses would use the closest evacuation routes to leave the area. Evacuation routes were selected based upon review of the project site, available evacuation routes, and the quickest way to leave the at-risk areas.

The number of evacuation roadways accessible to each village depends on the development phase of the specific plan. Appendix C outlines the evacuation roadways by development phases, and shows all available roadways at the full buildout of the specific plan.

No contraflow lanes[2] were assumed to provide access for first responders and law enforcement. Two-way travel was assumed, with evacuating vehicles traveling outbound to the designated Safe Zone. It is assumed that first responders or law enforcement will direct traffic at all major intersections during the evacuation process. Should evacuation managers determine whether contraflow is preferred or necessary, evacuation capacity would increase while evacuation times would decrease.

The Centennial Specific Plan Traffic Study conducted by Stantec in May 2017 and the Centennial Specific Plan Supplemental Traffic Study, both collectively referred to as 2017 Traffic Studies, assumed that the Project would improve SR-138 to a four-lane expressway from I-5 to 240th Street West and to a limited access conventional four-lane highway from 240th Street West to 190th Street West, with right-of-way reserved for a six-lane expressway

[2] Contraflow or lane reversal involves directing traffic to use lanes coming from the source of a hazard to move people away from the hazard. Such a strategy can be used to eliminate bottlenecks in communities with road geometries that prevent efficient evacuations or to facilitate traffic flow out of a major urban area. Among the considerations in planning emergency contraflow are whether sufficient traffic control officers are available, potential negative impact on responding fire apparatus, access management, merging, exiting, safety concerns, and labor requirements. Contraflow configurations must be carefully planned based on on-site factors and should not be implemented in an *ad-hoc* fashion. Dudek July 2014. "Wildland Fire Evacuation Procedures Analysis" for City of Santa Barbara, California, page 65.

between Gorman Post Road and 300th Street West, or comparable improvements consistent with the Northwest 138 Corridor. However, due to uncertainty regarding the timing of the improvements it is assumed that SR-138 would remain as a two-lane highway for all analysis scenarios.

The study assumed that evacuees would use the proposed roads, as well as SR-138 to head towards the I-5 or other developed communities such as the Neenach community. It is likely to assume Project occupants would utilize the major transportation arteries to evacuate. It is likely that a wildfire would ignite to the north of the Project site, so it is unlikely that Project occupants would evacuate to the north.

No contraflow lanes were assumed so that access would be fully maintained for first responders and law enforcement. Two-way travel was assumed, with evacuating vehicles traveling outbound to the Safe Zone and first responders and law enforcement provided the opportunity to travel inbound to the fire. Should evacuation managers determine that contraflow is preferred or necessary in a wildfire evacuation scenario, evacuation capacity would increase while evacuation times would decrease.

Control of Downstream Intersections

As part of evacuations operations, as demonstrated in Border Fire #32, first responders or law enforcement will direct traffic at all major downstream intersections out of the area during the evacuation process. As possible, intersection traffic signals may be managed at appropriately equipped signals to assist in the movement of traffic from areas of higher potential exposure to areas of lower exposure.

Safe Zone

Based on Dudek's review of the area's fire history, fires have halted along areas adjacent to wildland fuels and have not historically progressed into the more densely urbanized, irrigated, and hardscaped areas. Specifically, none of the historical fires encroached beyond the periphery areas within the wildland urban interface area of the Los Angeles County. Recent fires such as the Jerry Fire (2019), Merwin Fire (2015), Lago Fire (2011), Max Fire (2024) were all stopped prior to reaching the urbanized area. Thus, it is assumed that during the earlier phases of the specific plan, evacuees are considered "safe" once their vehicles reach an area outside the evacuation order zone. For scenarios 1 through 3, this would be when the vehicles arrive at either the SR-138/I-5 interchange to the west or the community of Neenach to the east. In the later scenarios, evacuees are considered "safe" once they arrive at the respective villages or evacuation point indicated in Table 1.

Evacuation Scenarios

A total of fifteen evacuation scenarios were analyzed, which are shown in Table 1 below and graphically represented in Figures 1-15 of Attachment C in Appendix C.

Targeted Evacuation

Current evacuation practice typically targets the scope of the evacuation only to the area in immediate danger and placing a larger area on standby for evacuation. This practice allows for better evacuation operations, reduces gridlock, and reserves sufficient travel way for emergency vehicles. The Project evacuation model utilizes a worst-case simultaneous evacuation of all existing uses/occupants within the modeled area. However, the likelihood of each of these populations being evacuated at the same time is low. In an actual evacuation scenario, the IC would

prioritize evacuation of land uses located closest to the area with immediate risk, depending on the location of the fire, which may result in reduced evacuation timeframes compared to this modeling.

Table 1. Evacuation Travel Time Analysis Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
1	Phase 1-2	Village 1 & Village 3	South/Southeast	75% via SR-138 westbound toward I-5	Village 1	3,783
				25% via internal road toward I-5	Village 3	3,878
				—	Existing	200
2	Phase 1-2	Village 1 & Village 3	North/Northeast	25% via SR-138 westbound toward I-5	Village 1	3,783
				25% via internal road toward I-5	Village 3	3,878
				25% via internal road toward Lancaster	Existing	200
				25% via SR-138 eastbound toward Lancaster	—	—
3	Phase 1-2	Village 1 & Village 3	West/Northwest	75% via SR-138 eastbound toward Lancaster	Village 1	3,783
				25% via internal road toward Lancaster	Village 3	3,878
				—	Existing	200
4	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	South/Southeast	50% via SR-138 westbound toward I-5	50% of Village 7	1,490
				50% via internal roadway toward Village 1	Business Park West	1,875
				—	Institutional & Civic	2,958
5	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5	50% of Village 3	2,085
				50% via internal roadway toward Village 1	Village 7	2,979
				25% via SR-138 eastbound toward Lancaster	Existing	200
6	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional/Civic land use	Village 1	3,783
				50% via SR-138 eastbound toward Lancaster	30% of Village 3	1,251
				—	Business Park West	1,875
				—	Existing	200
7	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park	South/Southeast	25% via SR-138 westbound toward I-5	50% of Village 7	1,490
				25% via internal roadway toward Village 1	Business Park West	1,875
				25% via internal roadway toward Village 3	Business Park Central	1,250
				25% via internal roadway toward Village 6	Institutional & Civic	2,958

Table 1. Evacuation Travel Time Analysis Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
		Central, Institutional & Civic				
8	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5	Village 6	3,488
				50% via internal roadway toward Village 1 and Village 3	Village 7	2,979
				25% via SR-138 eastbound toward Lancaster	—	—
9	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional & Civic	Village 1	3,783
				50% via SR-138 eastbound toward Lancaster	Village 9 West	2,218
				—	Existing	200
10	Phase 1-8	Village 1, 3, 7 E & West, Village 9 West, Village 6, Village 9 East, Village 8 West, Village 2, Village 4 South	South/Southeast	25% via SR-138 westbound toward I-5	50% of Village 7	1,490
				25% via internal roadway toward Village 1	Business Park West	1,875
				25% via internal roadway toward Village 3	Business Park Central	1,250
				25% via internal roadway toward Village 6	Business Park East	1,186
				—	30% of the Institutional & Civic	887
11	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business	North/Northeast	25% via internal roadway toward Village 1	30% of Village 2	738
				25% via internal roadway toward Village 3	Village 4 South	2,269
				25% via internal roadway toward Village 7	50% of Village 6	1,744
				25% via internal roadway toward Institutional & Civic	Village 8 West	1,922
				—	30% of Village 9	979

Table 1. Evacuation Travel Time Analysis Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
		Park East, Institutional & Civic				
12	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	West/Northwest	25% via internal roadway toward Village 3	30% of Village 1	1,135
				25% via internal roadway toward Village 7	30% of Village 2	738
				25% via internal roadway toward Business Park	Village 4 South	2,269
				25% via internal roadway toward Institutional & Civic	Village 9	3,264
13	Phase 1-10	Buildout	South/Southeast	25% via SR-138 westbound toward I-5	Business Park West	1,875
				25% via internal roadway toward Village 1	Business Park Central	1,250
				25% via internal roadway toward Village 3	Business Park East	1,186
				25% via internal roadway toward Village 6/Village 5	30% of the Institutional & Civic	887
				—	50% of Village 7	1,490
				—	Village 8 East	3,678
14	Phase 1-10	Buildout	North/Northeast	25% via internal roadway toward Village 1/ Village 2	30% of Village 4	1,284
				25% via internal roadway toward Village 3	Village 5	10,333
				25% via internal roadway toward Village 7/Institutional & Civic	30% of Village 6	1,046
				25% via SR-138 Westbound toward Business Park	Village 8 West	1,922
				—	Village 8 East	3,678
15	Phase 1-10	Buildout	West/Northwest	25% via internal roadway toward Village 3	30% of Village 2	738
				25% via internal roadway toward Village 7	50% of Village 4	2,140

Table 1. Evacuation Travel Time Analysis Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
				25% via internal roadway toward Business Park	50% of Village 5	5,167
				25% via internal roadway toward Institutional & Civic	Village 9	3,264

Sources: CR Associates 2024, US Census Bureau 2023, Google Maps 2023

Evacuating Vehicles

The projected number of vehicles evacuating from the study area is based on a combination of various data sources: Parcel Quest's parcel map data for land use, vehicle ownership averages from the US Census Bureau, aerial imagery from Nearmap, and relevant environmental documents. Breakdown of the calculations for evacuating vehicles is as follows:

Existing Residential: This is obtained by multiplying the total number of households (from Parcel Quest parcel map data) with the average vehicle ownership, which stands at 2.07 vehicles per household as per the US Census Bureau.

For this analysis, it is assumed that during the earlier phases of the Project, existing land use to the east of the Project site will evacuate in the same direction as the Project's traffic. Once the Project is developed, the Project site can serve as an evacuation zone for existing land use that need to evacuate westward toward the Project site. Therefore, the evacuation times for existing land uses are only included in scenarios where the Project's traffic would potentially share the same evacuation roadway as the existing land uses.

Proposed Project: This is calculated by multiplying the quantities of land use by the following sources:

- Residential Land Use: Total number of dwelling units x average vehicle ownership.
- Nonresidential Land Uses: Total square footage x parking rate derived from the Institute of Transportation Engineer (ITE) Parking Generation Manual.

Land use quantities were obtained from Stantec and Appendix E of the Centennial Specific Plan Traffic Study (November 2017).

Shadow Evacuees: These are individuals who choose to evacuate out of an abundance of caution, even without an official evacuation order. The "Review of California Wildfire Evacuations from 2017 to 2019" report found that approximately 30% of evacuees fall into this category.

For a reasonable analysis, these scenarios assumed that two percent (2%)[3] of the evacuating vehicles are heavy vehicles (trucks with trailers). Two percent is the nationally acceptable ratio of heavy vehicles to all vehicles.

Average vehicle ownership, residential units, and evacuating vehicles calculations are provided in Appendix C. Table 1 displays the number of vehicles evacuating under each scenario. Figure 4 demonstrates phasing of the Project, and Figure 5 shows the proposed villages.

Under emergency evacuation conditions and consistent with the OEP and practices employed during prior emergency evacuation events in the County, traffic signals would revert to special timing plans and/or traffic personnel will be deployed at key intersections to help regulate traffic flow for primary evacuation approaches.

[3] https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_599.pdf (p.5).

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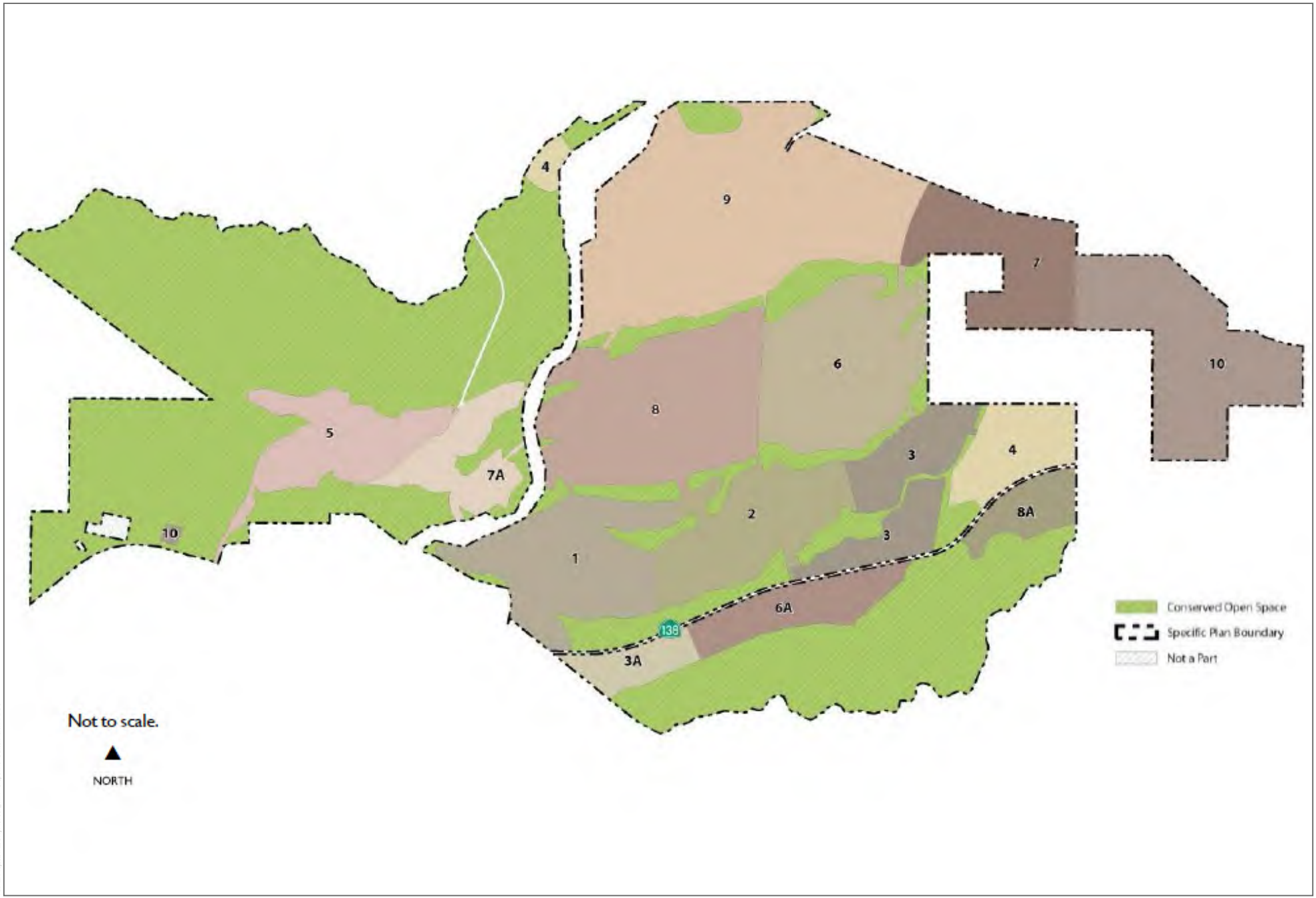

FIGURE 4

Conceptual Project Phasing Plan

Centennial Wildfire Evacuation Study

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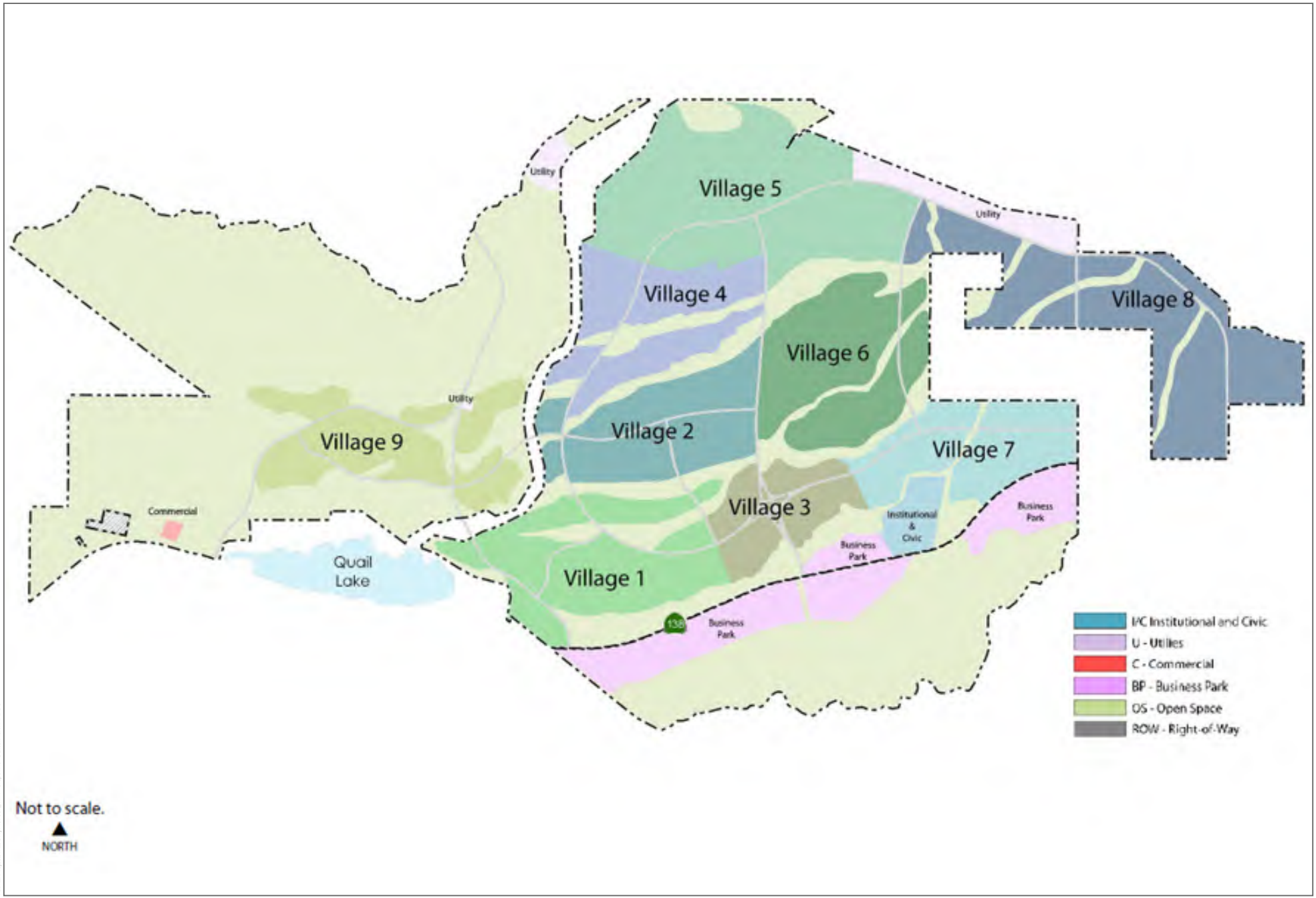

FIGURE 5

Proposed Villages

Centennial Wildfire Evacuation Study

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6.2 Potential for Project Evacuation Impact

Based on the analysis methodology described in the previous section, Table 2 summarizes the evacuation time for each analysis scenario. The evacuation time does not depict the evacuation time for each individual person within an evacuation area, but rather the total amount of time needed to evacuate all populations modeled from an area. Populations located in closer proximity to the IC designated safe zone will safely evacuate sooner than the total calculated evacuation time identified in Table 2. Detailed evacuation travel time analysis information is provided in Appendix C.

Table 2. Evacuation Time Summary

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/ Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hr:Min)
1	Phase 1-2	Village 1 & Village 3	South/ Southeast	75% via SR-138 westbound toward I-5	Village 1	3,783	2:04
				25% via internal road toward I-5	Village 3	3,878	3:37
				—	Existing	200	0:42
2	Phase 1-2	Village 1 & Village 3	North/Northeast	25% via SR-138 westbound toward I-5	Village 1	3,783	1:33
				25% via internal road toward I-5	Village 3	3,878	1:34
				25% via internal road toward Lancaster	Existing	200	0:17
				25% via SR-138 eastbound toward Lancaster	—	—	—
3	Phase 1-2	Village 1 & Village 3	West/Northwest	75% via SR-138 eastbound toward Lancaster	Village 1	3,783	2:03
				25% via internal road toward Lancaster	Village 3	3,878	1:36
				—	Existing	200	0:17
4	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	South/ Southeast	50% via SR-138 westbound toward I-5	50% of Village 7	1,490	1:00
				50% via internal roadway toward Village 1	Business Park West	1,875	1:54
				—	Institutional & Civic	2,958	1:46
5	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5	50% of Village 3	2,085	1:07
				50% via internal roadway toward Village 1	Village 7	2,979	1:23
				25% via SR-138 eastbound toward Lancaster	Existing	200	0:17

Table 2. Evacuation Time Summary

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/ Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hr:Min)
6	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional/Civic land use	Village 1	3,783	2:26
				50% via SR-138 eastbound toward Lancaster	30% of Village 3	1,251	0:41
				—	Business Park West	1,875	2:21
				—	Existing	200	0:17
7	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	South/ Southeast	25% via SR-138 westbound toward I-5	50% of Village 7	1,490	0:39
				25% via internal roadway toward Village 1	Business Park West	1,875	0:50
				25% via internal roadway toward Village 3	Business Park Central	1,250	1:07
				25% via internal roadway toward Village 6	Institutional & Civic	2,958	1:20
8	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5	Village 6	3,488	3:27
				50% via internal roadway toward Village 1 and Village 3	Village 7	2,979	1:49
				25% via SR-138 eastbound toward Lancaster	—	—	—
9	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional & Civic	Village 1	3,783	1:22
				50% via SR-138 eastbound toward Lancaster	Village 9 West	2,218	1:11
				—	Existing	200	0:17

Table 2. Evacuation Time Summary

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/ Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hr:Min)
10	Phase 1-8	Village 1, 3, 7 E & West, Village 9 West, Village 6, Village 9 East, Village 8 West, Village 2, Village 4 South	South/ Southeast	25% via SR-138 westbound toward I-5	50% of Village 7	1,490	1:21
				25% via internal roadway toward Village 1	Business Park West	1,875	1:07
				25% via internal roadway toward Village 3	Business Park Central	1,250	0:47
				25% via internal roadway toward Village 6	Business Park East	1,186	1:19
				—	30% of the Institutional & Civic	887	0:26
11	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	North/Northeast	25% via internal roadway toward Village 1	30% of Village 2	738	0:53
				25% via internal roadway toward Village 3	Village 4 South	2,269	0:53
				25% via internal roadway toward Village 7	50% of Village 6	1,744	0:53
				25% via internal roadway toward Institutional & Civic	Village 8 West	1,922	1:02
				—	30% of Village 9	979	0:49
12	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	West/Northwest	25% via internal roadway toward Village 3	30% of Village 1	1,135	0:52
				25% via internal roadway toward Village 7	30% of Village 2	738	0:57
				25% via internal roadway toward Business Park	Village 4 South	2,269	0:48
				25% via internal roadway toward Institutional & Civic	Village 9	3,264	2:58

Table 2. Evacuation Time Summary

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/ Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hr:Min)
13	Phase 1-10	Buildout	South/ Southeast	25% via SR-138 westbound toward I-5	Business Park West	1,875	1:07
				25% via internal roadway toward Village 1	Business Park Central	1,250	0:55
				25% via internal roadway toward Village 3	Business Park East	1,186	1:32
				25% via internal roadway toward Village 6/Village 5	30% of the Institutional & Civic	887	0:26
				—	50% of Village 7	1,490	1:32
				—	Village 8 East	3,678	2:20
14	Phase 1-10	Buildout	North/Northeast	25% via internal roadway toward Village 1/Village 2	30% of Village 4	1,284	0:51
				25% via internal roadway toward Village 3	Village 5	10,333	6:41
				25% via internal roadway toward Village 7/Institutional & Civic	30% of Village 6	1,046	0:34
				25% via SR-138 Westbound toward Business Park	Village 8 West	1,922	4:32
				—	Village 8 East	3,678	3:06
15	Phase 1-10	Buildout	West/Northwest	25% via internal roadway toward Village 3	30% of Village 2	738	1:11
				25% via internal roadway toward Village 7	50% of Village 4	2,140	1:08
				25% via internal roadway toward Business Park	50% of Village 5	5,167	2:37
				25% via internal roadway toward Institutional & Civic	Village 9	3,264	1:53

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. The "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act" guidance from the California Office of the Attorney General suggests that jurisdictions set benchmarks of significance based on past successful evacuations or on those from communities in similar situations. Safely undertaking large-scale evacuations is a complicated process that involves many factors that cannot necessarily be determined in advance. A large scale evacuation 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, occupants' awareness and preparedness, evacuation messaging and direction, and on-site law enforcement control.

Technological advancements and improved evacuation strategies learned from prior wildfire evacuation events have resulted in a system, reflected in the EOPs and the experience of the people tasked with coordinating events, that is many times more capable of managing evacuations. With the technology in use today in the City and County, 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 avoided, and those populations most at risk safely evacuate.

Due to its location, the Project would also provide the responding emergency managers (e.g., incident commander, Los Angeles 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. This would provide emergency managers with a safer alternative to risking a late evacuation.

Overall, as presented in this WETR, safe evacuation of the Project and surrounding community is possible in all modeled scenarios and would not be expected to expose people or structures to a significant risk of loss, injury or death. Also, because the Project site is a large area of ignition resistant, urbanized landscapes, it is not anticipated that the entire community would be relocated off-site during a wildfire event in the grasslands that are adjacent to the Project's protective fuel modification zones. Further, like any new, large community or larger, urbanized area, Centennial will provide numerous opportunities throughout the site for on-site relocation and sheltering in place as a contingency option to evacuation off-site.

In support of this WETR's analysis that sheltering in place is a viable contingency option during most wildfire events anticipated to be experienced at the Centennial site, the following section provides an overview of how master planned communities built to the ignition resistant standards required for Centennial have performed during wildfires. These results indicate a lack of significant fire impacts within these communities.

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7 Wildfire Safety of Master Planned Communities

7.1 History of Master Planned Communities

Master-planned communities are large developments, often in rural or remote areas, made of multiple residential and building use types. The residential buildings may include single family or multi-family homes, that are all built to meet a similar aesthetic standard. These communities also often include amenities such as restaurants, parks, pools, recreation areas, office space and retail shops within walking distance of the residential areas. The Centennial master-planned community at Tejon Ranch will include amenities zones such as business parks, commercial, retail, institutional, open spaces, parks, lakes, and schools.

Almost 50% of the master planned community is designated as a preserved open space area, that will be regularly grazed and maintained through brush removal. The open space that surrounds the proposed development, as seen in Figure 3- Project Site Plan, allows for proper defensible space regulations, fuel modification zones (FMZ), to be met for the protection of homes and other buildings in the community.

A 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, fire-resistant plants, in order to provide a reasonable level of protection to structures from wildland fire. FMZs are designated to provide vegetation buffers that gradually reduce fire intensity and flame lengths from advancing fire by strategically placing thinning zones, restricted vegetation zones, and irrigated zones adjacent to each other on the perimeter of the WUI exposed structures. New Fire and Building Codes

Newly developed master-planned communities will follow all new housing laws, building codes and fire codes to ensure the safety of occupants in the event of a wildfire or hazard. As stated above, many master-planned communities are developed in rural areas, new housing laws and legislature do not preclude the development of these communities in high or very high fire hazard severity zones, instead they abide by the stringent regulations that now apply to modern development.

Being in the Wildland Urban Interface (WUI) places these communities at a higher risk for facing the threat of a nearby wildfire encroaching on homes. Stringent building regulations aid in the process of making homes ‘ignition-resistant’, the process is also commonly known as ‘home hardening’. In the event a wildfire does burn near these communities, the homes are more likely to withstand flames, extreme heat, or potential ember-cast. Following these regulations also allows for residents to shelter in place, in the event of an emergency in which they are not able to evacuate.

The following is a list of current applicable codes and regulations to the Project; however the Project will be required to comply with the code edition in effect at the time of the building permit submittal.

California Building Code 2022

Title 24, Part 2, Chapter 7A includes regulations addressing the acceptable materials and construction methods for exterior wildfire exposure and applies to new buildings located in a State Responsibility Area in any Fire Hazard Severity Zone or any Wildland Urban Interface area. Chapter 7A details regulations for required Fire Protection Plans, fire resistant vegetation, ignition resistant construction, and requirements on buildings size and distance from buildings of accessory buildings and miscellaneous structures.

California Fire Code 2022

Title 24, Part 9 establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

International Fire Code 2018

The 2018 International Fire Code (IFC) addresses regulations for fire prevention, protection, life safety, and the safe storage and use of hazardous materials. IFC also addresses regulations related to emergency planning, fire department emergency access, water supply, automatic sprinkler systems, and fire alarms.

California Public Resources Code

CPRC Section 4291 addresses requirements for the ownership, operation and/or maintenance of buildings in, upon or adjoining to a mountainous, forested, brush or grass covered land, or land that contains flammable material areas, specifically the on and off-site vegetation to prevent wildfire damage. Section 4291 discusses the regulations of defensible space, fuel modification zones, clearance beyond the property line, insurance company requirements for vegetation clearance away from homes, and chimney and stovepipe safety.

California Reference Standards Code (2019)

Title 24, Part 12, Chapter 12-7A discusses the materials and construction methods for exterior wildfire exposure, as well as regulations to thoroughly test for fire resistance. This section details the minimum design, construction and performance standards for exterior windows, and wall siding and sheathing.

California Code of Regulations

Title 14, Division 1.5, Chapter 7, Subsection 2, Articles 1-5 detail fire safe regulations for building, construction and development in a Cal Fire State Responsibility Area. Specifically, these articles discuss the classification of private lands, fire extinguisher test standards and procedures, fire prevention standards for multi-position small engines, fire prevention standards for electric utilities, and standards for cooperative fire protection contracts during the non-fire season.

Title 14, Division 1.5, Chapter 7, Subsection 3, Section 1299 discusses the regulations of fire hazard reduction around buildings and structures, specifically defensible space requirements, additional clearance, and alternative methods that may be acceptable if minimum defensible space requirements cannot be met.

Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07 discusses the regulations for clearances around buildings regarding safe storage of combustible materials. The regulation states that no combustible material shall be places or stored within 10 feet of any building, and all buildings and structures must have a defensible space around them.

California Government Code

Title 5, Division 1, Part 1, Chapter 6.8, Sections 51175-51182 discuss the process of determining how Very High Fire Hazard Severity Zones are designated, as well as regulations for building and maintaining defensible space in areas designated by Cal Fire as a Very High Fire Hazard Severity Zone.

California Residential Code 2022

Section 327 addresses aging in place design. This code addresses the regulations for newly constructed dwellings stating they must be designed and constructed with aging-in-place considerations such as reinforcement for grab bars in bathrooms, and spacing requirements for individual units within a structure must be separated by at least 3 feet. The code also details compliance with fire safety measures.

Assembly Bill 2011, Extension of Senate Bill 35

Assembly Bill 2011, the primary housing production bill of the 2022 legislative session, creates a ministerial, California Environmental Quality Act (CEQA)-exempt, time-limited approval process for multifamily housing developments on commercially zoned property. AB 2011 is an extension of Senate Bill 35. AB 2011 allows SB 35 to continue facilitating new housing beyond the initial time frame of until 2025.

7.1.1 Fire Resilience and Evacuation Preparedness in Centennial

Built in accordance with the CFC and CBC stated above, the Centennial master-planned community will be built to the highest standards of safety, with fire protection and evacuation readiness at the forefront of their building goals.

As detailed in the Centennial Specific Plan, a minimum of 5,620 acres of preserved open space at Centennial will be actively and professionally managed using grazing and brush clearance techniques with the goal of preventing fires.

Modern construction and infrastructure practices will meet the most recent standards of the CBC and CFC. All planned utility lines will be buried undergrounded, and the Highway 138 road improvements will be built and maintained to help further reduce fire risk and provide better emergency egress, while also serving as a fuel break and hardened defensible space for the community nearby.

A fuel modification plan will be prepared and coordinated with Los Angeles County Fire Department to incorporate Fuel Modification Zones and buffer zones of between 100-200' wide, for wildfire prevention. Landscaping throughout the Project is recommended to be native, drought tolerant species, optimally fire-resistant plants, and have specific requirements for maintenance and irrigation. Landscaping shall not use plants listed in the Southern California Undesirable Plants List (Appendix D). Fuel modification zones will be implemented and maintained by the HOA(s) of the Project, following guidance provided by the Los Angeles Fire Department.

Furthermore, Centennial plans to construct a minimum of three and up to four fire stations in the community, that would be available to assist in the event a wildfire began. These new fire stations would have the capability to deploy a rapid initial attack and decrease the probability of wildfire spread into the community.

7.1.2 Shelter in Place Capabilities

Although evacuation is typically advised as the first response to an emergency, it is not always the safest. If evacuating would lead evacuees into the path of the fire, or if people needing to evacuate did not have ample time to do so safely, sheltering in place may become the next best option to staying safe during a wildfire. Shelter-in-Place is the use of a structure to temporarily separate individuals from a hazard or threat. Sheltering in place should only occur when the first responders, emergency management team, or incident command inform occupants that it is the safest option.

In order for entire communities to be considered for Shelter-in-Place, they must abide by certain regulations. The entire community must be designed and built to have ignition-resistant design qualities including, but not limited to:

- A well-maintained, irrigated, fire department approved landscape
- Adequate roadway and driveway widths, designed to accommodate two-way traffic and large firefighting apparatus
- Adequate water supply and water flow for firefighting efforts
- Fuel modification zones surrounding the community and individual homes

In addition, each home should be built with the following ignition resistant features:

- Ignition resistant exterior walls. Any wood siding must be treated.
- Eaves must be boxed or constructed of heavy timber and all vents must be screened to prevent fire embers from entering the inside of your home
- Windows must be dual pane, tempered glass
- Chimneys must have spark arrestors

- Roofs must be comprised of Class A, non- combustible materials like tile, slate, cement, asphalt or metal. Wood shingles are unacceptable materials for roofing.
- Wood fences must be at least 5 feet from the house
- Trellises, patio covers and other auxiliary structures must be made with non-combustible materials. Structures covering must remain at least 50% open or a Class A roof
- Decks must be non-combustible or constructed of heavy timber or fire retardant wood
- Landscape must be well maintained, irrigated and fire resistant
- A minimum requirement of 100 feet of defensible space around the home, following the Cal Fire protocol for defensible space zones.
- If it is impossible to evacuate and the situation requires a shelter in place order, the following list details suggestions by SafeHome (SafeHome 2024) on how to do so safely.
- Turn off the house's propane and/or natural gas
- If possible, wet the yard and roof with a sprinkler. Fill sinks and bathtubs with water
- Close all inside doors to slow the spread of fire in the house
- Turn off devices that circulate air through the house (i.e., fans)
- Have a cellphone, fire extinguisher, bottled water, battery powered radio, and flashlight with extra batteries on-hand
- Shelter in a hallway or room in the middle of the home- avoid the homes perimeter walls

7.2 CBIA Fire Safety Analysis

In January 2022, the Coalition of California Home Builders and Businesses, along with former State Fire Marshall and CalFire Director, Ruben Grijalva, commented on the Board of Forestry's Fire Safe Regulations (Grijalva 2022). Their efforts were aimed at achieving the following modifications to the current Fire Safe Regulations:

1. Approved master- planned communities that address fire safety and protection should be grandfathered to avoid a regulatory do-loop that would severely harm the production of much needed housing.
2. The regulations must account for (and take advantage of) the differences and fire safety benefits associated with master-planned communities.
3. The regulations must provide flexibility and a right to seek exceptions to avoid unintended consequences, the risk of which is high given the substantial expansion in regulatory scope from the State Responsibility Area (SRA) to the Local Responsibility Area (LRA).

To support these comments, an analysis was conducted to determine how new homes built following new WUI regulations (conservatively, after January 1, 2010) fared in the 10 worst property -loss fires compared to homes built prior to 2010 (Grijalva 2022a). Data was obtained from the State Fire Marshall (SFM). Regulatory standards for new construction include the SFM's fire hardening building standards, defensible space mandates and Cal Fire's Fire Safe Development Standards. The analysis proved that on average, for the 9 worst property loss fires dating back to 2017, only ~1% of the homes and apartments destroyed, damaged, or affected were new dwellings. Additionally, it was commonly found, aside from one instance, that new homes built next to each other were not both destroyed. This analysis shows that new homes are fire protective individually, but also help resist the spread of fire within residential areas.

Case studies were also provided in support of their comments (Grijalva 2022b). The case studies show aerial "before and after the fire" images of the communities at risk by the Silverado Fire (2020), Freeway Complex Fire (2008), and the Simi Fire (2003). The communities at risk survived the fire with no homes lost or damaged. The case study accredited: the Fire Protection Plans role in the development, Fuel Modification Zones including perimeter orchards, perimeter roads, and fire-resistant homes with non-combustible roofs as the reason the homes survived these fires. Other relevant articles were cited with excerpts pulled from the texts stating that wildfire preparedness at the forefront of building initiatives have proven to be extremely useful in protecting homes during a wildfire event.

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8 Wildfire/Evacuation Awareness

The Project should be active in its outreach to all occupants regarding fire safety and general evacuation procedures. There are aspects of fire safety and evacuation that require a significant level of awareness by all occupants 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 Project will engage occupants and coordinate with local fire agencies for fire safety awareness through a variety of methods.

The Project will implement an Emergency Response Plan informing residents, employees and visitors of potential emergency response scenarios that would typically occur during large wildfire events, including on and off-site evacuation procedures and other information included in this WETR. The Project is recommended to conduct an annual fire relocation and evacuation drill to train staff and fire personnel, and the procedures will be enforced through pre-drill public relations and post-drill information dissemination. Homeowners will receive ongoing outreach from the HOA along with coordination with LACoFD for fire safety awareness from the Firewise Committee/Board.

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 that residents are ready when a wildfire occurs. Occupants will create defensible space by clearing brush away from buildings as detailed in the Project's FPP (Dudek 2024). Additionally, occupants will use only fire-resistant landscaping and maintain the ignition resistance of buildings onsite. Residents should assemble emergency supplies and belongings in a safe spot, confirm registration with the County's Alert LA County system, and the HOA should provide awareness of the evacuation study for all individuals residing within the Project and guests.
- **"SET" – Situational Awareness When a Fire Starts:** If a wildfire occurs and there is potential for it to threaten the Centennial community, pack vehicles with emergency items. Stay aware of the latest news from local media, County of Los Angeles and LACSD for updated information on the fire. If uncomfortable, one should leave the area.
- **"GO!" – Leave Early!** Following an evacuation plan provides one with knowledge of the situation and how to approach evacuation. Leaving early—well before a wildfire is threatening the community—provides one 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 the community) is dangerous and exacerbates an already confusing situation. This WETR provides key information that can be integrated into the evacuation 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 Project's Fire Safety Coordinators 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 Project, this WETR will be accessible on the website (e.g. HOA or Property Management) for all future developments. It is also recommended that all future HOAs or Property Management Companies identify a Fire Safety Coordinator(s) that is responsible for:

1. Preparing and distributing the annual reminder notice that shall be provided to each occupant encouraging them to review this WETR and be familiar with community evacuation protocols.
2. Coordination with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting for occupants. The meeting should be attended by representatives of appropriate fire agencies and important fire and evacuation information should be reviewed.
3. Maintaining fire safety information on the development's website, including the WETR and materials from the "Ready, Set, Go!" Program.

For non-residential uses, Fire Safety Coordinators should also be responsible for:

1. Coordinating an annual fire evacuation drill/fire exercise to confirm proper safety measures have been implemented, facility awareness and preparation of a community-wide "Ready, Set, Go!" plan. The Fire Safety Coordinators will also organize employee training and awareness through various practices:
    a. New hire fire awareness and evacuation training
    b. Ongoing staff training
    c. Strategically placed fire safety and evacuation/sheltering protocol information, as determined by the Fire Safety Coordinators.

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9 Project Funded Evacuation Outreach

1. All Project implementing developments will include a proactive wildfire education program utilizing a multi-pronged approach to fire safety following the "**Ready, Set, Go!**" approach to wildfire evacuation, to include, but not limited to:
   i. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies.
   ii. Annual reminder notices will be provided to each occupant encouraging them to review this WETR and be familiar with evacuation protocols.
   iii. The development's website will host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this WETR and the resources provided herein.
2. All HOAs and Property Managers for developments within the Project will designate a Fire Safety Coordinator(s) to oversee implementation of the wildfire education program. The Fire Safety Coordinator(s) will:
   a. Prepare and distribute the annual reminder notice that shall be provided to each occupant encouraging them to review this WETR and be familiar with community evacuation protocols.
   b. Coordinate with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting for occupants. The meeting should be attended by representatives of appropriate fire agencies and important fire and evacuation information should be reviewed.
   c. Maintaining fire safety information on the development's website, including the WETR and materials from the "Ready, Set, Go!" Program.

   For non-residential uses (e.g., commercial, institutional) Fire Safety Coordinator(s) will also:

   a. Coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a community-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator(s) will also organize employee training and awareness through various practices:
      i. New hire fire awareness and evacuation training
      ii. Ongoing staff training
   b. Strategically place fire safety and evacuation/sheltering protocol information
3. The Project includes a contingency plan for the rare occurrence that evacuation is not safe that includes occupants sheltering in place within onsite structures.

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10 Limitations

Wildfire Evacuation Technical Report ("WETR")

This section details basic evacuation information that will familiarize Project occupants with alternate bodily and property options that may be available to them during an emergency; mindful, however, that real-time law enforcement and fire personnel/agencies' decision-making and direction during an emergency requiring evacuation is of utmost importance and must be adhered to.

This WETR analyzes the existing community's evacuation times currently, and assuming the construction of the Project as it relates to wildfires; however, the components of the plan may also be useful in similar situations, as noted above. The estimated evacuation times are based on several assumptions detailed further below in this WETR. However, actual evacuation times may be faster or slower than the estimates, depending on the type of emergency, the extent of the evacuation, its gravity, the time of day, and other factors. A collective, community–wide evacuation of existing populations and the proposed population from the Project would include congested roads in its existing condition that are improved, but still congested with the Project. Congested roads are normal in any urban setting when a large evacuation is declared unless it is managed appropriately (*e.g.*, evacuation areas are staggered to reduce the potential traffic surges that can significantly impact evacuations), and thus potentially could be counterproductive. Therefore, there would still be the potential for congestion and delays.

This WETR 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 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 situational awareness.

Lastly, fire or law enforcement officials will mandate that populations "Go" by executing pre-planned evacuation procedures. The preferred alternative, initially, may well 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, or other factors.

The Project also is designed specifically to maintain an enhanced resistance to wildfire ignition and perform as a fire adapted Project, offering fire and law officials with additional options for safety to the populace compared to those options available to less thought-through projects.

As noted, this WETR does not and cannot provide a guarantee that all persons and property will be unaffected because of the considerations presented herein for further development and refinement, including, as noted, in-place versus evacuation protocols, suggested roadway enhancements, increased effectiveness of traffic measures, ignition resistance measures, public outreach, program maintenance and updates by local authorities in conjunction with owner, occupant, and worker input and participation, with an overall goal of instilling a heightened sense of awareness and preparedness in the event of an incident. Fire is a dynamic and unpredictable occurrence, and it is important for those in a high fire severity zone to educate themselves on practices that will improve safety and that will be able to be implemented at the individual level rapidly and effectively, albeit in combination with protocols and "in-the-field" decision making of emergency responders.

Summary – Vehicle Travel Time Scenarios

This WETR presents a reasonable vehicle travel time estimate based on professional judgments made by CRA, taking into consideration input from Dudek and other resources. Changing any number of these assumptions can lengthen or shorten the average vehicle travel time. For instance, a situation could arise in which professionals *may* choose to utilize additional roadways for evacuation not utilized in the Dudek/CRA analysis and *may also* choose to send more vehicle trips to certain evacuation routes and *may also* choose to guide vehicle trips to more or different route permutations relative to what has been modeled in this the Dudek/CRA analysis. The net result of changing the variables selected could yield an average evacuation travel time shorter or longer than the results detailed in the Dudek/CRA analysis.

Many factors can shorten or lengthen the vehicle time from the results shown herein. For example:

Changing the possible evacuation routes selected would affect the results. For instance, utilizing roads for ingress and/or egress that are not utilized in this analysis could shorten vehicle travel times relative to the results shown herein.

Increasing or decreasing the number of path permutations and percentage of the population utilizing each route that leads out of the immediate area could shorten or lengthen vehicle travel time relative to the results shown herein.

Emergency professionals electing to reserve certain road lanes for emergency vehicle ingress for portions of time could affect the travel time relative to the results shown herein.

Assuming evacuees utilize fewer or more vehicles to evacuate from the Project or surrounding communities relative to the Vehicle Utilization Rate selected in the analysis would shorten or lengthen vehicle travel time relative to the results shown herein.

Changing the mix of vehicle trips allocated to each evacuation route could shorten or lengthen vehicle travel time relative to the results shown herein.

Assuming a different road capacity adjustment factor could shorten or lengthen the vehicle travel time relative to the results shown herein.

Assuming fewer people are at home when the evacuation notice is given would reduce the number of vehicle trips and shorten vehicle travel time relative to the results shown herein. For instance, an evacuation during daytime hours would typically result in fewer outbound trips than assumed in this analysis.

Assuming some portion of vehicle trips are made in advance of the evacuation notice would reduce the number of vehicle trips relative to the results shown herein.

Assuming some homeowners and their families are not in the Study Area when evacuation notice is given (most likely in a daytime evacuation event), could reduce the number for vehicle trips relative to the results shown herein.

Limitation On Reliance or Dependence Upon Report

Any person or entity furnished with this report and/or who reviews it agrees that the advance written consent of Dudek be sought and furnished to such person or entity prior to the review, reliance or authorization as to any

matters that are the subject of the reports by any person or entity (whether through act or omission as set forth in the report), other than Dudek's direct client. In such case, obtaining Dudek's consent shall not be subject to any fee or charge (other than reasonable copy costs, where applicable).

Dudek expressly disavows, does not assume any responsibility for, nor will be liable for any claims, losses, or damages associated with any matters that are the subject of this or other reports it prepares or contributes to respecting this project, however characterized (including without limitation as sounding in tort, breach of contract, misrepresentation by act or omission, failure to adhere to applicable standards of professionalism, statutory liability, etc.), whether in law or equity, whether known or unknown, and whether actual or contingent, excepting only Dudek's direct client, as to which the limitation of liability provisions in the contract between Dudek and its client shall govern.

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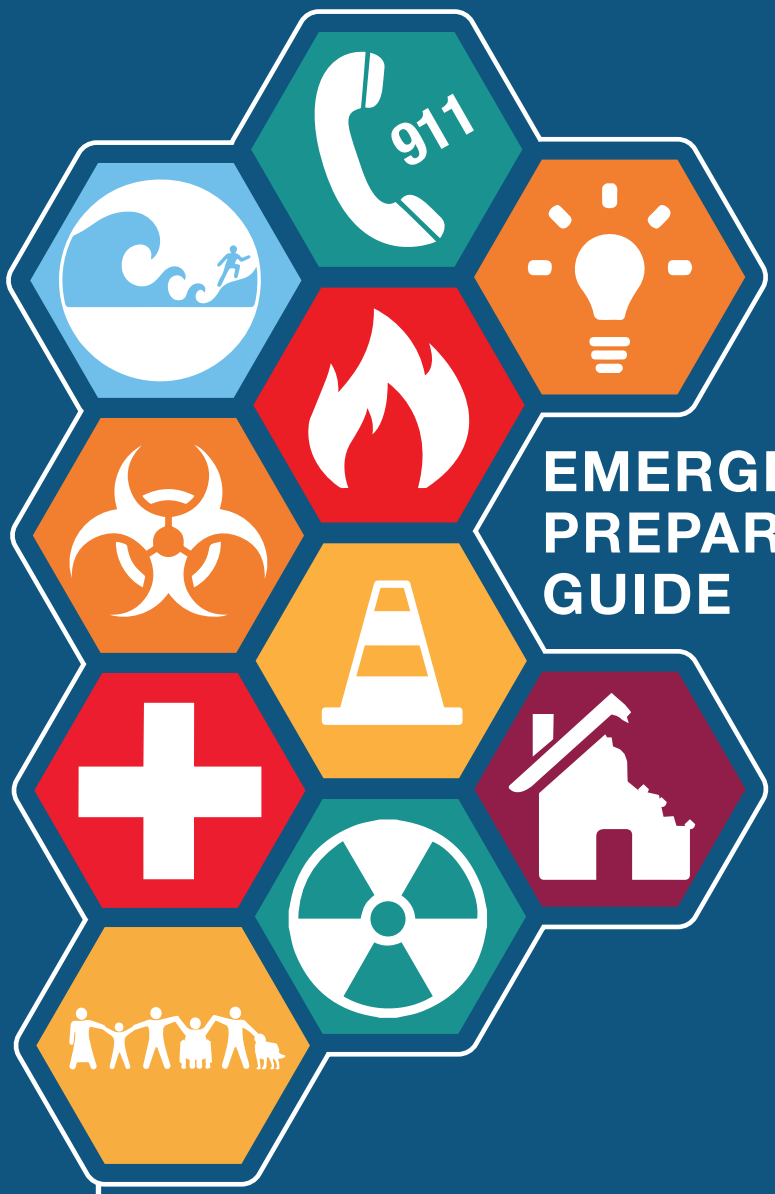
Appendix A-1 through A-2

LACoFD Emergency Preparedness Guide
"Ready, Set, Go!" Wildfire Action Guide



EMERGENCY PREPAREDNESS GUIDE

LOS ANGELES FIRE DEPARTMENT

www.lafd.org

For more Fire Department information, visit www.lafd.org

Los Angeles is susceptible to a variety of emergencies both natural and man made. Not only should we all be prepared and ready for these emergencies, but we should also know what to do before, during, and after an incident occurs. It is extremely important to also be aware of emergency plans that may already exist in your school, work, house of worship, or wherever you may be. This guide will help you get informed, have a plan, and get involved.

EMERGENCY PREPAREDNESS GUIDE

FOR NON-EMERGENCIES & EVERYTHING ELSE

CALL 3-1-1

Or go to www.myla311.lacity.org

- City Services & Programs
- Animal Services
- Child & Adult Services
- Permits & Property Violations
- Illegal Dumping & Vandalism
- Parking & Vehicle Services
- Street Problems & Repairs
- Community Disturbances

For the hearing impaired dial TDD, (Telecommunication Device for the Deaf): (213) 473-5990

FOR EMERGENCIES ONLY

For police, fire, or paramedics...

CALL 9-1-1

Or if you can't, TEXT to 9-1-1

What is the address of the emergency?
State the type of location.

House? Business? Apartment?

What is the phone number?

(___) ___ - ____

What is happening?

Accident? Fire? Medical? Crime?

Meet with the first responders.
Help is on the way.

If it is safe, meet with the first responder

If possible, open the garage door & turn on the light

EMERGENCY PREPAREDNESS GUIDE

www.lafd.org

LOS ANGELES FIRE DEPARTMENT

EMERGENCY PREPAREDNESS GUIDE

GET INFORMED

IMPORTANT ALERT SYSTEMS

It is important to know how the City of Los Angeles will notify the community before, during and after an emergency. Here are some of the ways you can expect to find important emergency information:

WIRELESS EMERGENCY ALERTS (WEA)

During an emergency, alert and warning officials need to provide the public with life-saving information quickly. Wireless Emergency Alerts (WEAs), made available through the Integrated Public Alert and Warning System (IPAWS) infrastructure, are just one of the ways public safety officials can quickly and effectively alert and warn the public about serious emergencies.

NOTIFY LA

A Community Mass Notification System that will be used in emergencies to contact City residents and businesses through phone messages, text messages and e-mail.

www.notifyla.org

COMMERCIAL MEDIA

Listen to broadcast stations for regional emergency alert information for Los Angeles City and surrounding areas. Because power failures are likely in an emergency, keep at least one battery powered radio in your household.

AMATEUR RADIO

The City of Los Angeles created the LAFD Auxiliary Communications Service (ACS) which expands and supplements emergency communications capabilities. ACS is recognized as a state disaster group. **more at www.lafdacs.org**

WEBSITES

www.nws.noaa.gov
Sign up for weather related web feeds that are sent directly by text or email.

www.lacounty.gov
LA County updates after a disaster will list shelter locations and other essential information.

TIP: Remember that your car radio might be the easiest way to listen to emergency broadcasts.

EMERGENCY INFORMATION

ALERT SYSTEMS:

lafd.org/alerts

lapdonline.org

www.weather.gov/alerts

redcross.org

fema.gov

ready.gov/alerts

BROADCASTERS:

AM / FM / SATELLITE RADIO

KPCC 89.3 FM	**KFI** 640 AM
KCBS 93.1 FM	**KABC** 790 AM
KIIS 102.7 FM	**KNX** 1070 AM
KROQ 106.7 FM	

SATELLITE RADIO

SiriusXM Channels
FOX NEWS CH. _____
CNN NEWS CH. _____

AMATEUR RADIO SERVICE

FREQ. 147.3 + 110.9 (LAFD ACS CH. 1)

FREQ. _____

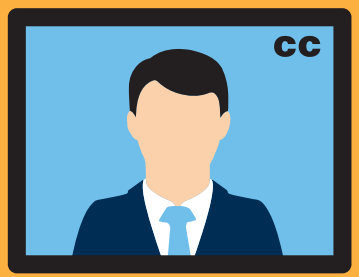
FREQ. _____

SMARTPHONE ALERTS

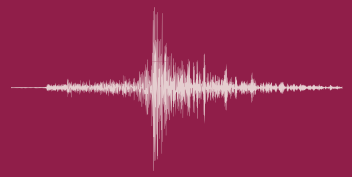
Smartphones have alerting apps for emergency notifications.

These apps may warn you of earthquakes, wild fires or other hazardous emergencies.

TV : LOCAL NEWS



EARTHQUAKE HISTORY



EARTHQUAKE MAGNITUDE SCALE

1-1.9	2-2.9	3-3.9	4-4.9	5-5.9	6-6.9	7-7.9	8-8.9	9-9.9
Micro	Minor		Light	Moderate	Strong	Major	Great	
Vibration detected			Building damage		Building damage		Devastating	

DID YOU KNOW?

Each year the Southern California area has about 10,000 earthquakes. The majority of which go unnoticed. However, if there is a large earthquake the aftershock sequence will produce many more earthquakes of all magnitudes for months.

Information cited from www.usgs.gov

EUREKA
November 8, 1980
2:27 AM
Magnitude 7.4

NAPA VALLEY
August 24, 2014
3:20 AM
Magnitude 6.0

SAN FRANCISCO
April 18, 1906
5:12 AM
Magnitude 7.8

LOMA PRIETA
October 17, 1989
5:04 PM
Magnitude 6.9

KERN COUNTY
July 21, 1952
4:52 AM
Magnitude 7.5

FORT TEJON
January 9, 1857
8:20 AM
Magnitude 7.9

SYLMAR
February 9, 1971
6:00 AM
Magnitude 6.6

NORTHRIDGE
January 17,1994
4:30:55 AM
Magnitude 6.7

WHITTIER
October 1st, 1987
7:42 AM
Magnitude 5.9

LANDERS
June 28, 1992
4:57 AM
Magnitude 7.3

LONG BEACH
March 10, 1933
5:54 PM
Magnitude 6.4

SAN ANDREAS FAULT

The San Andreas Fault extends 750 miles through California. It forms the tectonic boundary between the Pacific Plate and the North American Plate.

NEWPORT-INGLEWOOD FAULT

The Newport–Inglewood extends for 47 miles from Culver City through Inglewood and other coastal cities towards Newport Beach.

PUENTE HILLS FAULT

The Puente Hills Fault extends 25 miles from Puente Hills through downtown Los Angeles, ending in Griffith Park.

**Map details for reference only.*

EARTHQUAKES

BEFORE THE EARTHQUAKE

1. SECURE YOUR PLACE
By identifying hazards and securing movable items.

2. PLAN TO BE SAFE
By creating a disaster plan and deciding how you will communicate in an emergency.

3. ORGANIZE DISASTER SUPPLIES
In convenient locations.

4. MINIMIZE FINANCIAL HARDSHIP
By organizing important documents, strengthening your property, and considering insurance.

DURING THE EARTHQUAKE

1. DROP COVER AND HOLD ON
When the earth shakes. See illustrations on the next page.

2. IMPROVE SAFETY
After earthquakes by evacuating if necessary, helping the injured, and preventing further injuries or damage.

TIP: Learn the 7 steps to earthquake safety.
Go to: **www.shakeout.org** for more information.

PROTECT YOURSELF DURING EARTHQUAKES!

IF POSSIBLE

USING WHEELCHAIR

For more information: www.earthquakecountry.org

AFTER THE EARTHQUAKE

1. CHECK AREAS
If it is safe, check for gas and water leaks, and broken electrical wiring or sewage lines. If there is damage, turn the utility off at the source and immediately report gas leaks to your utility company.

2. STAY CLEAR
Stay away from downed power lines and warn others to stay away. **AVOID GAS**, do not attempt to re-light the gas pilot unless your gas line has been thoroughly inspected. Call the Gas Company for assistance.

3. PUBLIC SAFETY
Cooperate fully with public safety officials and follow instructions; they are trained to ensure safety. **AVOID DRIVING**, do not use your vehicle unless there is an emergency.

4. AFTER SHOCKS
Be prepared for aftershocks. Stay calm and help others. **NOTIFY CONTACTS** if you evacuate, leave a message at your home telling family members and others where you can be found.

CITY LA DBS
DEPARTMENT OF BUILDING AND SAFETY

After a major earthquake, Building and Safety (LADBS) will evaluate damaged buildings (dwelling, apartment or commercial building) to determine if buildings are safe to occupy. LADBS will then post one of the following placards on the damaged building(s):

BUILDING ASSESSMENT SIGNS

UNSAFE
Do not enter or occupy

RESTRICTED USE
Entry or occupancy is restricted as specified

INSPECTED
No apparent structural hazard, may have minor damage

more info at www.ladbs.org

TSUNAMIS

TSUNAMI EVACUATION ROUTE

WHAT IS A TSUNAMI

Tsunamis, also known as seismic sea waves, are a series of enormous waves created by an underwater disturbance such as a landslide, volcanic eruption, and most commonly, an earthquake. After a disturbance has occurred, the first wave in a series could reach the beach in a few minutes, even before a warning is issued. Areas are at greater risk if they are less than 25 feet above sea level and within a mile of the shoreline. Drowning is the most common cause of death associated with a tsunami. Tsunami waves and the receding water are very destructive to structures in the run-up zone.

SIGNS OF A TSUNAMI

Rapid change in water levels may be an indication of an approaching tsunami.

An earthquake may be your only warning of an approaching tsunami, so act quickly.

If you notice water has pulled back or run out, creating an empty beach, this may be tsunami warning.

BEFORE

Build an emergency kit and make a family communications plan.

If you are a tourist, familiarize yourself with local tsunami evacuation routes.

After an earthquake, turn on your radio and listen for tsunami warning.

DURING

Move to high ground or inland and away from water immediately. Never go to the beach to watch or surf a tsunami wave.

If you are a tourist, familiarize yourself with local tsunami evacuation protocols.

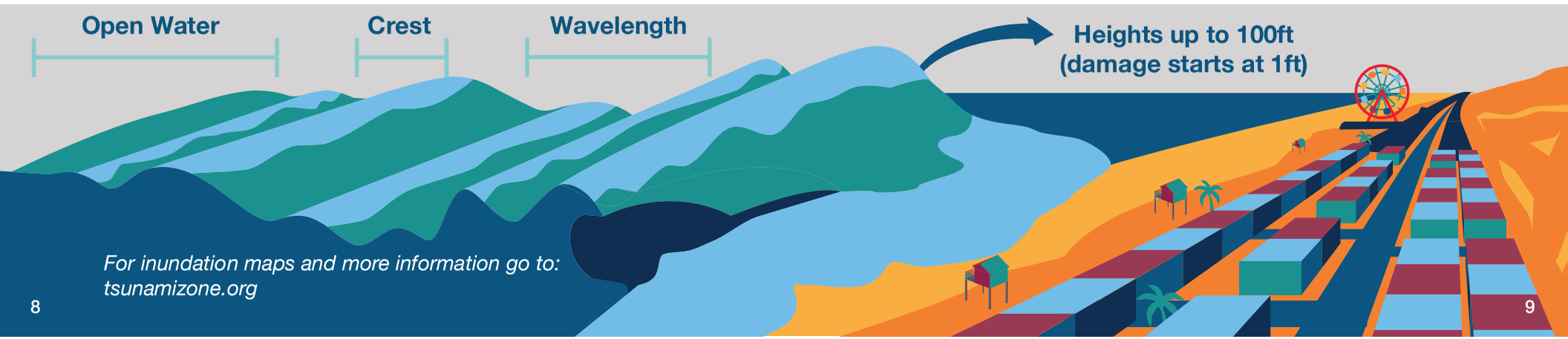
Help your neighbors who may require assistance.

AFTER

Return home only after local officials tell you it is safe.

Go to a designated public shelter if you have been told to evacuate or you feel it is unsafe to remain in your home.

Stay away from debris in the water; it may pose a safety hazard to people or pets.



For inundation maps and more information go to: tsunamizone.org

ADVERSE WEATHER

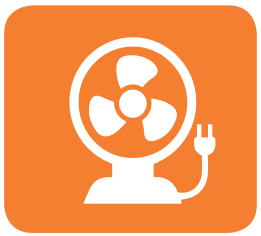
6 TIPS FOR EXTREME HEAT

When temperatures are high, prolonged sun exposure may cause dehydration, heat cramps, heat exhaustion, and heat stroke. Never leave children, elderly people, or pets unattended in closed vehicles, even with the windows cracked open.

TO STAY COOL

Hydrate by drinking water or sports drinks. Avoid drinking alcohol.

Offer help to those in your neighborhood with limited access to air conditioning and transportation, such as seniors or those who are ill.



During peak heat hours stay in an air conditioned area. Visit public facilities such as shopping malls, parks, and libraries to stay cool.

Stay out of the sun if you do not need to be in it. When in the sun, wear a hat, preferably with a wide brim.

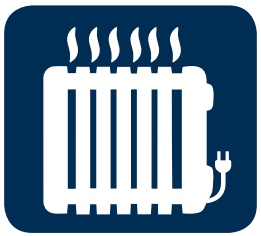
Avoid unnecessary exertion, such as vigorous exercise during peak sun hours.

Wear light, loose-fitting clothing.

6 TIPS FOR EXTREME COLD

Every year in Los Angeles there are carbon monoxide poisonings from a barbecue, stove, or oven used as a source of warmth. A safe way to stay warm is by using central heating, electric heaters, and ventilated fireplaces.

TO STAY WARM



Check to make sure heating appliances are in good working condition before using them.

Furnaces and fireplaces should be checked to ensure that chimneys or flues are not blocked to allow for proper ventilation.

A winter shelter program is available for seniors and those looking for a place to beat cold weather.

Install a carbon monoxide detector in your home to reduce the risk of poisoning.

If you use an outdoor generator, place it as far away from the home as possible.

Never use a barbecue, stove, or oven to heat your home.

TIP: For shelter locations during extreme heat or cold weather events, call 3-1-1 or search www.laparks.org

TIP: A power outage may occur during extreme heat or cold weather events.

STORMS & FLOODS

Los Angeles County contains some of the steepest and most erosive mountains in the world. With elevations reaching 10,000 feet above sea level. Below steeply walled canyons lie large coastal plains with a high population density. When heavy rains come, there is a significant potential for floods and mudslides.

6 TIPS SAFETY TIPS FOR FLOODS

Have a plan in place before an evacuation is ordered.

Avoid walking or driving through flood waters.

Talk to your neighbors about their plans, and encourage them to evacuate early.

If there is a chance of flash flooding, move immediately to higher ground.

Turn on your TV/radio. You will receive the latest weather updates and emergency instructions.

Disconnect electrical appliances and do not touch electrical equipment.

WHEN ITS RAINING

Plan to arrive at your home or destination in a safe neighborhood. Remain there until well after the storm has ended.

This could be hours or sometimes even days after the rain has stopped. Be particularly alert when driving. Watch the road for collapsed pavement, mud, fallen rocks, and other hazards.

Bridges may be washed out, and culverts over stopped. When you see water across a roadway, there is no way to see whether the road is under the water has been washed away.

BEFORE THE FLOOD

Assess the safety of your residence and belongings.

Clean drains and gutters around the house.

Plan for sandbags. Visit your local fire station if sandbags are needed.

Maintain all slopes in a safe manner. Roots bring stability to soil.

DURING THE FLOOD

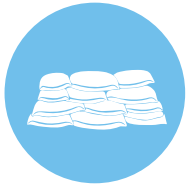
Do not cross rapidly flowing streams.

Check drainage systems at your home and driveways.

Watch for mudslides and adjust drainage to reduce mudslides.

AFTER THE FLOOD

Don't return to your flood damaged home if area is not safe.



Sandbags may help divert flood water, however they are meaningless when there is significant debris flow.

Drive slowly and carefully as many roads may have mud, debris, holes, and washed-out areas.

Assess damage; check hillsides, houses.

POWER OUTAGES

BEFORE A POWER OUTAGE

1. BUILD

Build or restock your emergency preparedness kit, including a flashlight, batteries, cash, and first aid supplies.

2. CHARGE

Charge cell phones and any battery powered devices. Also keep alternative charging methods at all times.

3. LEARN

Learn about the emergency plans by following dwp.web for additional information postage.

4. FUEL UP OR CHARGE UP

Maintain the proper fuel or charge for your vehicle. If you use your car to re-charge devices, do NOT keep the car running in a garage, partially enclosed space,or close to a home, this can lead to carbon monoxide poisoning.

5. BUY

Purchase ice or freeze water-filled plastic containers to help keep food cold during a temporary power outage.

DURING A POWER OUTAGE

1. NO FLAMES

Open flames are dangerous during a power outage. Only use flashlights for emergency lighting; candles can cause fires.

2. FOOD

Keep refrigerator and freezer doors closed. Most food requiring refrigeration can be kept safely in a closed refrigerator for several hours. An unopened refrigerator will keep food cold for about 4 hours.

3. POWER OFF

Turn off or disconnect appliances and other equipment in case of a momentary power “surge” that can damage computers and other devices. Consider adding surge protectors.

4. PURCHASE

If you are considering purchasing a generator for your home, consult an electrician or engineer before purchasing and installing. Make sure it remains outside of the house.

5. DRESS

Dress to prepare for the weather, if it’s cold outside layer clothing to stay warm and never use the oven as a source of heat. During a heatwave find places where it is cool, and avoid layering clothes.

TIP: www.ladwp.com for reported power outages & wait times.

POWER OUTAGES

AFTER A POWER OUTAGE

1. THROW AWAY

Throw away any food that has been exposed to temperatures 40° F (4° C) for 2 hours or more or that has an unusual odor, color or texture. When in doubt, throw it out!

2. CHECK

If food in the freezer is colder than 40° F and has ice crystals on it, you can refreeze it.

3. RESTOCK

Restock your emergency kit with fresh batteries, canned foods and other supplies.

4. CONTACT

Contact your doctor or your local pharmacist if you're concerned about medications having spoiled.

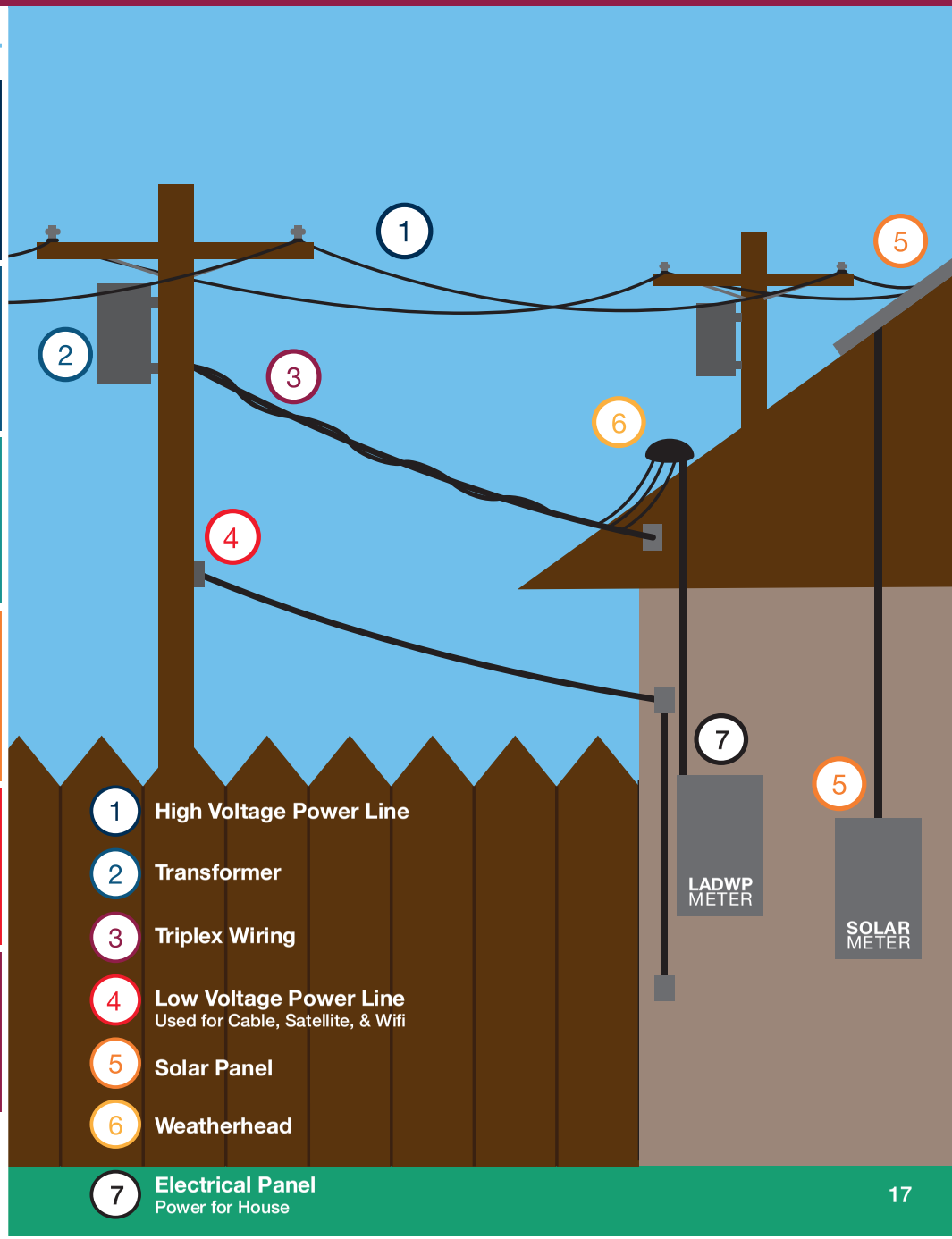
5. RESET

Unplug any electrical appliances before resetting your circuit breaker to protect them from a power surge.

6. INFORMATION

Do not call 9-1-1 for information—call only to report a life threatening emergency. If you do need to make a call, use the 3-1-1 number instead for any additional information.

TIP: If electrical power lines are down, don't touch them. Keep your family and pets away. Report downed lines to 9-1-1.



WILDLAND FIRES

BEFORE THE FIRE

Park your car heading out and keep your keys with you.

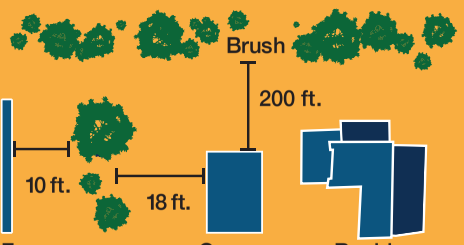
Place important documents, records, and digital files inside the car.

Unplug automatic garage door openers in case of power failure.

Have pet carriers & trailers ready to go.

Close all doors and windows inside your home. Leave all drapes & coverings open but leave lights on.

Move combustible materials away from exterior of home.



FIRE CODE (L.A.M.C. 57.322)

Maintain required clearance from brush, shrubbery, and trees around your home.

*Diagram not to scale.

Visit lafd.org/brush for more info.

DURING THE FIRE

EVACUATE

Follow evacuation instructions from Law Enforcement and Fire Department officials. Call 911 if you are unable to evacuate.

STAY TOGETHER

Gather your family, pets, and disaster supply kit. Leave your home or business immediately.

STAY CALM

Drive carefully at normal speeds. Do not park your vehicle in a traffic lane or safety area. Monitor road closures.

TIP: Pre-wetting your home and surrounding areas will not improve the safety of your home. It wastes valuable time and water.

AFTER THE FIRE

Check with the City of Los Angeles to find out what roads are closed or damaged.

RETURN SAFE

Do not return home until authorities say it's safe. Wear appropriate shoes and clothing, and wet debris down to minimize breathing in dust particles.

CLEAN UP

Make sure your utilities are operational. Do not use contaminated water. Throw out any food exposed to heat, smoke, or soot.

STAY ALERT

Maintain a "fire watch." Check your home (including the roof and attic) for smoke, sparks or hidden embers—hot spots and other hazards can flare up without warning. Leave at once if you smell smoke. Call 911 to report fire.

RECORD DAMAGES

Be sure to photograph any damages to your property for insurance purposes.

HOUSE FIRES

BEFORE A FIRE

E. D. I. T. H

E. Exit
D. Drills
I. In
T. The
H. Home

WINDOWS

Make sure that windows are not stuck, screens can be taken out quickly, and that security bars can be properly opened.

1

ESCAPE ROUTES

Find two ways to get out of each room (door or window)

2

DURING A FIRE

CRAWL, EXIT & CALL 911

Crawl low under any smoke to your exit. If you see, smell or hear a fire, exit immediately and call 911.

EVACUATE & ASSIST

Evacuate early. Remove loved ones, pets, and assist neighbors and those with disabilities.

CALL 911

If you can't get to someone needing assistance, call 9-1-1 for help.

3

SEAL DOORS & VENTS

If unable to evacuate, shelter in place, call 9-1-1 to report your location, seal doors or vents if possible.

4

FEEL THE DOOR FOR HEAT

Feel the doorknob with the back of hand, if hot leave the door closed and use another way out.

5

*Read BEFORE, DURING, AFTER tips and compare them to the home diagram below.

AFTER A FIRE

CHECK FOR SAFETY

Check with the Fire Department to make sure your residence is safe to enter. Be watchful of any structural damage caused by the fire.

RELIEF SERVICES

LAFD will contact Red Cross, if you need temporary housing, food and medicines.

6

UTILITIES

The fire department should see that utilities are either safe to use or are disconnected before they leave. DO NOT attempt to reconnect utilities yourself.

7

RECOVERY

Contact your insurance company for detailed instructions on protecting the property. If you are not insured, contact private organizations for aid.

INVENTORY DAMAGES

Maintain an inventory of damaged property and items .Protect valuable documents and records.

8

COLLECT DOCUMENTS

Save receipts for any money you spend related to fire loss. They may be needed by your insurance to verify loss claims on income tax.

HOUSE FIRES

TIPS ABOUT FIRE

FIRE IS FAST!

In less than 30 seconds a small flame can turn into a major fire. It only takes minutes for thick black smoke to fill a house or for it to be engulfed in flames.

FIRE IS DEADLY!

Fire starts bright, but quickly produces black smoke and complete darkness.

FIRE IS HOT!

Heat is more threatening than flames. Room temperatures in a fire can be 100 degrees at floor level and rise to 600 degrees at eye level. Inhaling this super-hot air will scorch your lungs and melt clothes to your skin.

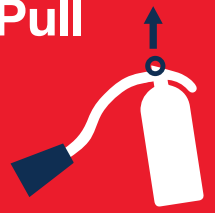
FIRE MAKES DEADLY SMOKE!

Smoke and toxic gases kill more people than flames do. Fire produces poisonous gases that make you disoriented and drowsy. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.

OPERATING A PORTABLE FIRE EXTINGUISHER

P.A.S.S

Pull



Pull the pin

Aim

Aim the nozzle or horn low at the base of the fire

Squeeze

Squeeze the handle to release the agent

Sweep

Sweep from side to side at the base until the fire is out.

SMOKE ALARMS

NEVER DISABLE

Never disable a smoke alarm while cooking – it can be a deadly mistake.

ALARM BATTERIES

Test batteries monthly. Replace batteries in battery-powered and hard-wired smoke alarms at least twice a year at daylight savings.

ALARMS ON EVERY FLOOR

Install smoke alarms on every level of your home, including the basement, both inside and outside of sleeping areas.

REPLACE ALARMS

Replace the entire smoke alarm unit every 8-10 years or according to manufacturer's instructions.

Fire burns but smoke kills. Smoke alarms save lives. That's why it's important you have functioning smoke alarms throughout your home.

SMOKE ALARM SAFETY FOR PEOPLE WITH DISABILITIES

AUDIBLE ALARMS

Audible alarms for people with visual disabilities should pause with a small window of silence between each successive cycle so that they can listen to instructions or voices of others.

VIBRATING /FLASHING ALARMS

Smoke alarms with a vibrating pad or flashing light are available for people who are deaf or hard of hearing.

Smoke alarms with a strobe light outside the home may be to catch the attention of neighbors. Emergency call systems for summoning help are also available.

TIP: Do not touch the plastic discharge horn on CO2 extinguishers; it gets very cold and may cause skin damage. Lay used fire extinguisher on their side so no attempt will be made to use them until they are recharged.

ACTIVE SHOOTER RESPONSE

CALL 911

RUN | **HIDE** | **FIGHT**

TEXT 911 ONLY WHEN SAFE

HIDE IF ESCAPE IS NOT POSSIBLE

Stay out of the shooter's view.

Silence your electronics.

Block entrances & turn off lights.

Groups should spread out when hiding.

Text to 911 and text message others to silently communicate.

Stay in place until given the all-clear signal.

TIP: The very first officers on scene will not stop to help the injured. Their top priority is to end the incident as fast as possible. Rescue teams will move in after the first officers. They will treat and move the injured to safety.

RUN AND ESCAPE IF POSSIBLE

Getting away is your top priority.

Leave behind any heavy belongings.

Help others if you can, but you must escape.

Warn others to stay away from the area.

FIGHT AS A LAST RESORT

Commit to your actions. FIGHT. Do not hesitate.

Rally others & attack together.

Be prepared to inflict severe injury to shooter.

Throw objects or improvise weapons.

TERRORISM

As we've seen in the last several years, domestic and international terrorists can strike at any time. To combat the threat of terrorism, emergency services officials across all levels of government continue to work together to develop and implement effective strategies for preventing and responding to incidents.

TYPES OF TERRORISM

- Arson
- Bioterrorism
- Chemical Attacks
- Cyberterrorism
- Hijackings
- Suspicious Packages
- Nuclear Attacks
- Radiological Attacks
- Shootings

TIP: Report a tip, lead, or threat directly to the Joint Regional Intelligence Center at: www.JIRC.org, *(Select Private Sector/General Public Reporting.)*

BEFORE AN ATTACK

SEE SOMETHING, SAY SOMETHING!

OBSERVE SURROUNDINGS

Terrorists look for high visibility targets such as sporting events, political conventions, international airports, and high-profile landmarks.

REPORT THREATS

- Call or text to 911 or 1-877-A-THREAT
- Submit a tip, lead, or threat at: www.jirc.org

WHEN TRAVELING

Keep track of your belongings—do not accept packages from strangers. Locate emergency exits and stairways for buildings, subways, and crowded public areas.

TIP: Preparing for terrorist attacks is the same as preparing for fires, earthquakes, and other emergencies.

- Keep emergency supply kits.
- Train in how to use fire extinguishers.
- Practice evacuation drills and procedures.
- Obtain training in CPR and first aid.
- Establish a family meeting place.
- Create an emergency communications plan.

DISEASE OUTBREAK

BEFORE A PANDEMIC

Have any nonprescription drugs and other supplies on hand, such as pain relievers, stomach remedies, cough and cold medicines and vitamins.

Store two weeks worth of supplies.

Refill your perscription medications.

Maintain health records in a safe place.

Consider vaccinations.

DURING A PANDEMIC

Practice other good health habits. Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

Stay away from others already sick.

Cover your cough.

Keep hands clean.

Visit a doctor.

Visit these sites to learn about how to prevent the spread of disease.

www.cdc.gov
www.flu.gov
www.hhs.gov
www.redcross.org

NOTES

HAVE A PLAN

DISASTER SUPPLY KITS

A Disaster Supply Kit is any pre-assembled group of items that will improve the health and safety of your family during a disaster. Kits can be purchased, or homemade in a variety of styles and sizes. They can be as small as a shaving kit for your glove compartment or as big as 50-gallon drums for your business, or home. In general, kits should be easy to carry and as lightweight as possible. You can have many kits, each suited to a different purpose.

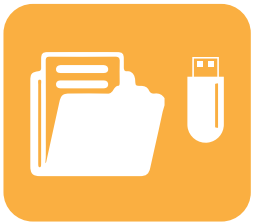
THE EVACUATION CHECKLIST

EMERGENCY SUPPLY KIT

CASH AND CREDIT CARDS

OUT OF STATE CONTACT LIST

FAMILY PHOTOS



IMPORTANT DOCUMENTS
social security card, driver license, passport, medical card and records of insurance information

CHANGE OF CLOTHING
each family member

PERSONAL HYGIENE
toothbrush, toothpaste, shampoo, soap, lotion, deodorant, and tissues

MEDICAL NEEDS
wheelchair, canes, walkers, medications, hearing aids, and extra batteries

BABY
diapers, formula, food, change of clothing

PET CARE
identification, and immunization records, carrier, or cage, muzzle, leash, food and water

TIP: If time permits, prior to evacuating, consider taking photos or videos of your residence to assist in documentation of property. This may help provide information during the claims process.

EVACUATIONS

EVACUATION WARNING OR VOLUNTARY EVACUATION

Prepare to leave your home and the area. Gather your family, pets, basic needs and important paperwork and listen for instructions from emergency responders.

If you have special medical needs or have limited mobility, you should prepare to leave the area when an Evacuation Warning is issued, Those with the horses or large animals should also begin to evacuate.

EVACUATION ORDER OR MANDATORY EVACUATION

A directive from Police Department or Fire Department to leave your home or business immediately.

Failure to Evacuate may result in endangerment to the lives of others, personal injury, or death. Once you evacuate you will not be able to return until the order has been lifted.

EVACUATION SHELTER

Shelter may be set up by the Amercian Red Cross at the request of the City if an area must be evacuated for an extended amount of time. The location for an evacuation shelter will be announced by local officials.

SHELTER IN PLACE

Shelter indoors. Turn off air-conditioner or heater, seal the gaps around windows and doors. Listen to the radio for authorities to announce the threat has passed. You may also receive emergency alerts to your cellular telephone, or a reverse 911 system on your landline telephone. Call 9-1-1 if you are unable to evacuate.

FLASH FLOODS

A flash flood WATCH means flash flooding is possible in your area. Be ready to evacuate.

If you evacuate, remember to leave your information inside your home so others know where you are planning to go. Be sure to include your out of area contact.

Learn about **READY, SET, GO!** program on LAFD.org

10 ESSENTIAL EMERGENCY SUPPLIES

At a minimum your emergency supply kit should include these **10** essential items.

1. **WATER FOR 3-10 DAYS**
   (1 gallon per person per day)
2. **FOOD FOR 3-10 DAYS**
   (including pet food)
3. **MEDICATIONS**
   (prescription & non-prescription)
4. **RADIO**
   (& extra batteries)
5. **FLASHLIGHTS**
   (& extra batteries)
6. **FIRST AID KIT**
   (bandages, disinfecting wipes gauzes, medical tape)
7. **CASH & IMPORTANT DOCUMENTS**
   (small bills, coins, birth certificates, medical cards, licenses, USB)
8. **SANITATION & HYGIENE SUPPLIES**
9. **TOOLS**
   (wrench, duct tape, fire extinguisher, sturdy gloves)
10. **CLOTHING & STURDY SHOES**

PERSONALIZE IT

Camping stove fuel, pots and pans, aluminum foil, paper cups, plates and plastic utensils

Emergency blankets or sleeping bags

Pet Carriers and supplies for your animals and pets

Extra set of car, home and safe deposit box keys

List for emergency telephone numbers and contacts

Medication, portable toilet, toilet paper and plastic bags for human waste

Compass and maps

Pens, pencils, paper tablet to document incident

Toys, candy, crayons and books to keep children busy

TIP: When purchasing a fire extinguisher, the best type is ABC, which covers combustibles. liquids, and electrical fires. Be sure to check the expiration date on your extinguisher

Include items in you disaster kit that will help your family be comfortable and self-sufficient after a disaster. At minimum your emergency supplies should include these 10 essential items.

WATER STORAGE

STORE WATER

Keep bottled water in its original container and do not open it until you need to use it. Be sure to notice the expiration date or "use by" date. Store off the ground.

In an emergency situation, tap water may be safe to drink or use. It is important to prepare for possible emergency situations ahead of time. It is also essential to know how to make contaminated water safe to drink and how to find alternative sources of water.

x = Day

- Generally a person needs to maintain 1 gallon to drink water each day. Children, nursing mothers, and others may need more.
- Consider water storage for your pets.
- Very hot temperatures can double the amount of water needed.

- Store water in thoroughly washed plastic, glass, or enamel-lined metal containers.
- Before you access the water in your plumbing, locate the water inlet/shutoff valve for the house, condominium or appartment and turn off the water.

Pools, spas, toilet resevoirs and similar sources of water can be used for sanitary purposes only. **Do not drink** water frome these sources. Water from these sources contain toxic chemicals and have a high potential of giving you diarrhea, causing dehydration.

TIP: Water from water heater tank may be boiling hot.

Recycle self-stored water every six months. Recycle commercially bottled water every 12 months. WARNING: The water stored in the water heaters is VERY HOT. Take precautions to avoid injury!

For more information about Water, Sanitation, and Hygiene visit the Centers for Disease Control and Prevention at: **www.cdc.gov**

DRINKING WATER

In an emergency you can use water already in your heater tank, plumbing, and in ice cubes. Do not drink water from the reservoir tank of you toilet.

ACCESS WATER

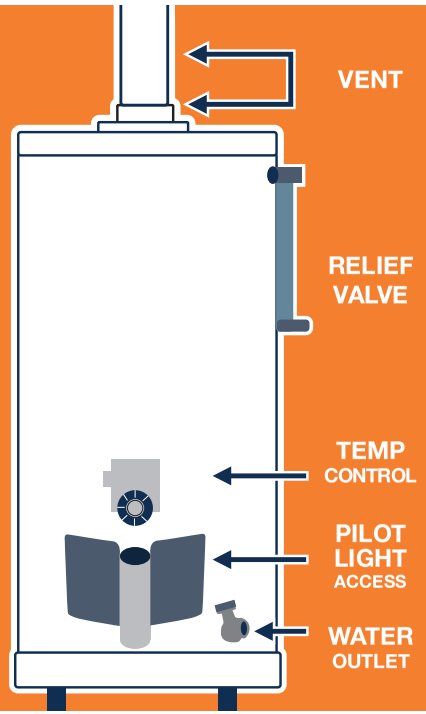
ACCESS RESERVES IN THE WATER HEATER:

- Use extreme caution. Let the water cool.
- Turn off cold water supply to the tank.
- Open the drain valve near the bottom.

Remember: Some sediment at the bottom of the tank may flow at first, continue to drain water until it becomes clear.

Don't forget to clean and sanitize your food and water containers before using them. Wash with soap and water then fill them with a 10% bleach unscented solution. After 5 min empty the bleach solution and let air dry.

Water that is dirty should be first strained through a coffee filter, cheesecloth, or a paper towel to remove suspended matter.



RATIOS FOR PURIFYING WATER WITH BLEACH

8 drops of pure unscented liquid bleach per gallon of water will reduce the contaminants in the water.

1 Quart Water: 4 Drops of Bleach

1 Gallon Water: 8-16 Drops of Bleach

5 Gallon Water: 1 TSP of Bleach

If water continues to be murky or had an odor, add 1/8th teaspoon (or 8 drops of regular, unscented liquid household bleach for each gallon of water, stir it well, and let it stand for 30 minutes before you use it.

UTILITIES

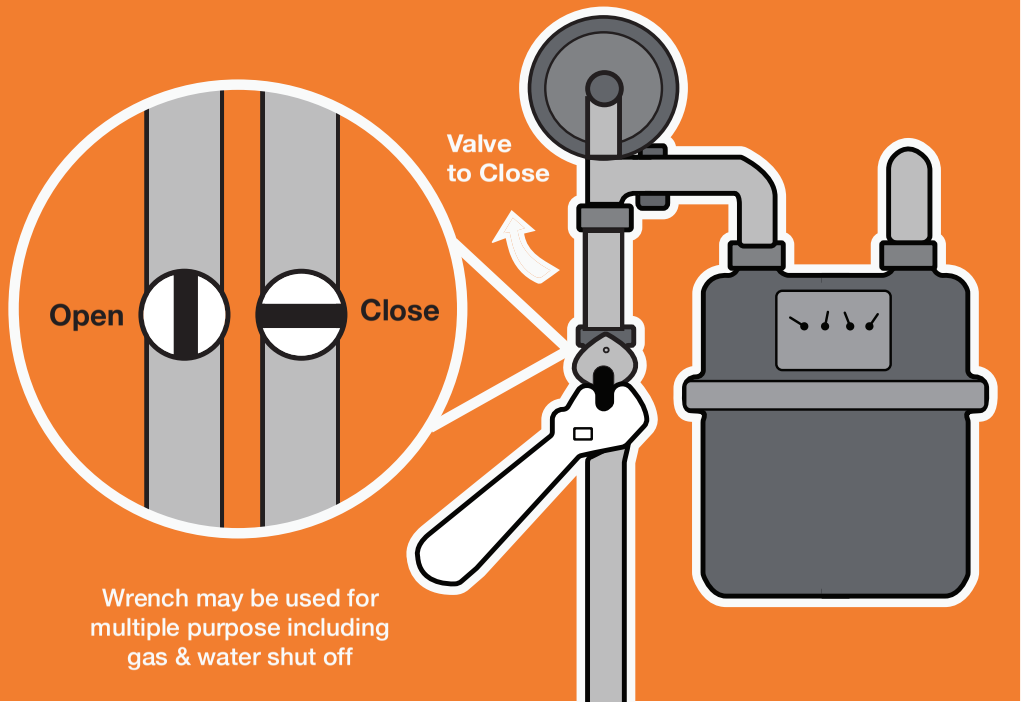
GAS SHUT OFF

LOCATE GAS METER

Learn the location of your gas meter and how to shut off the supply valve. **DO NOT shut off the gas supply valve** unless you smell or hear gas leaking. If you have “Natural Gas” (a line from the street) the main shut-off valve is located next to your meter.

TURN OFF GAS SUPPLY

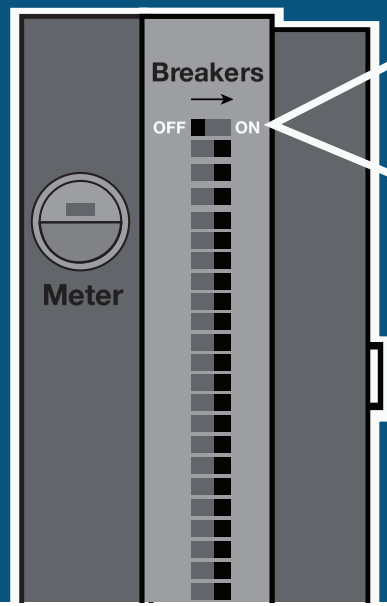
Use a wrench and carefully give it a quarter turn in either direction so that the bar runs crosswise on the pipe. Shut off valves covered with paint should be tapped gently to break the seal; forcing the valve can break it. If you have propane (gas in a tank), **turn off the main gas supply valve** if it is safe to do so.



Wrench may be used for multiple purpose including gas & water shut off

TIP: Walk carefully around your property; look for downed power wires, water or gas leaks and damage to the structure(s). DO NOT enter severely damaged buildings, especially alone. Wait for help and use safety gear.

ELECTRICITY SHUT OFF



1. TURN POWER OFF
Turn off individual breakers FIRST, then the main switch.

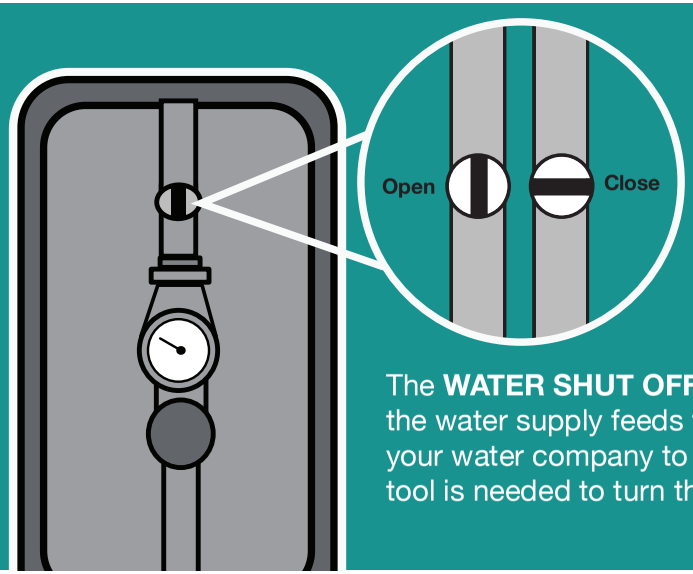
2. TURN POWER ON
Turn on the main switch FIRST, then individual breakers.

ELECTRICAL PANEL

Know where your electrical panel is and which breakers control power to your home. *(Be aware of sub panels in your garage or basement)*

Remember **Do Not** operate any electrical switches if a gas leak is suspected.

WATER SHUT OFF



The **WATER SHUT OFF valve** is found where the water supply feeds the house. Check with your water company to determine if a special tool is needed to turn the valve.

HOME SAFETY CHECK

GAS

Learn the location of your gas meter and how to shut off the supply valve.
DO NOT shut off the gas supply valve unless you smell or hear gas leaking.

FIRE EXTINGUISHERS

Keep a fire extinguisher in plain view and on every floor of your home.

SMOKE ALARMS

Make sure to install smoke alarms on every floor of the house, including the basement and near rooms where people sleep.

Carbon monoxide detectors are vital because this gas is tasteless and odorless.

WATER

If pipes are damaged, turn off the main water valve.

Check with local authorities before using any water. The water could be contaminated.
DO NOT flush toilets until you know that sewage lines are intact.

APPLIANCES

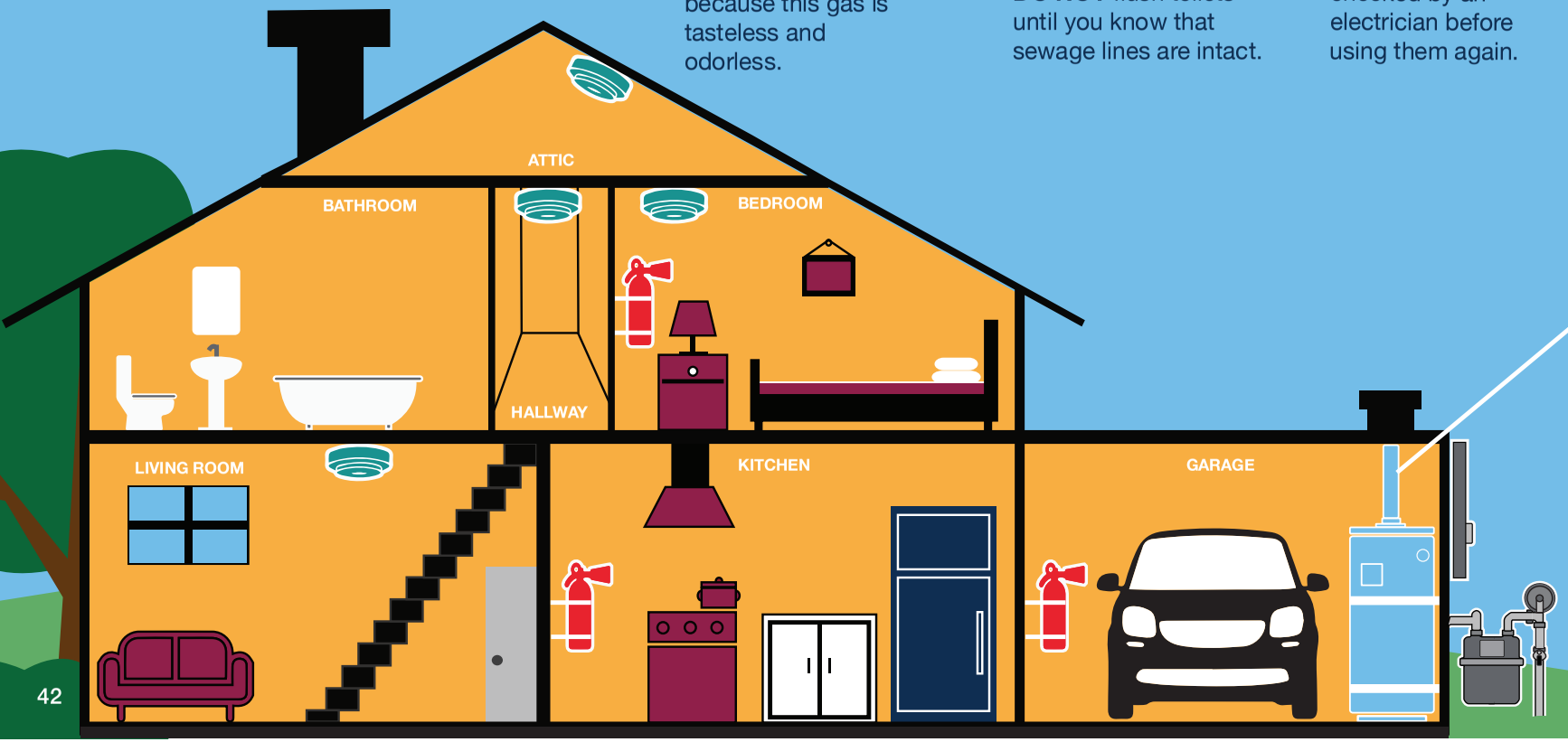
If appliances are wet, turn off the electricity at the main fuse box or circuit breaker. Then, unplug appliances and let them dry out.

Have appliances checked by an electrician before using them again.

FOOD

Throw out all food and other supplies that you suspect that may have been contaminated or come into contact with flood water.

Be alert that stored food and supplies may shift and fall.



TIP:
BROKEN WATER HEATER may leak carbon monoxide always make sure your detectors are working properly.

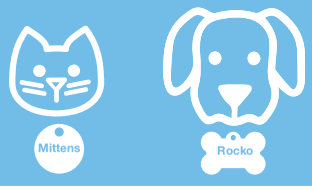
SMALL ANIMAL PREPAREDNESS

SHELTERING

Before the emergency, make arrangements to shelter your animals at two different locations far apart from each other.

COLLAR

Be sure all dogs and cats are wearing collars with securely fastened current identification, attach the telephone phone number and address.



TRAINING

Train both dogs and cats to feel comfortable going in and being in a crate for fast transportation during a disaster

OUTDOORS

Always bring pets indoors at the first sign or warning of a storm or disaster. Pets can become disoriented and wander away from home in a crisis.

SERVICE ANIMALS

A service animal is any dog that is individually trained to perform tasks for the benefit of an individual with a disability.

PET KIT & STORAGE

Keep an emergency pet kit and leashes and that it is clearly labeled and easy to carry in an accessible place and store them in sturdy containers that can be carried easily (duffel bags, covered trash containers, etc.)

TIP: Identification microchips are highly recommended for all pets

For more information go to www.laanimalservices.com

SUPPLY KIT

Name tags and phone numbers for collars and harnesses

Water and food for 3-10 days

Leashes, harnesses, gloves and carriers to transport pets safely and securely

Supplies like bowls, cat litter and pans, manual can opener, foil or plastic lids for cans

3-10 day supply of medications. Medical records stored in a waterproof container

Current photos of your pets in case they get lost

Keep information on feeding schedules, medical conditions, behavior problems, and the name and number of your vet in case you have to board your pets.

First Aid Kit (including large/small bandages with elastic tape, scissors, tweezers, Q-tips, antibiotic ointment, saline eyewash, & hydrogen peroxide)

LARGER ANIMALS PREPAREDNESS

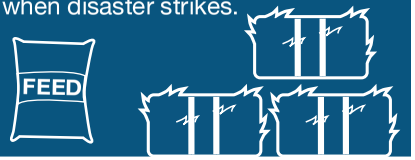
Make sure your horse is identifiable with a bracelet or microchip.

Train horses to lead and trailer so that they become comfortable with the process.

Identify alternate ways that you can trailer and/or walk your horse(s) to nearby stables or other designated safety zones.

Prearrange for boarding at stables outside the City of Los Angeles, if possible.

Have a surplus of feed available. Don't let yourself get down to the last bale when disaster strikes.



Have an emergency three day supply of water available (use drums or barrels).

Keep a leather halter near the corral that's easy to find for emergency responders in case you are not able to evacuate your horses yourself.

Never turn your horse or livestock loose during a wildfire. You do not know how they will react and they could be a danger to you or others.

TIP: If there is an emergency in your area and you believe evacuation is likely, or if you have been ordered to evacuate, please contact one of the animal Shelters below to get current information on large animal evacuation sites for your area.

West Valley Center : (818) 756-9325 from 8 a.m. to midnight.
East Valley Center : (818) 756-9323 24 hours a day

For more information go to www.laanimalservices.com

SHELTER-IN-PLACE

PREPAREDNESS TIPS

DO NOT TURN HORSES LOOSE
Horses may return home to a burning barn. Loose horses also cause serious problems for first responders.

MAINTAIN ADEQUATE CLEARANCE
The Los Angeles Fire Department recommends 200 ft. clearance around your property.

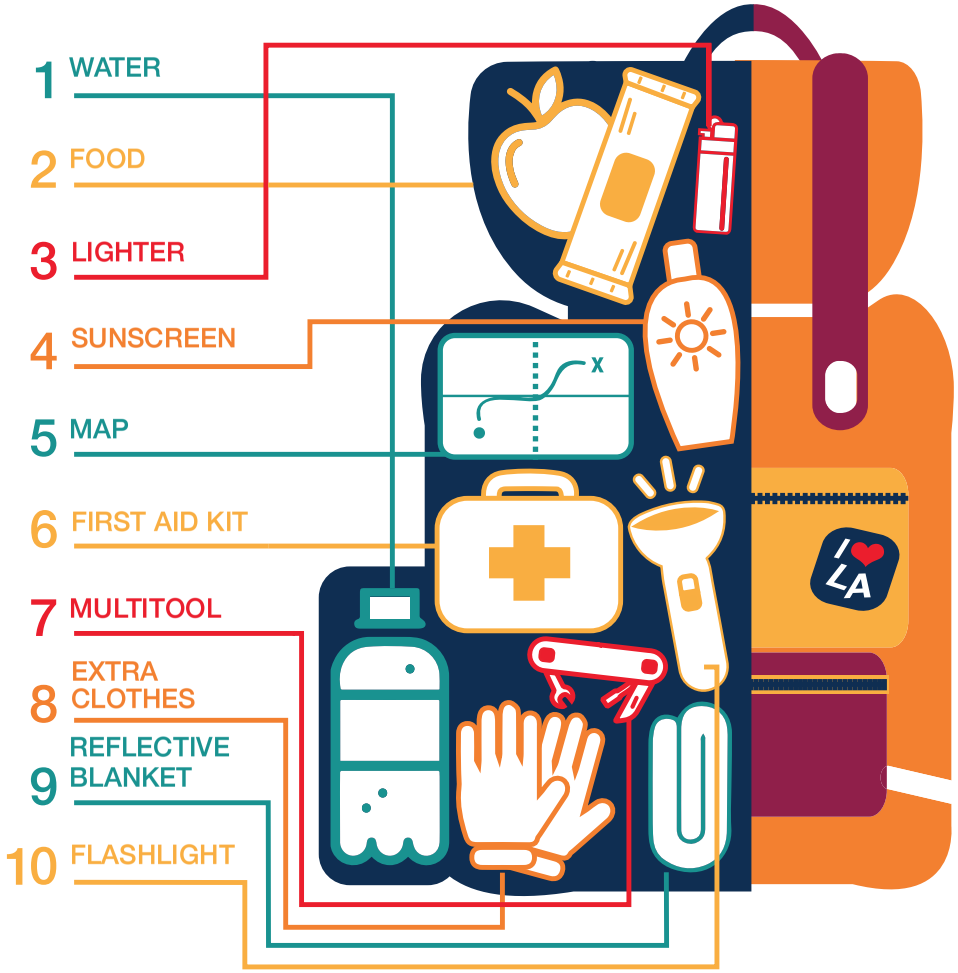
BRING HORSES INTO ARENA WITH SUFFICIENT BRUSH AND TREE CLEARANCE
Your horse corral should be made with metal pipes, not PVC or wood.

SUGGESTED SUPPLIES

- Fire hose(s)
- Generator
- Shovels axes, hoe, rake, broom
- Ladders
- Portable AM/FM radio with spare batteries
- Hand-held FRS radios
- Masks, goggles, work gloves and bandannas
- Use leather halters

DAY HIKING SAFETY GUIDE

DAY HIKING CHECKLIST:
10 KEY ITEMS



TIP: Call the ranger station closest to the trailhead before your hike to find out about possible road closures, hiking conditions, or required wilderness permits.

HIKE WITH A FRIEND OR FAMILY MEMBER.

It makes hiking more safe and fun.
Encourage one another to meet your goals!

TAKE PLENTY OF DRINKING WATER.

Don't drink stream water, it can make you sick.
Save enough water for the way back on long hikes.

LET SOMEONE KNOW WHERE YOU ARE GOING AND WHEN YOU PLAN ON RETURNING.

Bring a cell phone and let that person know you made it home safely.
Check phone battery and reception before leaving.

DON'T WALK OFF-TRAIL.

Cutting across switchbacks erodes the hillside and destroys the trail.
Walking off-trail increases your chance of suffering an injury or getting lost.

BE AWARE OF THE WILDLIFE THAT LIVES IN ALL OF OUR STATE PARKS.

Black bears, mountain lions, and rattlesnakes are rarely encountered. If seen, keep your distance, back away slowly, and do not run. Report your sightings to a park ranger.

POISON OAK IS COMMON THROUGHOUT CALIFORNIA.

Avoid touching this shiny, three leafed shrub. If you touch poison oak wash it with soap and water immediately and pat dry. Remember "leaves of three, let it be".

For more information visit www.LAparks.org/hiking

GET INVOLVED

NOTES

COMMUNITY TRAINING

WHAT IS CERT?

The Community Emergency Response Team (CERT) Program trains residents on disaster preparedness and the hazards that may impact their area.

The Los Angeles Fire Department is the authorized program manager of the CERT program in the City of Los Angeles.

WHAT WILL I LEARN?

- Disaster Preparedness
- Fire Safety
- Medical Operations
- Patient Assessment
- Light Search and Rescue
- Disaster Psychology
- Terrorism
- Natural/Manmade Hazard Response

WHAT WILL IT TAKE?

- Commitment to 1 day a week for 2.5 hours, for a total of 17.5 hours.
- This free training is offered mornings, afternoons, or nights.
- All classes taught by LAFD firefighters.
- Certification upon completion.
- Must be 18 or older.

For more information on CERT Training and classes near you, please visit www.CERT-LA.com or email LAFDCERT@lacity.org (213) 202-3136.

BASIC FIRST AID

CPR EMERGENCY PROCEDURE

Check if alert, breathing & pulse. | Call 911 | CPR if needed. Push hard & fast in center of chest. | Continue until help arrives.

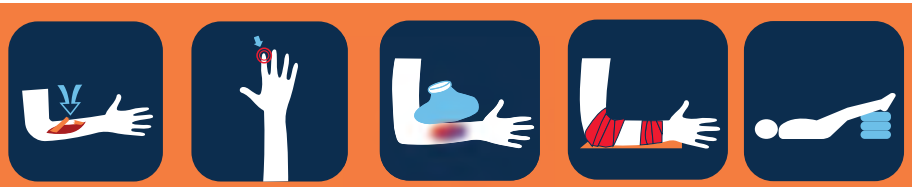
HEAD, NECK AND BACK INJURIES

Call 911 | Hold still. | Watch for vomiting. | May have unequal pupils.

CONTROLLING BLEEDING

Call 911 | Apply direct pressure. | Elevate injured area. | Wrap with bandage. | TIP: Use tourniquet if needed.

AIDING FRACTURES



Help/ support area. | Check pulses & sensation. | Apply ice or a cold pack. | Immobilize the area. | Treat for shock.

TRIAGE PROCEDURE

Triage is the sorting of patients according to urgency of their need for care.
• Airway and breathing • Circulation and bleeding • Mental status

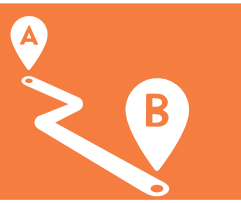
1. STOP, LOOK, LISTEN & THINK

- Size up the situation by looking around and listening.
- If it is safe to proceed, quickly make a plan for your approach.

2. CALL OUT FOR SURVIVORS

- Call out loudly and clearly, “Does anyone need help?”
- Tag survivors that are able to walk with “M” (minor) and direct them to a designated location.

3. START WHERE YOU STAND AND FOLLOW AN ORGANIZED ROUTE



- Evaluate the medical condition of the closet survivor.
- Work outwards in a organized matter, evaluating the next closet survivor and so on.

4. EVALUATE & TAG EACH SURVIVOR

- Identify yourself and ask for permission to treat their injuries.
- Remember to evaluate the survivors that are wounded and those that are not.

5. IMMEDIATELY TREAT SURVIVORS TAGGED “I”

- Apply first aid to category “I” survivors with life threatening injuries.

6. DOCUMENT THE RESULTS

- Note where resources have been deployed.
- Mark the location of survivors.
- List the numbers of casualties by degree of severity.

TRIAGE CATEGORIES

In mass casualty events, categorize the priority of treatment.

TAG	CATEGORY	CONDITION
“I” or Red tag	Immediate	Life Threating Injury
“D” or yellow tag	Delayed	Serious/ Non-Life Threating
“M” or green tag	Minor	Walking Wounded
“DEAD” or black tag	Deceased	Pulse-less/ Non-Breathing

INDIVIDUALS IN NEED OF ASSISTANCE

INDIVIDUALS WITH UNIQUE SUPPORT


PREGNANT


MOBILITY DEVICE


ELDERLY


INJURED


HEARING IMPAIRMENT


TEMPORARY DISABILITIES

NON-ENGLISH SPEAKERS


NO ACCESS TO TRANSPORTATION


BABY/CHILD

DISASTER RELATED STRESS

COMMON REACTIONS TO DISASTERS


NAUSEA


HEADACHES


SADNESS


ALCOHOL/DRUG CONSUMPTION

ANGER/IRRITATION


INSOMNIA


LOSS OF APPETITE


ANXIETY


LACK OF FOCUS

HOW TO COPE

- Ensure that your Family Emergency Plan includes the needs of all the members of your household.
- Consider your neighbors as part as your plan.

- First responders will notify a neighborhood that needs to be evacuated, at this time... PLEASE prepare to leave.
- NEIGHBORS typically perform 70% of all rescues.

- Seek help from professional counselors who deal with post-disaster stress.
- Don't hold yourself responsible or feel that you can not help in any of the disastrous events.
- Restock your disaster supplies and update your family plan.

- Maintain a normal daily routine and spend time with your family and friends.
- Take steps to promote your own physical and emotional health by healthy eating, rest, and exercising.
- Start a plan and prepare for future disasters.

TIP: For more information visit: www.disability.lacity.org on "Stay Safe, Stay in Control" or Dial 7-1-1.

DISASTER ASSISTANCE INFORMATION

FEMA

FEMA (Federal Emergency Management Agency) may offer several types of assistance including services and grants to help people repair homes and gain replacement housing.

After a Presidentially Declared Disaster, call the FEMA registration number and apply for FEMA and Small Business Administration (SBA) assistance programs. FEMA assistance does not make you whole again, but it can give offer a helping hand while recovering.

HOW TO APPLY?

Apply online at www.disasterassistance.gov
Call 1-800-621-FEMA (3362) or TTY 1-800-462-7585 to apply by telephone.

They will mail you a copy of your application and a copy of Help After a Disaster: Applicant's Guide to the Individuals and Households Program.

LOOKING FOR FAMILY?

FEMA's National Emergency Family Registry and Locater System (NEFRLS) helps reunite families separated during a disaster. It allows displaced individuals to register and provide information about their current location and situation.

Affected individuals, or those seeking information about friends or family, can visit the NEFRLS website or call 1-800-588-9822 to register themselves or another person.

HOME DESTROYED?

Finding shelter is critical in times of disaster. Shelter outside of the hazard area could include staying with family or friends, seeking a hotel room, or staying in a mass shelter. The following resources can help you find emergency shelter.

Search for open shelters near you by texting SHELTER and your zip code to 4FEMA (43362).

LOST JOB? CAN'T WORK?

People who lose their jobs due to a disaster may apply for Disaster Unemployment Assistance (DUA). DUA provides weekly benefits to unemployed individuals who are not eligible for regular insurance compensation. Unemployment Insurance (UI) claims, including claims for Disaster Unemployment Assistance (DUA), can be filed online, by phone, by mail, or by fax.

To file a claim by phone,
English: 1-800-300-5616
TTY: 1-800-815-9387
Online: www.edd.ca.gov

NEED LEGAL HELP?

Local non-profits often give legal assistance to people who have been impacted by disasters. Local members of the American Bar Association offer free legal counseling to low income individuals. You can get more info at a Local Assistance Center or Disaster Recovery Center that is set up after the President declares a major disaster.

American Red Cross

The American Red Cross and other volunteer agencies set up shelters for people who cannot return to their homes. These volunteer agencies will provide food, water, and clothing to the best of their ability. Listen to or watch local news for distribution locations.

Visit www.redcross.org to find the nearest shelter, reconnect with family members, or donate blood after a disaster. CPR training and other classes available to stay prepared!

SAFE & WELL?

The American Red Cross Safe and Well website is a central location for people in disaster areas in the Los Angeles and the United States to register their current status, and for their loved ones to access that information.

The Safe and Well website: safeandwell.communityos.org
It is easy to use and is available 24 hours a day, 365 days a year and is accessible in both English and Spanish.

SCHOOL SAFETY

BEFORE SCHOOL

If schools cannot open due to unsafe reasons, school staff may declare a school closure.

The school district will notify media to announce necessary closures. Automated phone calls, emails, or text alerts may also be received.

DURING SCHOOL HOURS

Students will be released to adults listed on their emergency card. Keep this contact information updated regularly.

If a disaster occurs during the school day, students will be sheltered and cared for at school. Parent pickup may be delayed.

Notification will be made to school staff if road conditions prevent or delay safe access to or from school.

EMERGENCY SCHOOL EVACUATIONS

Students may be relocated if flooding or fires occur. If destruction of facilities occur, site will be evacuated.

A site evacuation may occur. Students may be relocated to s a safe zone by walking to another site as not all schools have buses.

TIP: Keep your emergency contact information updated with school. Know the school's emergency plans, and emergency relocation sites.

PLACE OF WORSHIP

ENSURE THAT YOUR PLACE OF WORSHIP IS PREPARED FOR A MAJOR DISASTER.

Prepare to help other members of your community as the facility may be used as a shelter.

Plan for building evacuations with clear exits.

Prepare to help your congregation after a disaster.

Train staff in disaster readiness and response.

Prepare for a disaster with emergency supplies.

Identify additional threats including hate crimes, terrorism, and arson fires.

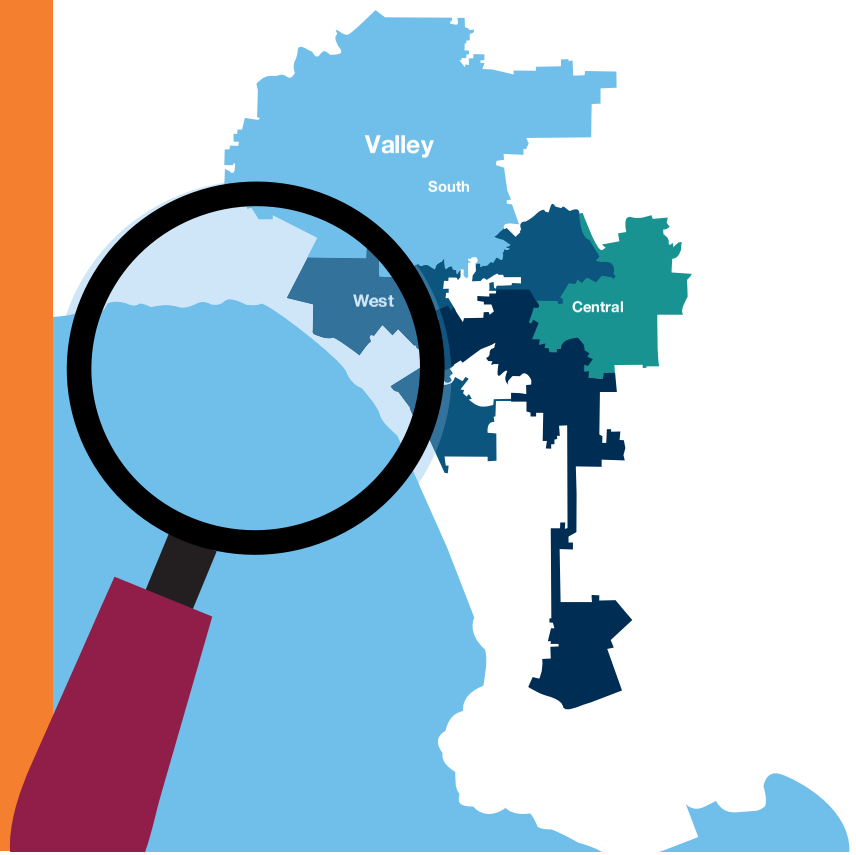
RECOVERY

24/7 Emergency Service

CITY OF LOS ANGELES CONTACTS

Department of Aging		1-800-510-2020
Department of Animal Services	www.laanimalservices.com	1-888-452-7381
Department of Building & Safety	www.ladbs.org/LADBSWeb/services-permit.jsf	(311) (TDD) 1-213-473-3231
Department on Disability	1-213-202-2764	(TDD) 1-213-202-3452
FIRE & POLICE Department: EMERGENCIES ONLY		DIAL (911)
DigAlert	www.digalert.org (811)	Information (411)
General Information	www.lafd.org www.lapdonline.org	1-213-978-3820/ 1-877-275-5273
Emergency Management Department	www.emergency.lacity.org	1-213-484-4800
Department of Water & Power	www.ladwp.com	1-800-342-5397
LA Sanitation Sewer/ Storm Drain Problem		
Storm Damage/ Mud Slide Reports		1-800-773-2489
Trees Down/ Debris Removal		1-800-996-2489
Recs & Parks		1-213-202-2700
Voluntary Organizations Active in Disaster (VOAD)	www.ENLA.org	1-703-778-5088
Street Lights	1-323-913-4744	1-213-485-4184
Traffic Signals		1-818-374-4823
Southern California Gas Company	www.socalgas.com	1-800-427-2200
United Policyholders	www.uphelp.org	1-415-393-9990
California Volunteers (donations/volunteers)	californiavolunteers.ca.gov	1-916-323-7646
American Red Cross	www.redcross.org	1-800-733-2767
The Salvation Army	www.salvationarmy.org	1-800-725-2769

RESOURCES



OFFICE OF THE MAYOR

mayor.lacity.org
213-978-0600

COUNCIL DISTRICTS

To find your Council District go to: www.lacity.org

Council District 1	213 473-7001	Council District 9	213 473-7009
Council District 2	213 473-7002	Council District 10	213 473-7010
Council District 3	213 473-7003	Council District 11	213 473-7011
Council District 4	213 473-7004	Council District 12	213 473-7012
Council District 5	213 473-7005	Council District 13	213 473-7013
Council District 6	213 473-7006	Council District 14	213 473-7014
Council District 7	213 473-7007	Council District 15	213 473-7015
Council District 8	213 473-7008		

EMERGENCY MANAGEMENT DEPARTMENT

www.emergency.lacity.org
(213) 484-4800
emdcommunications@lacity.org

The Emergency Management Department has five divisions comprised of administrative staff and specialists that work with City departments, municipalities and an array of community-based organizations to ensure that the City and its residents have the resources and information they need to prepare, respond, and recover from emergencies, disasters and significant events.

LOS ANGELES FIRE DEPARTMENT

The Los Angeles City Fire Stations have sandbags available in the event of pending major storms and storm emergencies. A limit of 25 burlap bags are available to each household. Property owners and residents should not solely rely on these sources, as high demand may rapidly strap resources and create spot shortages.

FIRE STATIONS IN LA CITY (ordered by zip code)

ZIP CODE	ADDRESS	PHONE NUMBER	FIRE STATION
90002	1801 E. Century Boulevard, Los Angeles	(213) 485-6265	65
90003	6406 S. Main Street, Los Angeles	(213) 485-6233	33
90004	326 N. Virgil Avenue, Los Angeles	(213) 485-6206	6
90006	2401 W. Pico Boulevard Los Angeles	(213) 485-6213	13
90007	3000 S. Hoover Street, Los Angeles	(213) 485-6215	15
90010	4029 W. Wilshire Boulevard, Los Angeles	(213) 485-6229	29
90011	3401 S. Central Avenue, Los Angeles	(213) 485-6214	14
90011	1192 E. 51st Street, Los Angeles	(213) 485-6221	21
90012	108 N. Fremont Avenue, Los Angeles	(213) 485-6203	3
90012	450 E. Temple Street, Los Angeles	(213) 485-6204	4
90014	430 E. 7th Street, Los Angeles	(213) 485-6209	9
90015	1335 S. Olive Street, Los Angeles	(213) 485-6210	10
90016	4470 Coliseum Street, Los Angeles	(213) 485-6294	94
90018	2009 S. Western Avenue, Los Angeles	(213) 485-6226	26
90018	3661 S. 7th Avenue, Los Angeles	(213) 485-6234	34
90019	5023 W. Washington Boulevard, Los Angeles	(213) 485-6268	68
90021	1601 S. Santa Fe Avenue, Los Angeles	(213) 485-6217	17
90023	2927 E. Whittier Boulevard, Los Angeles	(213) 485-6225	25
90024	107S Beverly Glen Boulevard, Los Angeles	(310) 575-8571	71
90024	1090 S. Veteran Avenue, Los Angeles	(310) 575-8537	37
90026	2144 W. Sunset Boulevard, Los Angeles	(213) 485-6220	20
90027	1601 Hillhurst Avenue, Los Angeles	(213) 485-6235	35
90028	5769 Hollywood Boulevard, Los Angeles	(213) 485-6282	82
90028	1327 N. Cole Avenue, Los Angeles	(213) 485-6227	27
90029	4957 Melrose Avenue, Los Angeles	(213) 485-6252	52
90031	2230 Pasadena Avenue, Los Angeles	(213) 485 6201	1
90032	2011 N. Eastern Avenue, Los Angeles	(213) 485-6216	16
90032	4575 Huntington Dr. South, Los Angeles	(213) 485-6247	47
90033	1962 E. Cesar Chavez Avenue, Los Angeles	(213) 485-6202	2
90034	3690 S. Motor Ave., Los Angeles	(310) 840-2143	43

ZIP CODE	ADDRESS	PHONE NUMBER	FIRE STATION
90035	1556 S. Robertson Boulevard, Los Angeles	(213) 485-6258	58
90036	5821 W. 3rd Street, Los Angeles	(213) 485-6261	61
90037	4370 S. Hoover Street, Los Angeles	(213) 485-6246	46
90039	2759 Rowena Avenue, Los Angeles	(213) 485-6256	56
90041	2021 Colorado Boulevard, Los Angeles	(213) 485-6242	42
90041	4455 E. York Boulevard, Los Angeles	(213) 485-6255	55
90042	5921 N. Figueroa Street, Los Angeles	(213) 485-6212	12
90044	7800 S. Vermont Avenue, Los Angeles	(213) 485-6257	57
90045	6911 World Way West, Los Angeles	(310) 978-2180	80
90045	10010 International Road, Los Angeles	(213) 485-6295	95
90045	10435 Sepulveda Boulevard, Los Angeles	(213) 485-6251	51
90045	8900 S. Emerson Avenue, Los Angeles	(213) 485-6205	5
90046	8021 Mulholland Drive, Los Angeles	(818) 756-8697	97
90046	1439 N. Gardner Street, Los Angeles	(213) 485-6241	41
90047	1909 W. Slauson Avenue, Los Angeles	(213) 485-6266	66
90049	16500 Mulholland Drive, Los Angeles	(818) 756-8609	109
90049	12229 Sunset Boulevard, Los Angeles	(310) 575-8519	19
90057	1819 W. 7th Street, Los Angeles	(213) 485-6211	11
90061	10811 S. Main Street, Los Angeles	(213) 485-6264	64
90064	10556 W. Pico Boulevard, Los Angeles	(310) 840-2192	92
90064	11505 W. Olympic Boulevard, Los Angeles	(310) 575-8559	59
90065	1410 W. Cypress Avenue, Los Angeles	(213) 485-6244	44
90065	3036 Fletcher Drive, Los Angeles	(213) 485-6250	50
90066	11970 W. Venice Boulevard, Los Angeles	(310) 397-2662	62
90068	3111 N. Cahuenga Boulevard, West Los Angeles	(213) 485-6276	76
90094	5451 Playa Vista Drive, Los Angeles	(310) 862-2844	67
90210	14145 Mulholland Drive, Beverly Hills	(818) 756-8699	99
90210	12520 Mulholland Drive, Beverly Hills	(818) 756-8608	108
90247	18030 S. Vermont Avenue, Gardena	(310) 548-7579	79
90272	17281 Sunset Boulevard, Pacific Palisades	(310) 575-8523	23
90272	15045 Sunset Boulevard, Pacific Palisades	(310) 575-8569	69
90291	1930 Shell Avenue, Venice	(310) 575-8563	63
90710	1331 W. 253rd Street, Harbor City	(310) 548-7585	85
90731	2945 S. Miner Street (Berth 44A), San Pedro	(310) 548-7545	110
90731	1444 S. Seaside Ave (Berth 256),Terminal Island	(310) 548-7541	111
90731	444 S. Harbor Boulevard (Berth 86), San Pedro	(310) 548-7542	112
90731	330 Ferry Street, Terminal Island	(310) 548-7540	40
90731	1601 S. Grand Avenue, San Pedro	(310) 548-7548	48
90732	1414 W. 25th Street, San Pedro	(310) 548-7501	101
90732	1005 N.Gaffey Street, San Pedro	(310) 548-2836	36
90744	124 E. "I" Street, Wilmington	(310) 548-7538	38
90744	400 Yacht Street (Berth 194), Wilmington	(310) 548-7549	49
91040	9411 Wentworth Street, Sunland	(818) 756-8624	24
91042	7777 Foothill Boulevard, Tujunga	(818) 756-8674	74
91303	6811 De Soto Avenue, Canoga Park	(818) 756-8672	72
91304	23004 Roscoe Boulevard, West Hills	(818) 756-8606	106
91306	8349 Winnetka Avenue, Winnetka	(818) 756-8604	104
91311	21800 Marilla Street, Chatsworth	(818) 756-8696	96
91311	20225 Devonshire Street, Chatsworth	(818) 756-8607	107
91316	4960 Balboa Boulevard, Encino	(818) 756-8683	83
91324	11351 Tampa Avenue, Northridge	(818) 756-8668	8
91324	9861 Reseda Boulevard, Northridge	(818) 756-7670	70
91325	18143 Parthenia Street, Northridge	(818) 756-8603	103
91326	11641 Corbin Avenue, Northridge	(818) 756-9728	28
91331	13035 Van Nuys Boulevard, Pacoima	(818) 756-8698	98
91335	7419 Reseda Boulevard, Reseda	(818) 756-8673	73
91340	15345 San Fernando Mission, Mission Hills	(818) 756-8675	75
91342	14430 Polk Street, Sylmar	(818) 756-8691	91
91343	10124 Balboa Boulevard, North Hills	(818) 756-8687	87
91344	12050 Balboa Boulevard, Granada Hills	(818) 756-8618	18
91352	9224 N. Sunland Boulevard, Sunland	(818) 756-8677	77
91356	19059 Ventura Boulevard, Tarzana	(818) 756-8693	93
91364	6345 Fallbrook Avenue, Woodland Hills	(818) 756-8605	105
91367	21050 W. Burbank Boulevard, Woodland Hills	(818) 756-8684	84
91401	13200 Burbank Boulevard, Van Nuys	(818) 756-8602	102
91401	14415 Sylvan Street, Van Nuys	(818) 756-8639	39
91402	14355 W. Arminta Street, Panorama City	(818) 756-8681	81
91402	14630 Plummer Street, Panorama City	(818) 892-4807	7
91403	5101 N. Sepulveda Boulevard, Sherman Oaks	(818) 756-8688	88
91406	7921 Woodley Avenue, Van Nuys	(818) 756-8690	90
91406	6751 Louise Avenue, Van Nuys	(818) 756-8600	100
91601	5320 Tujunga Avenue, North Hollywood	(818) 756-8660	60
91602	4305 Vineland Avenue, North Hollywood	(818) 756-8686	86
91604	4041 Whitsett Avenue, Studio City	(818) 756-8678	78
91605	7063 Laurel Canyon Boulevard, North Hollywood	(818) 756-8689	89

My local fire station is... _____

(write in pencil)

"The Los Angeles Fire Department is dedicated to saving lives, fighting fires, safety and prevention, and building communities."

For more fire department information visit www.lafd.org

THE LOS ANGELES POLICE DEPARTMENT

MAKE THE RIGHT CALL

9-1-1

- 911 is for **EMERGENCIES ONLY**
- An emergency is a situation that threatens human life or property and demands immediate attention.

EXAMPLES:
Robberies, violent assaults, significant car collisions, serious medical injuries, or fire emergencies

3-1-1

- 311 is for **NON-EMERGENCIES**
- It is designed to help reduce the number of non-emergency calls to 911 operators.

EXAMPLES:
City services and programs, animal services, child care, permits and licenses, utilities, street repairs, or community disturbances

REPORTING SUSPICIOUS ACTIVITY

To report suspicious activity, contact your local law enforcement agency. Describe specifically what you observed, including:

- Who or what you saw
- When you saw it
- Where it occurred
- Why it's suspicious

1-877-A-THREAT
(1-877-284-7328)
www.iWATCHLA.org
www.JIRC.org

For all other non-emergency calls for service, please telephone:

Non-Emergency Information Line
Toll Free 877-ASK-LAPD
(1-877-275-5273)

Spanish Line (Español)
213-928-8222

COMMUNITY POLICE STATIONS IN LA CITY

For general information or assistance, visit or call your local Community Police Station at any of our 21 geographic areas Citywide:

POLICE STATION	ADDRESS	PHONE NUMBER	ZIP CODE
77th	7600 Broadway, Los Angeles	(213) 485-4164	90003
Olympic	1130 S. Vermont, Los Angeles	(213) 382-9102	90006
Newton	3400 S. Central Avenue, Los Angeles	(323) 846-6547	90011
Central	251 E. Sixth Street, Los Angeles	(213) 833-3707	90014
Rampart	1401 W. Sixth Street, Los Angeles	(213) 484-3400	90017
Wilshire	4861 W. Venice Boulevard, Los Angeles	(213) 473-0476	90019
West Los Angeles	1663 Butler Avenue, Los Angeles	(310) 444-0701	90025
Harbor	2175 John S. Gibson Blvd, San Pedro	(310) 726-7700	90731
Hollywood	1358 N. Wilcox, Hollywood	(213) 972-2971	90028
Hollenbeck	2111 E. First Street, Los Angeles	(323) 342-4100	90033
Southeast	145 W. 108th Street, Los Angeles	(213) 972-7828	90061
Southwest	1546 W. Martin Luther King Blvd, Los Angeles	(213) 485-2582	90062
Northeast	3353 San Fernando Road, Los Angeles	(323) 561-3211	90065
Pacific	12312 Culver Boulevard, Los Angeles	(310) 482-6334	90066
Topanga	21501 Schoenborn Street, Canoga Park	(818) 756-4800	91304
Devonshire	10250 Etiwanda Avenue, Northridge	(818) 832-0633	91325
Foothill	12760 Osborne Street, Pacoima	(818) 756-8861	91331
West Valley	19020 Vanowen Street, Reseda	(818) 374-7611	91335
Mission	11121 Sepulveda Blvd, Mission Hills	(818) 838-9800	91345
Van Nuys	6240 Sylmar Avenue, Van Nuys	(818) 374-9500	91401
North Hollywood	11640 Burbank Boulevard, North Hollywood	(818) 623-4016	91601

TRAFFIC DIVISIONS IN LA CITY

TRAFFIC DIVISONS	ADDRESS	PHONE NUMBER	ZIP CODE
South	4125 S. Crenshaw Boulevard. Los Angeles	(323)-421-2577	90008
Central	251 East 6th Street. Los Angeles	(213)-833-3746	90014
West	4849 W. Venice Boulevard. Los Angeles	(213)-473-0222	90019
Valley	7870 Nollan Place. Panarama City	(818)-644-8000	91402

My local police station is... _____
(write in pencil)

"To Protect and To Serve"

For more police department information visit www.lapdonline.org

GET HELP.

Where can I find information about...

Animal services	LA Department of Animal Services	888-452-7381 www.laanimalservices.com
Buildings and safety	LA Department of Building & Safety	311 www.ladbs.org
Blood donations	American Red Cross	310-445-9900 www.redcross.org
Disaster recovery assistance	U.S. Department of Homeland Security	www.disasterhelp.gov
Disease control	CDC - Centers for Disease Control and Prevention	800-232-4636 www.cdc.gov
Earthquake information	U.S. Geological Survey	www.quake.usgs.gov
Environmental disasters	U.S. Environmental Protection Agency	www.epa.gov/ebtpages/emergencies.html
Exposure to toxic substances	Poison Control Center	800-222-1222 www.aapcc.org/DNN
Health and human services	211 LA County	211 www.211lacounty.org
Loan and grant information	U.S. Small Business Administration	800-659-2955 www.sba.gov
Reports for outages	LADWP - LA Department of Water and Power	800-342-5397 www.ladwp.org
School districts in LA	LAUSD - LA Unified School District	213-241-4500 www.lausd.net
Underground services	Dig Alert	811 www.digalert.org
Weather information	National Oceanic Atmospheric Administration	www.noaa.gov

Take time to record important contact information for members of your household as well as insurance information. *(write in pencil)*

HOME INFORMATION

Home Address: _____

Home Phone Number: _____

Cell Phone Number: _____

House Color: _____

Landmarks: _____

EMERGENCY INFORMATION

CONTACTS	NAME	LOCATION	PHONE NUMBER
In-State Contacts:			
Primary			
Secondary			
Out-of-State Contacts:			
Primary			
Secondary			
Hospitals Near:			
Home			
Work			
School			
Neighbor			
Family Physician			
Other Doctor			
Dentist			
Employer/Office			
School			
Vet			
Religious Organization			
My Fire Station			
My Police Station			
Poison Control			

INSURANCE INFORMATION

Medical Insurance: _____ Phone: _____

Policy Number: _____

Home Insurance: _____ Phone: _____

Policy Number: _____

Auto Insurance: _____ Phone: _____

Policy Number: _____

EMERGENCY PREPAREDNESS GUIDE

SPECIAL THANKS

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PROJECT MANAGER/DESIGNER:
Kat Hawley

LEAD GRAPHIC DESIGN TEAM:
Damian Aragon, Trixy Arias, Crystal Flores, Mark Llavore, Isabelle Lussier, Alexandra Menchaca, Anthony Phillips, Jose Ramos, & Monica Santoso

CREATIVE DIRECTOR:
Paula DiMarco, Ph.D

LAFD PROJECT MANAGER:
John Ignatczyk

CONTRIBUTING DESIGNERS:
Gabriela Alvarado, Emily Asprer, Samantha Barrios, Christian Becerra, Karin Boghoskhanian, Giovanni Castaneda, Charmaine Castillo, Liliana Del Cid, Manuel Doradea, Kyleigh Fontenot, Kristine Giron, Naomi Goodman, Brittney Gomez, Silvia Gomez, Gevorg Grigorian, LorrieJane Guinto, Calvin Han, Kyle Johnson, Xavier Oden, Stephanie Orozco, Swaay Ordonez, Kaitlyn Poyer, Andy Lai, Denna Madain, Jessica Martinez, Arman Minasian, Marvin Medrano, Atieh Salemi, Disa Sanz, Dalton Turner, Maria Villalobos, Sue Won, Mei Zhao, & Ronen Zur.

IMPACT DESIGN HUB

CSUN | MIKE CURB COLLEGE OF ARTS, MEDIA, AND COMMUNICATION

Students and faculty from CSUN Impact DesignHub worked collaboratively with the Los Angeles Fire Department using design-thinking strategies to produce the Emergency Preparedness Guide. For more information on Impact DesignHub, visit: csunDesignHub.org

For more fire department information
Visit www.lafd.org

THIS GUIDE

For assistance with this guide, and its content for public use, please contact the Los Angeles Fire Department Homeland Security Division, Disaster Preparedness Officer at 213-202-3136.

LAFD FOUNDATION

For donations to the Los Angeles Fire Department Foundation 501(c)3 visit:

supportLAFD.org
310-552-4139
info@supportlafd.org

FACEBOOK

LosAngelesFireDepartment

TWITTER

@lafd *(incident alerts)*
@lafdtalk *(casual conversation and inquiries)*

INTAGRAM

losangelesfiredepartment

FLICKR

photos/lafd/

www.lafd.org

www.lacity.org

PREPARED NEIGHBORS

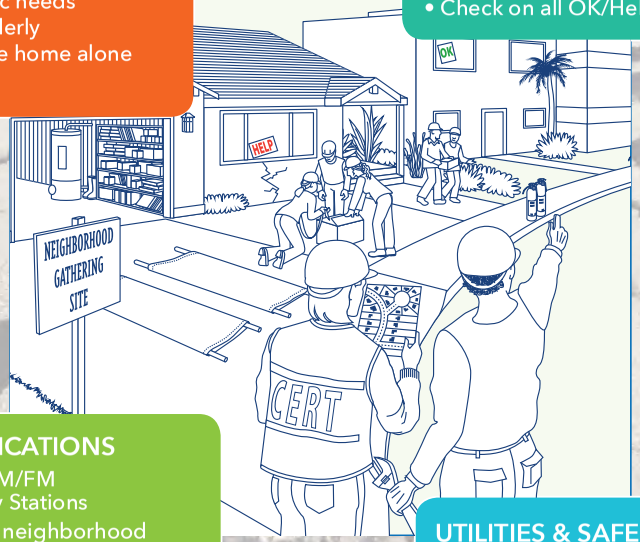
RESPONDING TOGETHER IN THE FIRST HOUR FOLLOWING DISASTER

CARE & SHELTERING

Care for neighbors:
- With specific needs
- Who are elderly
- Who may be home alone
- With pets

SEARCH & AID

- Conduct a door-to-door check
- Provide aid to those in need
- Check on all OK/Help cards



COMMUNICATIONS

- Listen to AM/FM Emergency Stations
- Establish a neighborhood communication system

UTILITIES & SAFETY

- Shut off leaking natural gas
- Reduce the threat of fire
- Rope off hazards (downed power lines, broken glass, etc.)

IT TAKES JUST ONE PERSON TO START, & A SINGLE 90-MINUTE MEETING.

Our proven materials make this easy!

CONTACT US FOR:

- The materials
- A neighborhood map
- A meeting facilitator

CITY of LOS ANGELES
EMERGENCY MANAGEMENT DEPARTMENT
"IN OMNIA PARATUS"

To learn more, contact EMD

Online:
www.emergency.lacity.org

Phone:
(213) 484-4800

Email:
emd.emdweb@lacity.org

NEIGHBORHOOD
DISASTER PREPAREDNESS

READY YOUR LA NEIGHBORHOOD

CITY of LOS ANGELES
EMERGENCY MANAGEMENT DEPARTMENT
"IN OMNIA PARATUS"

featuring
MYN Map Your Neighborhood

To organize your neighborhood for disaster—

BEGIN HERE

WHY NEIGHBORHOODS?

Disasters overwhelm 9-1-1 emergency responders (medics, fire, & police). If you have a crisis—say a loved one is seriously injured—your best source of help will be your neighbors.

PLAN

THE GOLDEN HOUR:

The first 60 minutes following disasters are golden—for saving lives, reducing the severity of injuries, and decreasing property damage.

HOW BIG SHOULD MY NEIGHBORHOOD BE?

The size is determined by the **Golden Hour.**

Experience shows the ideal size for neighborhoods is:

Single-Family: 15–20 houses

Vertical Neighborhood: the entire building

Less-Populated Neighborhood: 5–7 houses

Write your specific neighborhood boundaries here:

(For example: 1400–1498 Palm Blvd., Emergency Management Department [EMD] will need this information to prepare the map for your meeting).

_____

_____

CONNECT

CONTACT EMD

emd.emdweb@lacity.org, (213) 484-4800

- EMD will help you choose a meeting date, and will assign a facilitator to help you.
- Be ready to give EMD your neighborhood boundaries so they can prepare your neighborhood map.
- EMD will provide free materials:
  - Meeting invitations
  - Neighborhood Response Plans
  - OK/Help Cards
  - Maps of your neighborhood

INVITE YOUR NEIGHBORS

KEYS FOR SUCCESS:

- Hold a meeting at a home in your neighborhood.
- *Invite your neighbors in person.* Use the provided written invitation as a meeting reminder. A personal invite makes all the difference in encouraging your neighbors to come.
- Ask a neighbor or two to help you do the inviting.

MEET

HOLD A MYN (Map Your Neighborhood) MEETING

A 90-minute meeting teaches you what to do in the critical first hour following disasters.
You will:

- Learn the Neighborhood Response Plan.
- Complete a Skills & Equipment Inventory.
- Complete a Neighborhood Contact List, including neighbors with disabilities, those who are elderly, and homes with pets.
- Plan to conduct a walk-through in your neighborhood.

All will leave the meeting with:

- A Neighborhood Response Plan
- A neighborhood map
- An OK/Help card

AFTER YOUR MEETING

emd.emdweb@lacity.org, (213) 484-4800

- Schedule your neighborhood exercise as soon as possible by contacting EMD.

PREPARE

HOLD YOUR NEIGHBORHOOD EXERCISE

- Practice the Neighborhood Response Plan.
- Complete the Neighborhood Map by plotting the exact locations of all the natural gas meters.
- Discuss the neighborhood response to different disaster scenarios.

Already using MYN in your neighborhood?

Excellent!
Contact EMD to schedule your neighborhood exercise and to learn about other elements of preparedness in the RYLAN program.

www.emergency.lacity.org
(213) 484-4800

READY YOUR LA NEIGHBORHOOD

Welcome to the City of Los Angeles
Emergency Management Department (EMD)
Ready Your LA Neighborhood (RYLAN) Program. RYLAN is designed to help you, your family, and your neighborhood prepare for disaster. There are a variety of things you can do to increase your readiness.
For more information, visit us at emergency.lacity.org

PREPARE

Preparing yourself, your loved ones, and your home reduces the serious impacts of disaster. Many activities are free of cost and take only minutes. Contact EMD to learn how simple actions can save a life and reduce damage.

ORGANIZE

Hold a Map Your Neighborhood (MYN) meeting. You and your neighbors will create a Response Plan. You will learn what to do in the first hour of a disaster response. Contact EMD for program materials and a meeting facilitator.

PRACTICE

Disasters can overwhelm the capacity of 9-1-1. Neighbors become your best source of help. Your confidence as responders will increase as you practice using your Response Plan. Contact EMD to schedule your practice exercise.

CONNECT

Sign up for the City's emergency notification program, **Notify LA.** When disasters occur, the City will alert you with specific instructions on what to do.
Text READY to 888-777 to sign up.

COMMUNICATE

You and your neighbors will want to communicate with each other, other neighborhoods, and the City responders during a disaster. Contact EMD to learn how.

TRAIN

Enroll in preparedness training classes, such as Level 1 CERT, First Aid, CPR, Amateur Radio, Active Shooter, Stop the Bleed, etc. to enhance your readiness skills. Contact EMD to learn of the training opportunities available in your area.

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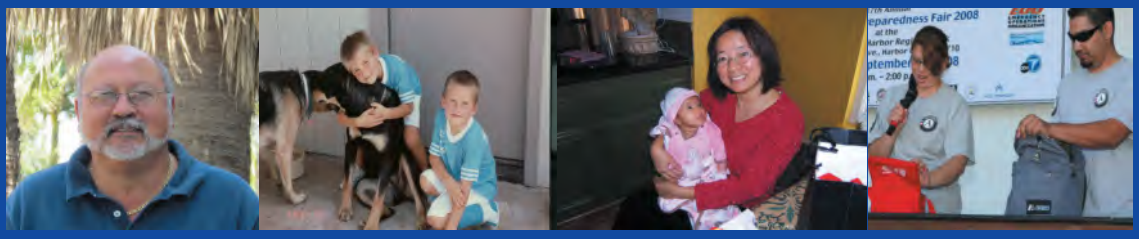
September 2017

WHO WILL YOU HELP?
ONCE IT HAPPENS…
IT'S TOO LATE!



A COMPREHENSIVE GUIDE TO FAMILY and HOME PREPAREDNESS

CITY OF LOS ANGELES
EMERGENCY MANAGEMENT DEPARTMENT
200 NORTH SPRING STREET, ROOM 1533
LOS ANGELES, CALIFORNIA 90012
(213) 978-2222 TTY (213) 978-0463
www.readyla.org

WHO WILL YOU HELP? ONCE IT HAPPENS...IT'S TOO LATE !

TABLE OF CONTENTS

An emergency can happen quickly and often without warning. In a major disaster (emergency) it may take several days for vital services to be restored.

Are you and your family prepared to survive for at least 72 hours without the comforts of home?

In Los Angeles, you are most likely to experience an earthquake. If you can prepare your family for a major earthquake, you will be prepared for most disasters.

WHO WILL YOU HELP? ONCE IT HAPPENS...IT'S TOO LATE !

Having a plan is one of the most important steps you can take in disaster preparedness. Knowing what to do and how to do it can help you and your family manage disasters with less worry, fear, and uncertainty.

Who Will You Help? Once It Happens…It's Too Late!

Commit a weekend to updating telephone numbers, buying, finding and collecting survival supplies, especially any personal items needed to sustain life. Always review your emergency plan with everyone.

The purpose of this City of Los Angeles Family Preparedness Guide is to show you and your family how to prepare and recover for disasters.

This guide has been prepared by the City of Los Angeles, Emergency Management Department, (EMD). EMD coordinates the emergency preparedness and planning of all City departments, over four million residents, and over 400,000 businesses residing within our 475 square miles. During major emergencies and disasters, we coordinate the response, mitigation and recovery efforts.

MAKE A FAMILY PLAN

Family Meeting

Who Will You Help? Once It Happens…It's Too Late!

The purpose of a family meeting is to inform and educate family members, including children, seniors and family members with disabilities. Having a plan is one of the most important steps you can take in disaster preparedness. Knowing what to do and how to do it can help you and your family manage disasters with less worry, fear, and uncertainty.

All Family Members need to know the following:

- The location of your Survival Supplies (page 5).
- The location of the "GO BAGS" (page 10).
- Draw a map of the house. Locate doors and windows that can be used as evacuation routes.
- Identify two evacuation routes from each room.
- Practice your evacuation routes.
- Determine a meeting place outside of your residence, in case it is unsafe to remain indoors.
- Do not meet on the roof.
- Determine one location outside your neighborhood in case of evacuation.
- Keep gas tank half full at all times. Gas might not be available after a disaster.
- Determine the out of state contacts. Family members should be instructed to call them in event of emergency. Local calls may be difficult to place.

MAKE A FAMILY PLAN

- Practice your Drop, Cover & Hold-On (Earthquake) and Stop, Drop & Roll (Fire).
- Teach each member of your family how to use a fire extinguisher.
- Create emergency cards for each of your family members (page 15).
- Locate utilities: Determine how to turn them off and with what tools? Do not turn the gas back on by yourself.

Gas On /Off valve

Water Shut-Off

Electric Breaker Panel

PREPARE AND PLAN WITH CHILDREN

A child that is knowledgeable of the information below will feel more in control during a crisis situation. Check off the boxes after you have talked with your children about this information.

	Include children in discussions and planning for emergency safety.
	Know two escape routes from your residence and from each room.
	Designate primary meeting areas and alternate meeting areas in case of an evacuation.
	Be alert for unusual or strange smells. Alert an adult.
	Never touch fallen poles or wires.
	In case of separation, children should know their family's personal information such as: How to spell their full name, their parents' names, their phone numbers, address, and other appropriate information.
	Every family member should have an "emergency card" which includes information above plus out-of-state contact.
	Know how to contact out of state contact?

PREPARE AND PLAN WITH CHILDREN	
	Know how and when to dial 911.
	Practice Role-playing what to tell the 911 dispatcher.
	Practice Role-playing what to do when a parent or caregiver becomes suddenly ill or injured.
	Rehearse Drop, Cover, and Hold-On (Earthquake)
	Rehearse Stop, Drop and Roll (Fire)
	Notify your children's school of address changes, phone numbers, and authorized persons to pick up children.
	Find out the emergency procedures of your child's school

SURVIVAL SUPPLIES

Survival Supplies are different from a First Aid Kit.
A First Aid Kit is *part* of Survival Supplies.

Survival Supplies can be stored in a large watertight container that is easily moveable, like a trash can with wheels. Food and water should be replenished after expiration dates.

There are many items on the list below. Think about situations unique to your family. It is important to recognize the significance of each item.

<u>You may know where these items are throughout the house</u>, but in the event of an emergency, there is no time to gather all the items. Family members should know the location of the Survival Supplies.

SURVIVAL SUPPLIES		
	Item	**How much and why?**
	Water	1 gallon/person/day for seven days. People can become dehydrated quickly, even in cold weather.
	Food and Utensils	3 days supply of non-perishables: canned meat, fruit and vegetables, cereal, peanut butter, manual can opener, sharp knife utensils, plates, paper towels.
	Battery operated or Hand-Crank Radio	Use AM Radio. Listen to KNX 1070 AM, KFWB 980 AM, and KFI 640 AM radio stations for regional emergency alert information for Los Angeles County.
	Flashlight(s)	Batteries should be inserted at time of emergency. Flashlight in rooms could have batteries already inserted.
	First Aid Kit	Can be purchased at local pharmacy. You can attend to the immediate first aid needs of your family, including bleeding and burn relief. Look for instructions inside the First Aid Kit.
	Whistle	1 whistle to signal for help.
	Duct-Tape; Plastic Sheeting; Dust Mask	Duct tape is versatile. Plastic sheeting and duct tape can be used as a shelter-in-place barrier. Mask is for blocking contaminants

SURVIVAL SUPPLIES		
	Sanitation/ Toiletries	Toothbrush, toothpaste, toilet paper, moist wipes, large garbage bags and shovel for waste disposal.
	Shut-off wrench, pliers	Know where the gas shut-off is. Turn off only in an emergency.
	Local Maps	You should be familiar with evacuation routes.
	Clothes	2 sets of clothes, undergarments, socks, comfortable, but sturdy shoes. Babies may need more.
	Blankets/ Sleeping Bags	Enough to cover family member for warmth and comfort.
	Medication	1 week supply. Instant cold packs for refrigerated medications since you may not have access to refrigeration.
	Consumable Medical Supplies	Enough to cover family members needs for up to 7 days.
	Durable Medical Equipment	Be sure to have an additional DME if possible, i.e., extra cane, manual wheelchair, etc.
	Matches	Stored in a water-proof container. Water-proof matches can be purchased at camping supply stores.

SPECIAL FAMILY SITUATIONS

Things to consider: These may not apply to your family situation.

BABY NEEDS

- Formula
- Diapers
- Bottles
- Powdered milk
- Medications
- Baby wipes
- Diaper rash ointment

MEDICAL NEEDS

Ask your doctor about storing prescription medications such as:

- Heart and high blood pressure medication
- Insulin and other prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eye glasses
- Durable medical equipment

People with Disabilities and Other Access with Functional Needs

- Do you know where the meeting place is? Does anyone need mobility assistance?
- Think about what modes of transportation you use and what alternative modes could serve as back-ups.
- If you require accessible transportation be sure your alternatives are also accessible.
- Make a communications plan: Who is the out-of-state contact to be notified?
- A week's supply of any medications, discuss with doctor about an emergency situation.

SPECIAL FAMILY SITUATIONS

People with Disabilities and Other Access with Functional Needs

- If routine medical treatments are administered at a clinic or at home, develop a plan with the health practitioner for emergency events.
- If you have tools or aids specific to your disability, plan how you would cope without them. For example, if you use a communication device, mobility aid, or rely on a service animal, what will you do if these are not available?
- If you are dependent on life-sustaining equipment or treatment such as oxygen or dialysis, find out from the provider how these can be administered in times of emergency.
- For every aspect of your daily routine, plan an alternative procedure. Make a plan and write it down. Put the plan in an envelope and place it with your Survival Supplies.

PLANNING FOR YOUR PET AND SERVICE ANIMAL

Part of your Family Plan should include your family pet and service animal. Having a plan for them will reduce stress that often occurs following an emergency.

Decide in advance how you will take care of your pet if you are not home and cannot get to them after an emergency. Can you make plans with the neighbors?

Service animals are permitted at all City of Los Angeles facilities providing assistance to people affected by a disaster/emergency. City staff will assist pet owners with sheltering their pets, if necessary.

Water	7 days supply; 1-2 ounces of water per pound of body weight of dog/cat. Water intake can be higher/lower depending on the age of the animal, exercise level. This is separate from the human supply of water.
Food	7 days supply in an airtight and waterproof container

PLANNING FOR YOUR PET AND SERVICE ANIMAL

Medicines, medical records and other essential documents	An extra supply of medicine that the animal regularly takes. Also adoption papers, medical and vaccination records should be included. Consider getting a permanent ID, like microchip ID.
Collar with ID, harness or leash	Your pet should be wearing an ID tag at all times. You should keep an extra leash/ harness and ID tag in Emergency Kit.
Crate or pet carrier	A sturdy crate or carrier will aid a safe evacuation for your pet. It should be big enough for the pet to sit, turn around, and lie down.
Sanitation	Plastic bags; litter box; household bleach for disinfecting
Picture of you and pet/service animal	In the event of separation, a picture can ease the reunion process.
Familiar Items	Toys, treats, or familiar bedding to reduce stress.

PET and SERVICE ANIMAL SURVIVAL SUPPLIES

For additional information please visit these sites:

- http://www.laanimalservices.com
- http://www.ready.gov/animals

HOME HAZARD HUNT

According to a study from the University of California in Los Angeles (UCLA), **55% of the injuries** during the 1994 Northridge earthquake were **caused by falling furniture or objects**.

Many of these injuries could have been prevented through actions taken before the earthquake.

As a family, go around your residence and identify areas that need to be secured or repaired. Here is a suggested checklist.

Not all items will apply to your household.

	Securely fasten or RELOCATE heavy pictures or mirrors away from beds.
	Fasten shelves securely: bookshelves, wall units, and entertainment centers. Nylon/ Velcro straps can be found at home improvement stores.
	Place large, heavy objects on lower shelves.
	Brace overhead light and fan fixtures.
	Secure cabinets to wall studs. Use latches designed for child-proofing, earthquakes or boat safety to keep cabinet doors from flying open and contents falling.

HOME HAZARD HUNT	
	Secure electronics with nylon/ Velcro straps found at home improvement stores: Computers, microwaves, televisions.
	Secure refrigerator so that it will not fall or move.
	Secure water heater. Strap to wall studs. Gas and water lines should be flexible.
	Store weed killers, pesticides, painting and cleaning liquids away from heat sources.
	Place oily polishing rags and waste in covered metal cans.
	Secure chimney with sheet metal straps and steel angle bracing to roof rafters. Clean and repair chimneys, flue pipes, vent connectors and gas vents.
	Repair defective electrical wiring and leaky gas connections.
	Know **how**, **when** and **where** to turn off utilities. Do not practice this on the gas meter since the gas utility professional must restore service after being turned off.

STAY OR GO?

Depending on the emergency you may decide to go (evacuate) or shelter-in-place.

During some emergencies, it is not safe to go outside.

You may not receive information immediately. You should use your battery or crank operated radio to learn about updated information. Television and the Internet are good resources if they are available. **Use AM Radio**: Listen to KNX 1070 AM, KFWB 980 AM, and KFI 640 AM radio stations for regional emergency alert information for the Los Angeles County area. To access or share emergency information, it is recommended that people with disabilities and others with access and functional needs develop multiple communication strategies with family, friends, and neighbors, which include, but are not limited to, the internet, TV with closed captioning, social media, smartphones, and texting.

Stay or Go?: Assess the situation

- Does the building appear to be unsafe to remain inside?
- Can you return to the building or must you stay somewhere else?
- Administer First Aid and get help for any seriously injured person(s).
- If you are at home, check for damages using a flashlight. DO NOT USE MATCHES OR CANDLES, OR TURN ON ELECTRICAL SWITCHES.

STAY OR GO?

- Check for any fire, electrical, or other household hazards. Check for spilled bleach, gasoline, or other liquids that may produce deadly fumes when mixed, or be a fire hazard.
- Sniff for any gas leaks, starting at the water heater**. In the event that you smell gas, shut off gas at gas meter, open windows, and evacuate the premises immediately.**

Shelter-In-Place:

Authorities may mandate this strategy

In a biological or chemical emergency, it might be necessary to shelter-in-place and seal the room. This is considered a short term strategy. Choose a room with few or no windows. Key points to remember:

- Make sure all family members and pets are inside together.
- Make sure your basic Emergency Supplies Kit is with you.
- You will need battery operated radio for updates.
- Turn off any type of ventilation or heating systems.
- Seal off any openings, windows, doors, and vents with duct tape and plastic sheeting. Plastic sheeting should be cut ahead of time. (10'x10')

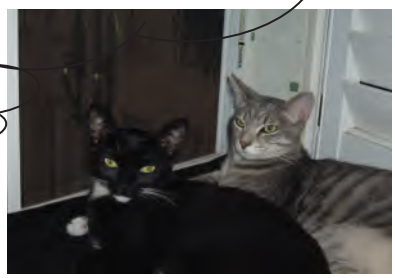
Evacuate:

You also may be asked to evacuate by authorities. If you cannot take your basic emergency supply kit, at least take the **emergency envelope with your important documents and a "GO BAG".**

STAY OR GO: A "GO BAG"

A "**GO BAG**" is an individual emergency kit for each family member. These items can be placed in a backpack or other easy to carry bag.

Have a GO BAG for your pet and service animal too!



Place a "**GO BAG**"*:*
1. Near your bed
2. In your car
3. At your workplace

Essential Items include but are not limited to:

Individual Emergency Card	(Page 15 & 16)
Water	A couple of 1/2 liter bottles
Non-perishable food	Granola bars, crackers
Medication & First Aid Supplies	A few days supply
A family photo	Identification purposes
A pocket-knife	To cut food, duct tape, first aid
A dust mask	A contamination protection
A change of clothes, underwear, sturdy shoes	A warm top for cold weather / a hat for the sun

STAY OR GO: A "GO BAG"	
Toothbrush/ toothpaste	Travel size is sufficient
Small Amount of Cash	Small denominations, and coins
Flashlight with batteries	To aid in evacuation or searches
Whistle	So other people can find you
Small battery operated radio	To keep updated on disaster information
Local Map	Know local evacuation routes
Pencil, Permanent Markers, Paper	To record information
An Extra Set of Keys	Auto/Home
Feminine Hygiene Products	Depends on individual
Small Toys, playing cards, books	Depends on individual
Consumable Medical Supplies	3 to 5 day supply

LOCAL DISASTERS

Earthquakes: Earthquakes damage can extend for miles from the epicenter. Damages can include collapsed building, bridges, and overpasses; cracked roadways; downed power lines; broken gas lines; fires; explosions; and landslides.

Earthquake responses: Duck, Cover, and Hold on. Evaluate damages to structure and humans. Evacuate structure if necessary. Take GO BAG.

Tsunami: A large wave, or series of large waves created by an undersea disturbance, such as an earthquake or volcanic eruption.

Tsunami responses: Evacuation is necessary. Gas tank should be at least half-full. A GO BAG should be in the car.

Chemical or Biological Release: A chemical emergency can occur as an accident or maliciously resulting with a release of chemical agents. A biological emergency can be a natural outbreak of disease or a deliberate release of germs or other biological substances.

Chemical or Biological Release Response: Get to a safe area by evacuating or shelter-in-place (use duct tape and plastic sheeting to create barrier).

LOCAL DISASTERS

Mudslide: Mudslides are moving rivers of rock, soil, and water. Most often they are triggered by rain, but also can occur after volcanic activity, earthquakes, fires, and manmade stress on the land.

Mudslide Response: If there is a threat of a mudslide in your area, you must evacuate immediately. Take GO BAG.

Fires: Fires can spread quickly. In five minutes an entire house can be engulfed in flames. Often, the heat and smoke can be even more dangerous than the flames.

Fire Response: If you are on fire: STOP, DROP, and ROLL. Evacuate immediately when you see, hear, feel, smell smoke and/ or fire.
Take GO BAG.

BE INFORMED

For additional ways to be informed *before* an emergency, visit:

- http://readyla.org
- http://emergency.lacity.org
- http://www.facebook.com/readyla
- http://twitter.com/ReadyLA
- http://5steps.la
- http://www.laanimalservices.com/general-information/emergency-preparedness/
- http://www.ready.gov
- http://www.listo.gov
- http://www.shakeout.org
- http://www.earthquakecountry.org/
- http://www.terremotos.org

It's up to you to GET INVOLVED!

CERT LA is a **FREE** training offered to adults (18+). Participants will learn how to:

- manage utilities and put out small fires
- provide basic medical aid
- search for and rescue victims safely
- organize themselves and spontaneous volunteers to be effective, and collect disaster intelligence to support first responder efforts

BE INFORMED

It is a 17.5 hour course offered over 7 weeks (once a week) plus bi-annual refresher courses. Classes are offered throughout City of Los Angeles; all year; various times of the day. If you have a group of 20 or more, CERT LA can arrange a course for your business, school, or neighborhood.

213-893-9840
www.cert-la.com
lafdcert@lacity.org

AMERICAN RED CROSS

The ARC offers classes in Basic First Aid, CPR (Cardio-pulmonary Resuscitation), Disaster Preparedness, etc. American Red Cross of Greater Los Angeles can be reached at:

1-800-627-7000
www.redcross.org/ca/losangeles

PREPARELA+

EMERGENCY ENVELOPE

Copies of these documents, photos, USB drives, and or CD/DVD's should be stored in a waterproof bag and placed in your Go-Kit along with this checklist.

Family members should know the location of these documents. It is also suggested that originals be placed in safety deposit box.

Check off the items after you have placed them in the emergency envelope

Yes	Item	Current
	Birth Certificates of all household Members	
	Marriage Certificates	
	Death Certificates	
	Driver's licenses or ID cards	
	Health Insurance & Immunization Records	
	Social Security Cards	
	Passports	
	Current Photos of all household members	
	Will, Deeds, Trusts, Medical Directives	

EMERGENCY ENVELOPE		
Yes	**Item**	**Current**
	Insurance papers	
	Bank and Credit Card Account Numbers	
	Stocks and Bonds	
	Inventory of household goods	
	Photos/ or video/ digital media of household goods	
	Receipts for valuables	
	Current photos of pets with family member, in case of separation	
	Digital copies of computer files	
	Local maps	
	Contact information for doctors, RXs, list of CMS	

EMERGENCY CONTACT INFORMATION	
Complete this information and place in your GO-KIT!	
FAMILY MEMBER'S LEGAL NAME	
RELATIONSHIP (MOM, DAD, DAUGHTER…)	
DATE OF BIRTH	
GOVERNMENT ISSUE ID # (DRIVER'S LICENSE/ PASSPORT/SOCIAL SECURITY)	
MEDICATIONS / ALLERGIES/ IMPORTANT HEALTH INFO	
FAMILY MEMBER'S LEGAL NAME	
RELATIONSHIP (MOM, DAD, DAUGHTER…)	
DATE OF BIRTH	
GOVERNMENT ISSUE ID # (DRIVER'S LICENSE/ PASSPORT/SOCIAL SECURITY)	
MEDICATIONS / ALLERGIES/ IMPORTANT HEALTH INFO	
Download this form at http://www.readyla.org	

EMERGENCY CONTACT INFORMATION	
Complete this information and place in your GO-KIT!	
FAMILY MEMBER'S LEGAL NAME	
RELATIONSHIP (MOM, DAD, DAUGHTER…)	
DATE OF BIRTH	
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MEDICATIONS / ALLERGIES/ IMPORTANT HEALTH INFO	
Download this form at http://www.readyla.org	

Fill out the front and the back. Each Family Member should have one to carry with them at all times.

Download this form at http://www.readyla.org.
It is designed to be printed as a
double-sided document.

EMERGENCY CARD

NAME……..
DATE OF BIRTH……
PHONE #……....
MEDICAL NEEDS……
NEIGHBORHOOD MEETING PLACE……...
OUT OF NEIGHBORHOOD MEETING PLACE……...
……..
OUT OF TOWN CONTACT NAME……
OUT OF TOWN CONTACT #.....

EMERGENCY CARD

NAME……..
DATE OF BIRTH……
PHONE #……....
MEDICAL NEEDS……
NEIGHBORHOOD MEETING PLACE……...
OUT OF NEIGHBORHOOD MEETING PLACE……...
……..
OUT OF TOWN CONTACT NAME……
OUT OF TOWN CONTACT #.....

CITY of LOS ANGELES
EMERGENCY MANAGEMENT DEPARTMENT
"IN OMNIA PARATUS"

WHO WILL YOU HELP?
ONCE IT HAPPENS…
IT'S TOO LATE!

BACK OF EMERGENCY CARD

SCHOOL OR WORK NAME……
ADDRESS……
SCHOOL OR WORK PHONE #……
PARENT OR CAREGIVER……
PET NAME……
VETERINARIAN……
PET MEDICATIONS……
OTHER IMPORTANT PHONE NUMBERS……
……

BACK OF EMERGENCY CARD

SCHOOL OR WORK NAME……
ADDRESS……
SCHOOL OR WORK PHONE #……
PARENT OR CAREGIVER……
PET NAME……
VETERINARIAN……
PET MEDICATIONS……
OTHER IMPORTANT PHONE NUMBERS……
……

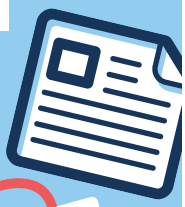
EMERGENCY SUPPLY CHECKLIST

CITY OF LOS ANGELES
Ready Your Los Angeles Neighborhood (RYLAN)

READY YOUR LA NEIGHBORHOOD

☐ IMPORTANT FAMILY DOCUMENTS

Have a copy of identification cards, driver licenses, social security cards, emergency contact lists, and medical information in your kit.



☐ FIRST AID KIT

Familiarize yourself with your kit and know how to use the items in an emergency.

☐ CASH

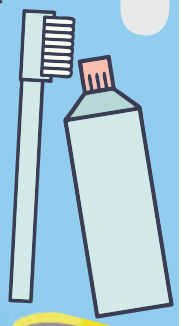
Have small quantities in both bills and coins. At least $100-$200 per person.

☐ MEDICATIONS

Know the doses and have the emergency prescription handy. Include your pets' medications, if any.

☐ TOILETRIES

Pack feminine products, deodorant, hand sanitizer, toothbrush, toothpaste, soap, etc.



☐ CLOTHING + SHOES

Pack extra clothing and sturdy shoes.

☐ FLASHLIGHT

Pack a crank or battery-operated flashlight!

☐ RADIO

Pack a battery, solar powered or hand crank AM/FM radio to tune into AM 1070 for emergency alerts.

☐ TOOLS

A wrench to turn off utilities, a crowbar for opening doors, etc.

☐ WATER AND FOOD

- Add non-perishable foods *(enough for 7 days)*, which require no refrigeration or cooking/preparation.
- Consider any allergies when packing food. Include food for your pets!
- You should have *1 gallon of water per person, per day, for up to 7 days.* Apply the same rule for children and pets!

☐ OTHER ITEMS

- Phone charger.
- Personal comfort item (toys for children or a favorite book).
- Adaptive or supportive equipment (extra batteries) and instructions on how to operate any special equipment.
- Pet supplies including identification tags, carrier, etc.
- Can-opener for canned foods.

FOR A LISTING OF ADDITIONAL ITEMS, VISIT:
EMERGENCY.LACITY.ORG

2019

PET EMERGENCY SUPPLY CHECKLIST

☐ IMPORTANT PET DOCUMENTS

Have a copy of important medical records, an emergency contact list, commands being used and record of any behavioral indicators or problems.

- *It is highly recommended that your pet is micro-chipped.*
- *All pets(including equine)should have a current City of Los Angeles License anionlinelicense.lacity.org*

☐ FIRST AID KIT

- Cotton Bandage Rolls
- Scissors
- Antibiotic Ointments
- Extra Supply of Medication
- Latex Gloves
- Isopropyl Alcohol
- Flea and Tick Prevention

Include a pet first aid reference book

☐ FOOD & WATER

- Have enough food for 7 days. If it is canned, do not forget a manual can opener!
- You should have 1 gallon of water, per pet, per day, for up to 7 days.

☐ COLLAR, HARNESS & LEASH

Your pet should wear a collar with their identification and rabies tag at all times. Include a backup leash, collar and ID tag.

☐ CRATE OR PET CARRIER

Pack a sturdy, safe, comfortable crate or carrier near your bag so that it is ready for transporting your pet.Remember that all animals need to be trained to get use to the carrier.

☐ SANITATION

Include pet litter, a litter box, or potty pads. If possible, also include newspapers, paper towels, and plastic trash bags in your emergency kit.

☐ MEDICATIONS

Know the doses and have an emergency prescription handy.

☐ FAMILIAR ITEMS

- Include toys, bedding and treats.
- Any extra items you can think that your pet needs!

☐ PICTURES

Include a picture of you and your pet. If your pet gets lost, you have a picture to find them!

PET DISASTER PLAN

It is important to make informal arrangements just in case you are unable to care for your pet.

- Identify a primary and secondary pet caregiver that you are comfortable with handling your pet in the event of an emergency.
- Provide your pet caregiver with the veterinarian's contact information, your contact information and the location of your pet's "go bag."
- Identify boarding facilities. Make arrangements ahead of time, check out the facility and know the requirements needed for boarding.
- Carry a wallet card with information about the number of pets you have, their names and their breed. Do not forget to include your emergency caregiver's information on this card.

LISTA DE SUMINISTROS DE EMERGENCIA PARA MASCOTAS

☐ IMPORTANTE DOCUMENTOS DE TU MASCOTA

Tén a la mano copias de registros médicos, lista de contactos de emergencia, las ordenes que tu mascota entiende y cualquier registro e indicador de problemas de conducta (en su caso).

- *Se recomienda que coloques un micro-chip a su mascota.*
- *Toda mascotas (incluyendo caballos) deben tener su licencia vigente de la Cuidad de Los Angeles anionlinelicense.lacity.org*

☐ BOTIQUIN DE PRIMEROS AUXILIOS

- Vendas
- Tijeras
- Ungüento antibiotico
- Dosis extra de medicamentos
- Guantes de Latex
- Alcohol Isopropilico
- Productos anti pulgas y garrapatas

- *Incluye un libro de referencia de primeros auxilios para mascotas*

☐ AGUA Y COMIDA

- Tén comida suficiente para 7 días. Si es comida enlatada, no olvide el abrelata.
- Debe tener 1 galón de agua diario por mascota para 7 días.

☐ COLLAR, ARNES Y CORREA

Su mascota debe llevar un collar con etiqueta de identificación y constancia de vacuna contra la rabia en todo momento. Incluye un collar, correa y etiqueta de identificacion de contacto.

☐ PORTADORA PARA MASCOTAS

Incluir una jaula transportadora cómoda, segura, y resistente para transportar tu mascota. Recuerda que es necesario que tu mascota esté acostumbreada a su jaula tranportadora

☐ HIGIENE

Incluye arena y arenero para mascotas, o tapete. Si es posible, incluye un periódico, toallas de papel y bolsas para basura.

☐ MEDICAMENTOS

Conocer las dosis exactas y tener la receta médica en mano.

☐ ARTÍCULOS FAMILIARES

Incluir juguetes, mantas, premios o cualquier otro artículo que pueda necesitar tu mascota.

☐ FOTOS

Incluye una foto de ti con tu mascota(si se pierde tu mascota, tendrás una foto para encontrarla)

PREPARAR UN PLAN DE DESASTRES PARA MASCOTAS

En caso de una emergencia, es importante hacer arreglos informales en caso de que no puedas cuidar a tu mascota.

- Identifica dos personas de confianza, una primaria y otra secundaria, que puedan cuidar a tu mascota en caso de emergencia.
- Proporciona a las personas de cofianza tus datos de contacto y los del veterinario, e infórmale del lugar en el que guardas la jaula transportadora y el kit de emergencia de tu mascota.
- Identifica el abordaje de mascota . Localiza el lugar y enterate de los requisitios para poder tener a tu mascota ahi. Haz los los arreglos antes del abordaje.
- En su cartera, lleve una tarjeta que indique el número de mascotas queusted tiene, sus nombres, y sus razas. No se olvide incluir datos de personas de confianza que pueden cuidar a las mascotas.

READY! SET! GO!

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. Climate change has made fire season year-round and increased our 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.

Daryl L. Osby
Los Angeles County Fire Chief

INSIDE

READY!

SET!

GO!

The *Ready!Set!Go!* program is supported by the following partner agencies:

READY!

Living in the Wildland Urban Interface

Ready! Set! Go! begins with a house that firefighters can defend.

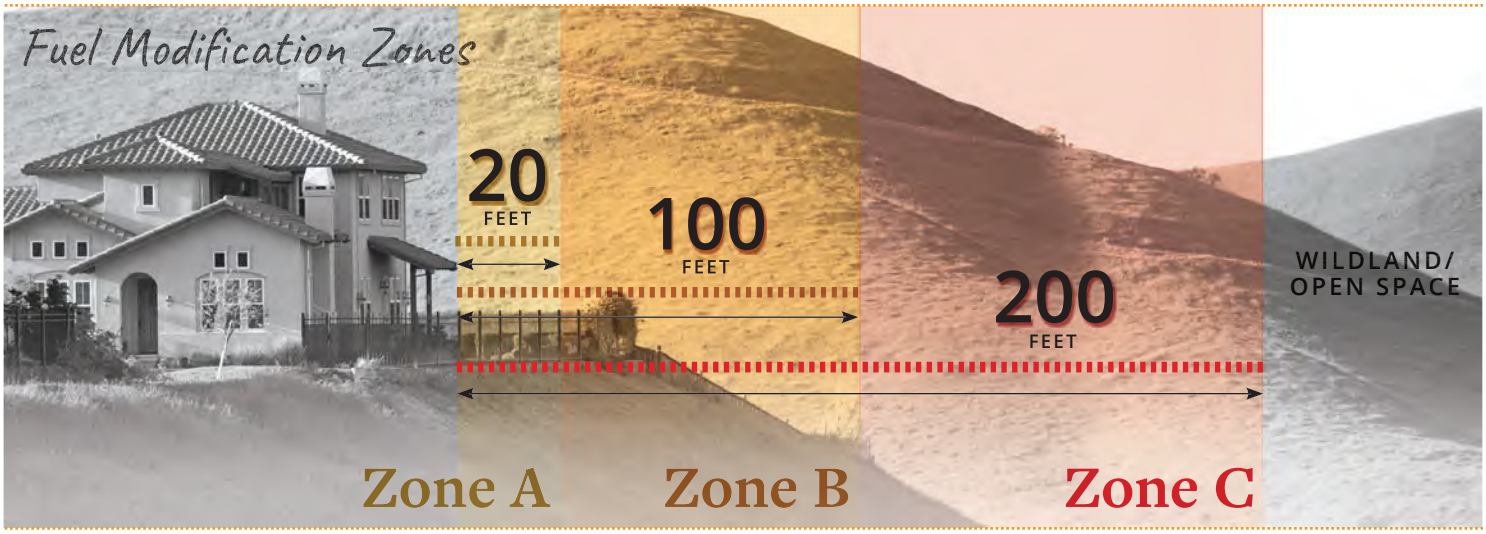
Create a Defensible Home

A defensible home is a home that has the greatest potential for surviving a wildfire. Defensible homes are those that are in compliance with the Los Angeles County Fire Department's Defensible Space requirements or have been through the Fire Department's Fuel Modification Plan Review Program, and have been constructed in accordance with the latest building standards for the fire zones.

What Is Fuel Modification?

The Fuel Modification Plan Review Program affects new structures and developments built in the fire hazard severity zones. A Fuel Modification Plan, submitted by applicants, reviews landscaping plans and identifies areas of defensible space within all fuel modification zones around structures.

For further information please visit: bit.ly/fuelmod



Zone A — EXTENDS 20 FEET FROM STRUCTURE

- Vines and climbing plants shall not be allowed on any combustible structure.
- Irrigated area consisting of low-growing, small herbaceous plants with high-moisture content immediately around structures.
- Occasional accents of woody shrubs or an occasional small patio tree ten feet from structure, if widely spaced and zone appropriate as well as eliminating annual grasses and leaf litter help prevent direct-flame impingement on the structure.

Zone B — EXTENDS UP TO 100 FEET FROM STRUCTURE

- Also irrigated with an approved slightly dense planting avoiding woody plant species larger than 3 feet at maturity beneath any tree canopy.
- Introducing shade trees that are zone appropriate with adequate spacing by eliminating continuous canopy coverage and continuous fuels to minimize fire transmission.
- Screen plantings can be used; however, continuous hedging is discouraged as it promotes the accumulation of dead litter inside the live hedge.

Zone C — EXTENDS FROM ZONE B OUTER EDGE UP TO 200 FEET FROM STRUCTURE

- Thinned to remove dead vegetation and prevent overgrowth.
- Designed to slow the fire's progress and reduce its intensity by decreasing the availability of continuous fuels.
- Native vegetation thinned 30 to 50 percent in Zone C.

Ideal Fuel Modification Landscape:

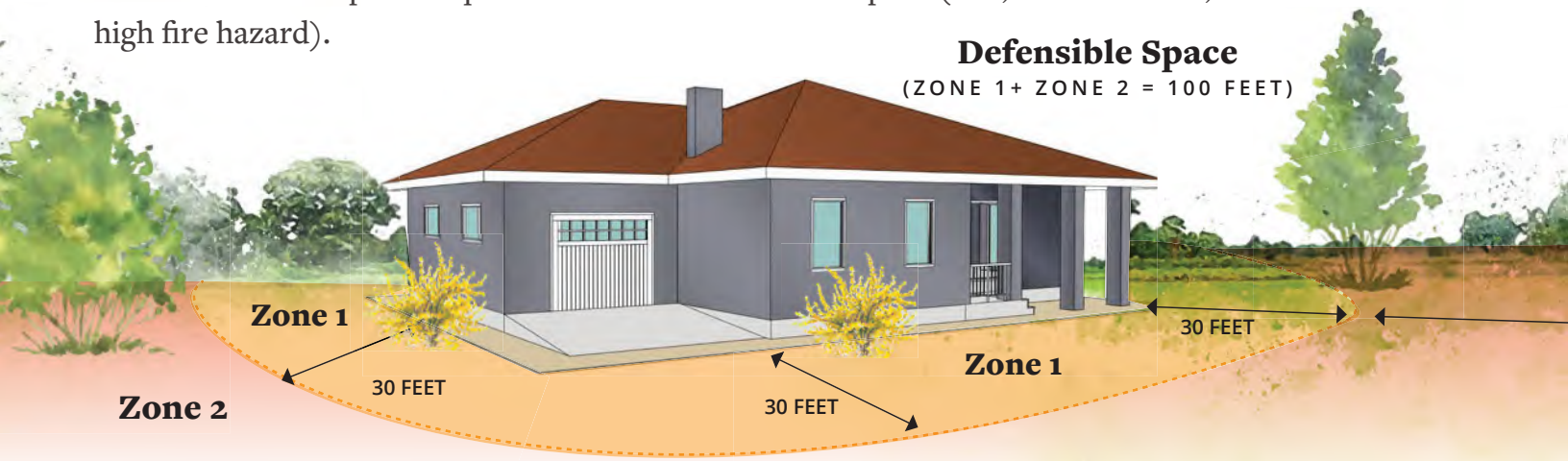
Limited woody plant material, high moisture content, adequate spacing and inorganic mulch thoughout Zone A.

READY!

Defensible Space

Creating and maintaining defensible space are essential for increasing your home's chance of surviving a wildfire. It's the buffer that homeowners are required to create on their property between a structure and the plants, brush, and trees or other items surrounding the structure that could catch fire. This space is needed to slow the spread of wildfire and improves the safety of firefighters defending your home. The defensible space for each structure varies, depending on the type of vegetation and topography.

Two zones make up the required 100 feet of defensible space (and, in some cases, 200 feet due to high fire hazard).



Zone 1

Extends 30 feet out from buildings, structures, decks, etc.

- 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 that hang over your roof. And, keep branches 10 feet away from your chimney.
- Relocate exposed woodpiles outside of Zone 1 unless they are completely covered in a fire-resistant material.
- Remove vines and climbing plants from combustible structures (e.g. bougainvillea, wisteria)
- Remove or prune vegetation near windows.
- Remove vegetation and items that could catch fire from around and under decks.
- Create a separation between trees, shrubs, and items that could catch fire, such as patio furniture, swing sets, etc.

Zone 2

Extends 30 to 100 feet from buildings and other structures.

(Note: The inspecting officer may require an additional 100 feet of thinning or removal, for a total of 200 feet due to high-fire hazard.)

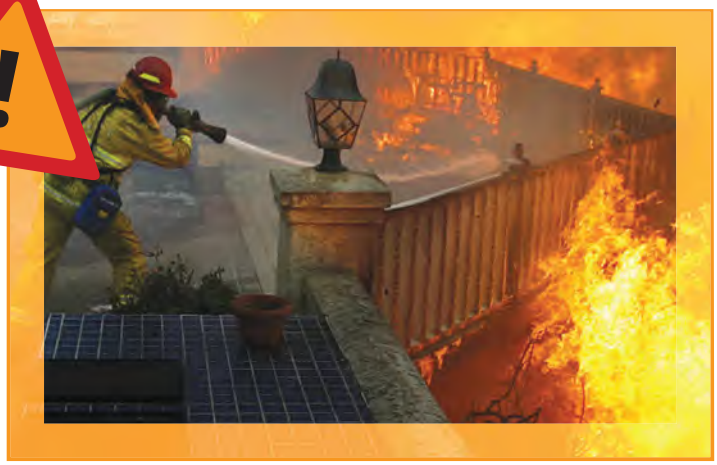
- Cut or move annual grass down to a maximum height of four inches.
- Create horizontal spacing between shrubs and trees.
- Create vertical spacing between grass, shrubs, and trees.
- Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 4 inches if erosion control is an issue.

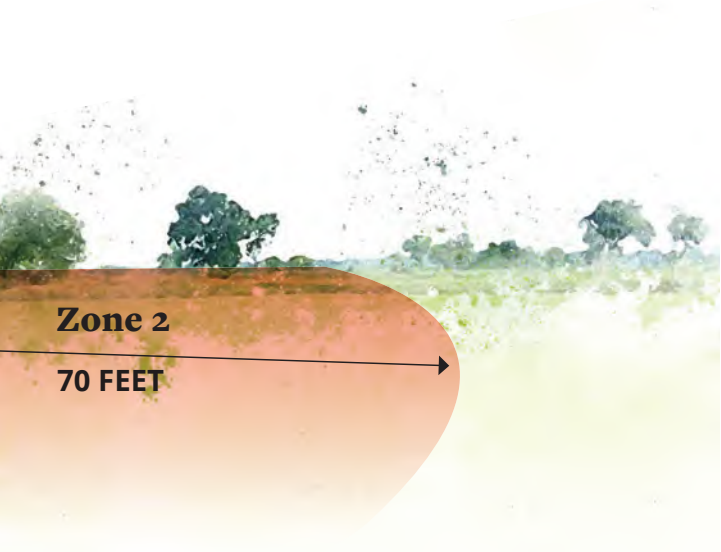
  Note: Special attention should be given to the use and maintenance of ornamental plants known or thought to be high-hazard plants when used in close proximity to structures. Examples include Acacia, Cedar, Cypress, Eucalyptus, Italian Cypress, Juniper, Palms (remove all dead fronds), Pine (removal within 20' 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.

READY!

HAZARDOUS
ORNAMENTAL LANDSCAPE

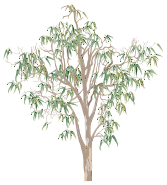
Preventing conditions where fire can travel from adjacent fuels, through an ornamental landscape to your structure, is the key to creating defensible space. Fire spreads through convection, conduction, radiation, or embers. Proper maintenance of ornamental vegetation reduces ember production, fire propagation, intensity, and duration of the approaching flames.





HIGH-HAZARD PLANTS


Acacia (Shrub)


Eucalyptus


Juniper


Palm


Pine


Pampas Grass


This home provides a good example of defensible space.


Firefighters in defensible space during a wildfire.

READY!

Safeguard or "Harden" Your Home

The ability of your home to survive a wildfire depends on its construction materials 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.

Chimney 2

- Cover your chimney and stovepipe outlets with a non-flammable screen of ¼-inch wire mesh or smaller to prevent embers from escaping and igniting a fire.
- Make sure that your chimney is at least 10 feet away from any tree branches.

Deck/Patio Cover 3

- Use heavy timber or non-flammable construction material for decks and patio covers.
- 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.
- The decking surface must be ignition-resistant if it's within 10 feet of the home.

Driveways and Access Roads 4

- Driveways should be designed to allow fire and emergency vehicles and equipment to reach your home.
- 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.
- Ensure that all gates open inward and are wide enough to accommodate emergency equipment.
- Trim trees and shrubs overhanging the road to a minimum of 13-½ (or 13.5) feet to allow emergency vehicles to pass.

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.

Home Site and Yard 6

- Ensure you have at least a 100-foot radius of defensible space (cleared vegetation) around your home. This means looking past what you own to determine the impact a common slope or neighbor's yard will have on your property during a wildfire.
- Cut dry weeds and grass before noon when temperatures are cooler to reduce the chance of sparking a fire.
- 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.
- Ensure trees are far away from power lines.

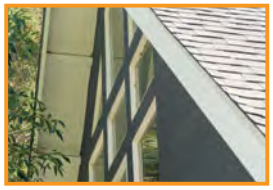
READY!

Inside

- Keep working fire extinguishers on hand and train your family how to use them (check expiration dates regularly).

- Install smoke alarms on each level of your home and near 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 7

- Make sure to use non-combustible fencing to protect your home during a wildfire.

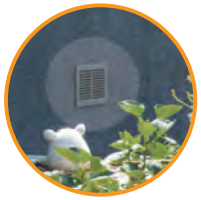
Rain Gutters

- 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 ⅛-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 prevent ember intrusion (mesh is not enough).

Walls 9

- 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 10

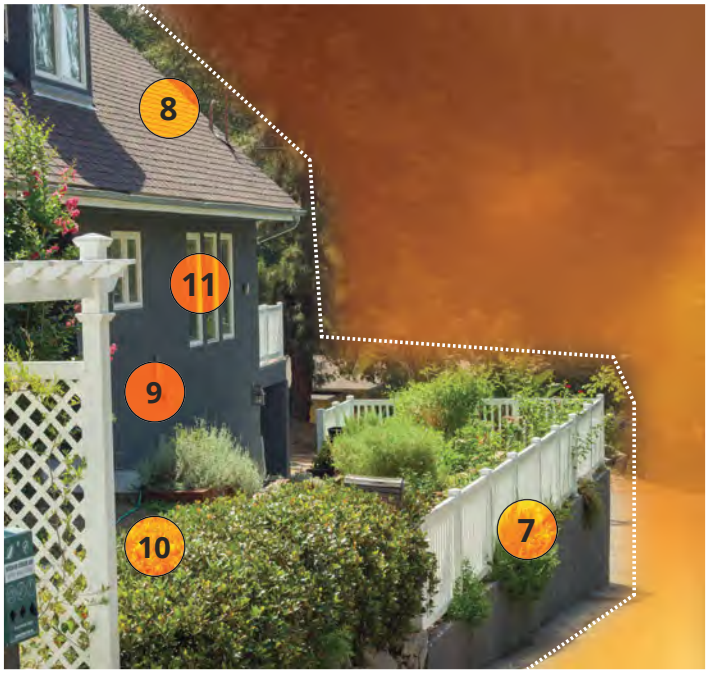
- Have multiple garden hoses that are long enough to reach any area of your home and other structures on your property.
- If you have a pool or well, consider a pump.

Windows 11

- 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 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.

2 What to Take

- ☐ Assemble an Emergency Supply Kit (see page 10 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.

3 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.
- ☐ Several different escape routes from your home and community. Practice these often so everyone in your family is familiar in case of emergency.
- ☐ Necessities and boarding options for your pets and large animals, such as horse and other livestock.

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

Name

( ) Phone

Name

( ) Phone

SCHOOLS

Name

( ) Phone

Name

( ) Phone

FAMILY & FRIENDS

Name

( ) Phone

Name

( ) Phone

2 WHAT TO TAKE

- ○ Insurance Papers
- ○ Photos
- ○ Emergency Supply Kit
- ○ Prescriptions
- ○ Important Documents
- ○ _____

3 EVACUATION

WHEN TO GO

WHERE TO GO

HOW TO GET THERE

DESTINATION

WHO TO TELL (BEFORE AND AFTER)

ANIMAL SHELTER

Name

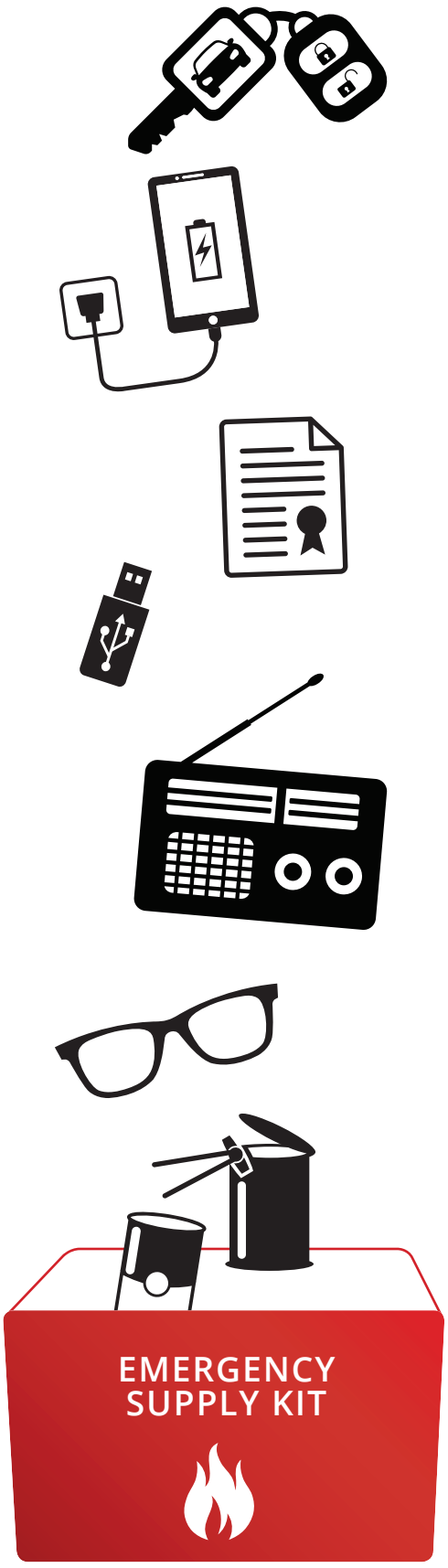
( ) Phone

LOS ANGELES COUNTY FIRE DEPARTMENT

IF YOU HAVE AN EMERGENCY, CALL 9-1-1

Public Information Office: (323) 881-2411
fire.lacounty.gov

☑ SET!



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 car.

Essential Supplies

- ☐ Three-day supply of non-perishable food and three gallons of water per person.
- ☐ Map marked with at least two evacuation routes
- ☐ Prescriptions or special medications
- ☐ Change of clothing
- ☐ Closed-toe shoes
- ☐ Extra eyeglasses or contact lenses
- ☐ An extra set of car keys, credit cards, cash, or travelers checks
- ☐ First aid kit
- ☐ Flashlight
- ☐ Battery-powered radio and extra batteries
- ☐ Sanitation supplies
- ☐ Copies of important documents (e.g., birth certificates, passports, etc.)
- ☐ Don't forget pet food and water!

If Time Allows

- ☐ Easy-to-carry valuables
- ☐ Family photos and other irreplaceable items
- ☐ Personal computer information on hard drives and flash drives
- ☐ Chargers for cell phones, laptops, etc.

☑ SET!

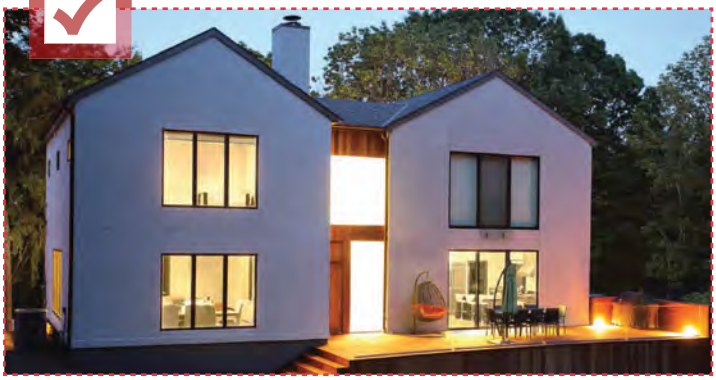
Pre-Evacuation Preparation Steps

When an evacuation is anticipated and if time permits, follow these checklists to give your home the best chance of surviving a wildfire:

Animals

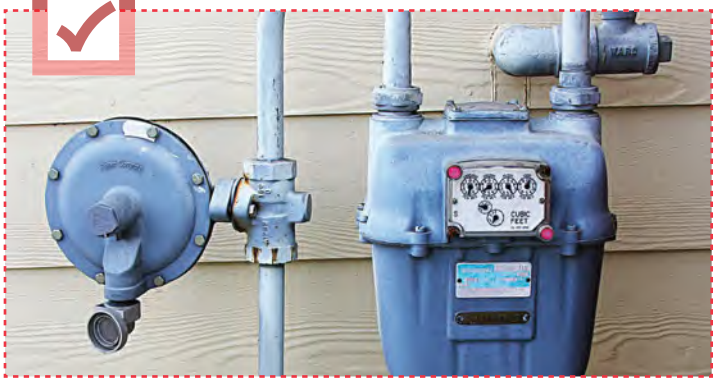
- ☐ Locate your pets and keep them nearby.
- ☐ Prepare farm animals for transport and think about moving them to a safe location early.

Inside



- ☐ Shut all windows and doors, leaving them unlocked.
- ☐ 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. Turn off pilot lights.

Outside



- ☐ Gather up 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. Fill water buckets and place them around the house.
- ☐ 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.
- ☐ Seal attic and ground vents with pre-cut plywood or commercial seals, if time permits.
- ☐ Monitor your property and the 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.

Remember the Six P's

P

People and pets

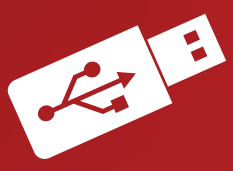
Papers, phone numbers, and important documents

Pictures and irreplaceable memorabilia

Prescriptions, vitamins, and eyeglasses

Plastic
(e.g., credit cards, ATM cards)
and cash

Personal computer hard drives and flash drives



GO!

TAKE ACTION IMMEDIATELY WHEN WILDFIRE STRIKES

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 and do their job.

When to Evacuate

Leave as soon as evacuation is recommended by emergency personnel to avoid being caught in fire, smoke, or road congestion. Don't wait to be ordered 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! Go!

- Emergency personnel will determine the areas to be evacuated and escape routes to use, depending upon the fire's location, behavior, winds, terrain, etc.
- Emergency personnel make every effort to advise you of potential evacuations as early as possible. You must take the initiative to stay informed and aware. Monitor social media and listen to your local radio/TV for announcements from law enforcement and other emergency personnel.
- You may be directed to temporary assembly areas to await transfer to a safe location.

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

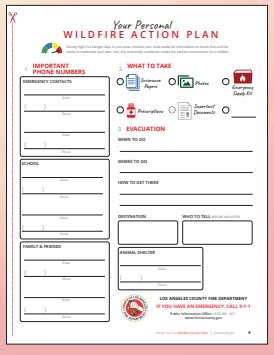
Leave for a pre-determined location. It should be a low-risk area, such as a well-prepared neighbor or relative's house, a Red Cross shelter or evacuation center, Motel, etc.

How to Get There

Have several travel routes in case one route is blocked by the fire or by emergency vehicles and equipment. Choose an escape 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 long-sleeve shirt, heavy shoes/boots, a cap, dry bandanna (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 with cold water.
- ☐ Keep doors and windows closed, but unlocked.
- ☐ Stay inside your home.
- ☐ Stay away from outside walls.

In Your Vehicle

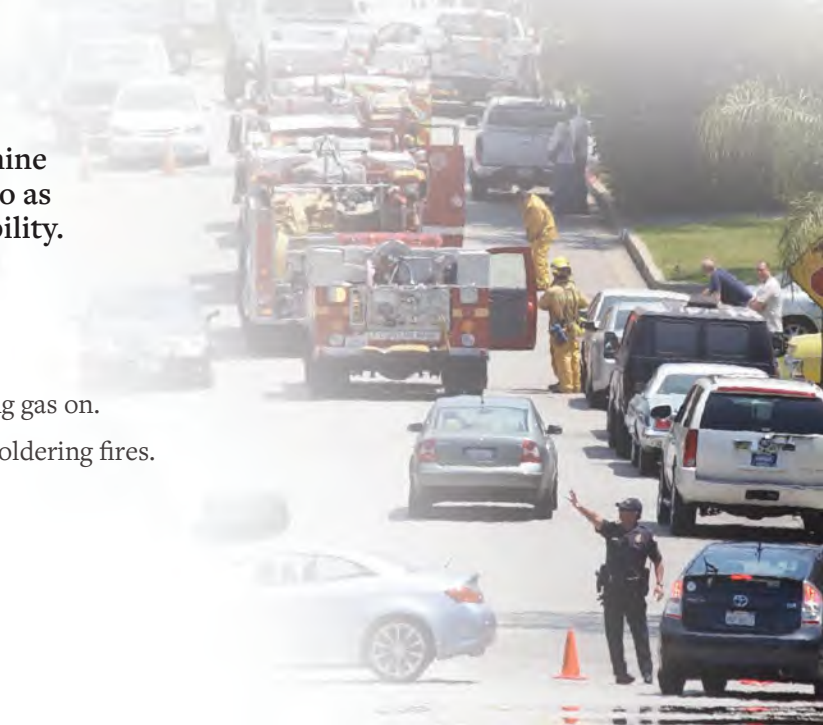
- ☐ Stay calm.
- ☐ Park your vehicle in an area clear of vegetation.
- ☐ Close all vehicle windows and vents.
- ☐ Cover yourself with a wool or cotton blanket or jacket.
- ☐ Lie on the vehicle floor.
- ☐ Use your cell phone and call 9-1-1 to inform authorities of your location.

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.

Preparing for a wildfire starts with three simple steps:

READY! SET! GO!

Please keep this plan on hand as a quick reference for helping your family and property be safe in the event of a wildfire.

OFFICIAL

facebook.com/LACoFD

twitter.com/LACoFD

instagram.com/lacountyfd

youtube.com/user/LosAngelesCountyFD

vimeo.com/user4029934

PUBLIC INFORMATION OFFICE

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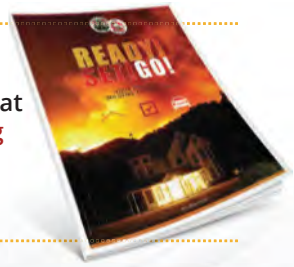
twitter.com/lacofdespanol

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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fire.lacounty.gov

LOS ANGELES COUNTY FIRE DEPARTMENT
Public Information Office
1320 N. Eastern Avenue
Los Angeles, California 90063

Produced by the Communications Section of the Executive Support Division. Revised September 25, 2018.

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**

Ready

Prepare. Plan. Stay Informed.®

Emergency Supply List

FEMA

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.

Ready FEMA

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 ready.gov/make-a-plan, 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.

TEXT IS BEST!

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.

The following sections will guide you through the process to create and practice your *Family Emergency Communication Plan*.

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.

- [ ] Make copies of your *Family Emergency Communication Plan* for each member of the household to carry in his or her wallet, backpack, or purse. Post a copy in a central place at home. Regularly check to make sure your household members are carrying their plan with them.
- [ ] Enter household and emergency contact information into all household members' mobile phones or devices.
- [ ] Store at least one emergency contact under the name "In Case of Emergency" or "ICE" for all mobile phones and devices. This will help someone identify your emergency contact if needed. Inform your emergency contact of any medical issues or other requirements you may have.
- [ ] Create a group list on all mobile phones and devices of the people you would need to communicate with if there was an emergency or disaster.
- [ ] Make sure all household members and your out-of-town contact know how to text if they have a mobile phone or device, or know alternative ways to communicate if they are unable to text.
- [ ] Read *Be Smart. Know Your Alerts and Warnings* at http://1.usa.gov/1BDloze and sign up to receive emergency information.

Once you have completed your *Family Emergency Communication Plan*, made copies for all the members of your household, and discussed it, it's time to practice!

Here are some ideas for practicing your plan:

- [ ] Practice texting and calling. Have each person practice sending a text message or calling your out-of-town contact and sending a group text to your mobile phone group list.
- [ ] 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 *Family Emergency Communication Plan* at least once a year, or whenever any of your information changes.

To help start the conversation or remind your family why you are taking steps to prepare and practice, you may want to watch the 4-minute video, *It Started Like Any Other Day*, about families who have experienced disaster, at www.youtube.com/watch?v=w_omgt3MEBs. Click on the closed captioning (CC) icon on the lower right to turn on the captioning.

After you practice, talk about how it went. What worked well? What can be improved? What information, if any, needs to be updated? If you make updates, remember to print new copies of the plan for everyone.

OTHER 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.

[1] Federal Communications Commission, Public Safety and Homeland Security Bureau. (n.d.) *Tips for communicating in an emergency.* Retrieved from http://transition.fcc.gov/pshs/emergency-information/tips.html

- [ ] 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.

10 WAYS TO PARTICIPATE IN AMERICA'S PrepareAthon!℠

Access Alerts and Warnings

Test Communication Plans

Assemble or Update Supplies

Drill or Practice Emergency Response

Participate in a Class, Training, or Discussion

Plan with Neighbors

Conduct an Exercise

Make Property Safer

Document and Insure Property

Safeguard Documents

FAMILY EMERGENCY COMMUNICATION PLAN

HOUSEHOLD INFORMATION

Home #: .....
Address: .....

Name: ..... Mobile #: .....
Other # or social media: .....
Email: .....
Important medical or other information: .....
.....

Name: ..... Mobile #: .....
Other # or social media: .....
Email: .....
Important medical or other information: .....
.....

Name: ..... Mobile #: .....
Other # or social media: .....
Email: .....
Important medical or other information: .....
.....

Name: ..... Mobile #: .....
Other # or social media: .....
Email: .....
Important medical or other information: .....
.....

SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS

Name: .....
Address: .....
Emergency/Hotline #: .....
Website: .....
Emergency Plan/Pick-Up: .....

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: ..... Mobile #: .....
Home #: ..... Email: .....
Address: .....

OUT-OF-TOWN CONTACT

Name: ..... Mobile #: .....
Home #: ..... Email: .....
Address: .....

EMERGENCY MEETING PLACES

Indoor: .....
Instructions: .....
Neighborhood: .....
Instructions: .....

Out-of-Neighborhood: .....
Address: .....
Instructions: .....

Out-of-Town: .....
Address: .....
Instructions: .....

IMPORTANT NUMBERS OR INFORMATION

Police: ..... Dial 911 or #: .....
Fire: ..... Dial 911 or #: .....
Poison Control: .....#: .....
Doctor: .....#: .....
Doctor: .....#: .....
Pediatrician: .....#: .....
Dentist: .....#: .....
Hospital/Clinic: .....#: .....
Pharmacy: .....#: .....
Medical Insurance: .....#: .....
Policy #: .....
Medical Insurance: .....#: .....
Policy #: .....
Homeowner/Rental Insurance: .....
#: .....
Policy #: .....
Flood Insurance: .....#: .....
Policy #: .....
Veterinarian: .....#: .....
Kennel: .....#: .....
Electric Company: .....#: .....
Gas Company: .....#: .....
Water Company: .....#: .....
Alternate/Accessible Transportation: .....
#: .....
Other: .....#: .....
Other: .....#: .....
Other: .....#: .....

AMERICA'S PrepareAthon!™
BE SMART. TAKE PART. PREPARE.

Ready

Write your family's name above

Family Emergency Communication Plan

IN CASE OF EMERGENCY (ICE) CONTACT

Name: ..... Mobile #: .....
Home #: ..... Email: .....
Address: .....

OUT-OF-TOWN CONTACT

Name: ..... Mobile #: .....
Home #: ..... Email: .....
Address: .....

FOLD HERE

HOUSEHOLD INFORMATION

Home #: .....
Address: .....

Name: ..... Mobile #: .....
Other # or social media: ..... Email: .....
Important medical or other information: .....

Name: ..... Mobile #: .....
Other # or social media: ..... Email: .....
Important medical or other information .....

FOLD HERE

Name: ..... Mobile #: .....
Other # or social media: ..... Email: .....
Important medical or other information: .....

Name: ..... Mobile #: .....
Other # or social media: ..... Email: .....
Important medical or other information: .....

FOLD HERE

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: .....

FOLD HERE

Name: .....
Address: .....
Emergency/Hotline #: ..... Website: .....
Emergency Plan/Pick-Up: .....

Name: .....
Address: .....
Emergency/Hotline #: ..... Website: .....
Emergency Plan/Pick-Up: .....

EMERGENCY MEETING PLACES

Indoor: .....
Instructions: .....
.....

Neighborhood: .....
Instructions: .....
.....

Out-of-Neighborhood: .....
Address: .....
Instructions: .....
.....

Out-of-Town: .....
Address: .....
Instructions: .....
.....

IMPORTANT NUMBERS OR INFORMATION

Police: ..... Dial 911 or #: .....
Fire: ..... Dial 911 or #: .....
Poison Control: ..... #: .....
Doctor: ..... #: .....
Doctor: ..... #: .....
Pediatrician: ..... #: .....
Dentist: ..... #: .....
Medical Insurance: ..... #: .....
Policy #: .....
Medical Insurance: ..... #: .....
Policy #: .....
Hospital/Clinic: ..... #: .....

Pharmacy: ..... #: .....
Homeowner/Rental Insurance: ..... #: .....
Policy #: .....
Flood Insurance: ..... #: .....
Policy #: .....
Veterinarian: ..... #: .....
Kennel: ..... #: .....
Electric Company: ..... #: .....
Gas Company: ..... #: .....
Water Company: ..... #: .....
Alternate/Accessible Transportation: ..... #: .....
Other: .....
Other: .....

Family Disaster Plan

Family Last Name(s) or Household Address: **Date:**

Family Member/Household Contact Info (If needed, additional space is provided in #10 below):

Name	Home Phone	Cell Phone	Email:

Pet(s) Info:

Name:	Type:	Color:	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 contact outside of our immediate area is:

Name	Home Phone	Cell Phone	Email:
_____	_____	_____	_____

After a disaster, let your friends and family know you are okay by registering at "Safe and Well" at https://safeandwell.communityos.org/cms// 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 household with a disability or special need is:

Person's Name:	Plan:
_____	_____
_____	_____

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 items you might want to take to an evacuation shelter. Remember 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 Medical Information	Make sure the household medical information is taken with us if evacuation is necessary.	
Financial Information	Obtain copies of bank statements and cash in the event ATMs and credit cards do not work due to power outages. Bring copies of utility bills as proof of residence in applying for assistance.	
Pet Information	Evacuate our pet(s), keep a phone list of pet-friendly motels and animal shelters, and assemble and take the pet disaster kit.	
Sharing and Maintaining the Plan	Share the completed plan with those who need to know. Meet with household members every 6 months or as needs change to update household plan.	

**What supplies and records should go in your disaster kit? Visit www.redcross.org*

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 www.redcross.org

Appendix C

Evacuation Travel Time Technical Analysis

TO:	Nathan Keith, Sr. Vice President, Tejon Ranch Company
FROM:	Phuong Nguyen, PE; CR Associates (CRA)
DATE:	August 19, 2024
RE:	Tejon Ranch Centennial Fire Evacuation Analysis – Technical Memorandum

The purpose of this technical memorandum is to assess the time required for emergency evacuation under several scenarios, assuming a wind-driven fire that results in an evacuation affecting the Tejon Ranch Centennial Project ("Project") and surrounding communities.[1] The following discussion of evacuation traffic simulations is not intended to be an Evacuation Plan, nor include elements typically found in an Evacuation Plan. The sole purpose of the traffic simulations is to focus on the vehicle travel times in simulated evacuation events.

Background and Purpose

This memorandum provides a summary of the traffic simulations conducted for evacuation of the Project and surrounding community due to a wildfire. The simulations have been conducted for a variety of evacuation scenarios described below. Modeling potential evacuation traffic impacts requires that numerous assumptions be made to address many variables that will impact a real-life evacuation scenario, including the number of existing vehicles in the community, the number of Project vehicles that will need to evacuate, the roadway capacities and whether enhancements are provided (e.g., extra lanes, lane widening, signaling intersections), the total number of intersections and how they will be operating, the final destination, the targeted evacuation area, the total mobilization time, vegetation communities, weather and wind, fire spread rates, humidity, topography, risk to homes, locations of ignitions and new fire starts, and lead time needed, etc. There are many hundreds or thousands of potential model scenarios, and every fire scenario poses variations that regularly change and are reassessed "real-time" during a wildfire. Agencies involved in implementing an evacuation order would not rely on a project-specific evacuation plan, but on situational awareness and agency created wildfire pre-plans, which act as operational tools to provide high-level fire assessments, identify critical infrastructure and assets, identify preferred evacuation approaches, and provide key safety information to inform evacuation decision-making.

The following analysis is intended to present representative evacuation scenarios using available information, conservative assumptions, and an industry-based modeling technology. In an actual emergency, Unified Command[2] will take into account numerous factors including fire location and spread rates, wind speeds and direction, humidity, topography, fuel loading, emergency access routes, evacuation routes, shelter-in-place options, time needed to evacuate, and other variables, and, after taking into account such factors and variables, will issue specific evacuation or shelter-in-place directives consistent with the process and protocols outlined in the Los Angeles County Emergency Operations Plans. During a wildfire,

[1] This memorandum was prepared with technical fire behavior input from Dudek's Urban Forestry + Fire Protection team.
[2] As defined in the FEMA Glossary, for incidents involving multiple jurisdictions, a single jurisdiction with multiagency involvement, or multiple jurisdictions with multiagency involvement, unified command allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.

nearby residents and the Project's residents should comply with those directives from authorities and first responders conducting the evacuation or emergency response. The evacuation traffic model used herein is appropriate for planning and comparison purposes but will likely not be relied on by first responders and should not be relied on by Incident Commander in time of an emergency. However, it provides useful information that will be provided to agencies and emergency managers and may inform strategic response plans in terms of evacuation timeframes and contingency options.

The roadway network and vehicle input assumptions have been selected to simulate targeted evacuations scenarios, based on potential fire location and direction as well as at different stages of Project implementation, as detailed in Table 2. Additionally, each of these scenarios assumes evacuation scenario that would occur during a weekend day (Saturday) when the Project's residents are home, and nearby homes are likely to be fully occupied. As it is most likely that phased evacuation orders would be given to provide for a more orderly evacuation. It is also likely that fewer residents would be present nearby if the evacuation happened during a time that the Project was not at full occupancy (e.g., a weekday afternoon); and, therefore less potential for evacuation traffic, a Saturday afternoon evacuation represents a reasonably conservative assumption for evacuation traffic conditions from the Project and surrounding areas.

The wildfire evacuation scenarios selected for this analysis were based on a comprehensive approach that included review of fire history, review of recent fires (e.g., 2014 Pine Fire, 2020 Ridge Fire, 2024 Max Fire[3], 2024 Post Fire[4]), fire behavior science, area topography, fuel types and the evolved approach to evacuations which have become increasingly more surgical instead of large, area-wide evacuations. Accordingly, given the highest probability wildfire scenarios that would result in evacuation, it is anticipated that specific neighborhoods and communities would be evacuated in a phased approach. The construction of the Project will adhere to the most recent building and fire code standards, which includes a number of fire safety precautions for properties situated within a Fire Hazard Severity Zone. Once the Project has been fully implemented and the Project site has become increasingly hardened with a singular WUI interface, the structures in the internal neighborhoods would no longer be considered part of the WUI; however, these structures will have been constructed to CBC and CFC standards for development in Very High Fire Hazard Severity Zones (e.g., Chapter 7A).

During a wildfire, a targeted portion of the Project site's population would likely be evacuated as a precautionary measure. This may be combined with targeted evacuations within the existing community of Neenach and surrounding residence. This type of evacuation is consistent with management of recent wildfires throughout southern California and Los Angeles County, where the phased evacuation practice has been implemented with great success and continues to be refined through real-time application. The phased evacuation approach was utilized in the recent fires including the 2024 Apache Fire in Ventura, CA, 2024 Post Fire in Gorman, California, 2023 Rabbit Fire in Riverside, CA, all of which included early evacuation warnings issued for vulnerable areas.

[3] https://ktla.com/news/local-news/max-fire-fire-raging-in-lancaster-threatening-hundreds-of-homes/
[4] https://twitter.com/search?q=(%23PostFire)%20(from%3ALACoFDPIO)&src=typed_query&f=top

Project Description

Centennial Specific Plan is a planned new town located east of the I-5 Freeway and adjacent to SR-138 in northwest unincorporated Los Angeles County. Comprising approximately 12,323 acres, the Specific Plan proposes development of both residential and nonresidential uses. Proposed are a maximum of 19,333 dwelling units, ranging from multi-family attached homes to low-density, single family detached units. The nonresidential component includes 10,097,208 total square feet of nonresidential commercial and business park development. By design, it includes a wide range of transportation demand management (TDM) features as an integral part of the Project. The northern boundary of the project area extends to the Los Angeles/Kern county line and the southern boundary extends to just south of SR-138. The western boundary begins approximately one mile east of I-5 and the eastern boundary is just east of 300th Street West.

Analysis Methodology

The analysis conducted for the Project was based on review of best practices research as well as the State of California Attorney General "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act (AG Guideline)" report. Section IV.C. of the AG Guidance report provides recommendations on Analyzing and Mitigating Wildfire Risk Impacts Under CEQA – including recommendations on analyzing a project's impact on evacuation and emergency access.

Per the AG Guidance, the addition of new developments in high wildfire risk areas can impact the evacuation of both new residents and the existing population, as well as hinder emergency responders' firefighting access. The report suggests that this impact could increase the risk and extent of large-scale fire spread and affect community safety. The report also suggests that Environmental Impact Reports (EIRs) should evaluate these impacts during construction and over the project's lifetime, with a higher level of analysis for low-density developments in wildland-urban interfaces compared to higher density infill projects in developed areas. Further, the report recommends that Projects in high wildfire risk areas should include evacuation modeling and planning at the review and approval stage, taking into account roadway capacity, evacuation timing, alternative plans, impacts on existing evacuation plans, emergency access adequacy, and traffic modeling. This would ensure that proposed developments facilitate emergency access and ease evacuation constraints and allow for design modifications that address wildfire risk.

Consistent with the AG Guidelines, the analysis presented herein accounts for roadway capacity and congestion that may occur during an evacuation, existing emergency response plan, potential evacuation scenarios, and evaluated modeled travel times for occupants (e.g., residents, employees, visitors, etc.) of the Project and the occupants surrounding communities to evacuate to nearby urban areas/freeway access in case of a fire emergency.

Existing Evacuation Plan and Practices

Current evacuation practice typically targets the scope of the evacuation only to the area in immediate danger (evacuation order area) and placing a larger area on standby for evacuation (evacuation warning or alert area). This practice allows for better evacuation operations, reduces gridlock, and reserves sufficient travel way for emergency vehicles. The practice of

evacuating areas most at risk first has become standard during evacuations. The most recent Office of the State Fire Marshal (OSFM) Incident Update for the 2024 Post Fire, referenced above, lists evacuation orders for at-risk areas that are the priority, as well as listing areas that have restricted access to the public, in the event they would need to be evacuated. Further, the evacuation warning platform Genasys Protect, assigns each designated evacuation zone with a level of evacuation anticipation. If an evacuation zone has received an evacuation order, the status will state 'EVACUATION ORDER' and the zone will be shaded red on the map. The zones that are anticipated to evacuate soon will have an 'EVACUATION WARNING' status, and the zone will be shaded yellow.

Methodical Approach

The County of Los Angeles Emergency Operation Plan describes an organized and systematic process of relocating people from an area or location that is at risk or threatened by an imminent hazard or disaster. Los Angeles County utilizes two levels of evacuation terminology:

1. Evacuation Warning: Potential threat to life and/or property. Those who require additional time to evacuate, and those with pets and livestock should leave now.
2. Evacuation Order: Immediate threat to life. This is a lawful order to leave now. The area is lawfully closed to public access.

Evacuations in Los Angeles County are managed in a consistent manner as evacuations in most other California jurisdictions (see wildfire evacuation summaries on following page). As evacuation methods, approaches, and technologies have been developed, tested, and adopted, they tend to be implemented widely throughout California emergency management agencies. Based on the review of the County of Los Angeles Operational Area Emergency Operation Plan (November 2023), the County of Los Angeles All-Hazards Mitigation Plan (2020), recent wildfire evacuation efforts, daily briefings[5], and other relevant information, the current evacuation practices are led by the local incident commander. These practices involve collaboration between fire departments and various law enforcement agencies. Depending on the nature of the emergency, multiple departments may work together during the evacuation process. The responsibilities of these departments are detailed in the County of Los Angeles Operational Area Emergency Operation Plan and summarized below:

Fire Department Responsibilities

The Fire Department is responsible for establishing command of the incident, conducting situation assessments to evaluate the need for evacuations, setting up an Incident Command Post (ICP) with sufficient space for representatives from assisting agencies, and announcing its location. Additionally, the Fire Department must request a law enforcement agency representative to respond to the ICP to ensure coordinated efforts during the evacuation process.

Law Enforcement Responsibilities

Law enforcement's responsibilities include sending a supervisor of the rank of Sergeant or above to the ICP and requesting a Deputy to work with the Operations Section Chief. They mobilize field resources to maintain ingress and egress routes for emergency vehicles, establish perimeter control to keep unauthorized vehicles and

[5] https://twitter.com/search?q=(%23PostFire)%20(from%3ALACoFDPIO)&src=typed_query&f=top

pedestrians out of the involved area, conduct evaluations as directed by the Incident Commander, establish anti-looting security patrols when safe to do so, and maintain a Unit log to document their activities during the incident.

Joint Fire and Law Enforcement Responsibilities

Fire and law enforcement agencies collaborate to evaluate and determine whether the law enforcement role will be as an Agency Representative or Unified Incident Commander, depending on the scope of the incident. They assign a law enforcement supervisor to work closely with the Operations Section Chief or Incident Commander to determine evacuation areas. Together, they assess and validate the need for an Evacuation Warning, Evacuation Order, and/or Shelter in Place, determine the location, potential size, and direction of the incident's travel or spread. Unified Commanders also assess the potential for incident spread and request appropriate resources to complete the evacuation and concurrently mitigate the incident.

On-the-ground conditions combined with ICP staff experience determine which areas need to be evacuated and which roadways may be closed to prioritize evacuating traffic. The ICP may issue evacuation orders out of an abundance of caution. For example, during the Post Fire, the ICP issued an evacuation order to all campers in the vicinity of the fire due to prevailing wind conditions[6]. Some of these evacuation orders were downgraded to evacuation warnings over the next few days as weather conditions changed. Once the ICP determines the need to issue an evacuation order or warning, the order/warning is communicated to the public in the affected area via various communication mediums. Given the diverse needs of the community, the County employs a variety of alert and warning tools to ensure effective communication during emergencies, including the National Emergency Alert System, Wireless Emergency Alerts, Non-Weather Emergency Messages, Alert LA County, websites, social media, traditional media, and field notifications.

The approach summarized above is similar to most other California jurisdictions, including the San Diego County Operational Area Evacuation and Repopulation Policy #8-B[7] which provides the following procedures when an evacuation is needed:

Fire Department Responsibilities

- Establish command of the Incident
- Conduct a situation assessment and evaluate the need for evacuations
- Establish an Incident Command Post (ICP) with sufficient room for representatives from other assisting agencies and announce its location
- Request Agency Representative from Law Enforcement to respond to the ICP.

Law Enforcement Responsibilities

- Assign supervisor of the rank of Sergeant or above to the Incident Command Post and request a Deputy to locate with Operations Section Chief
- Maintain ingress and egress routes for emergency vehicles

[6] https://www.youtube.com/watch?v=_sdQ7NCtff4
[7] https://sdoparea.org/wp-content/uploads/documents/8B%20Evacuation%20and%20Repopulation.pdf

- Establish perimeter control, keeping unauthorized vehicles and pedestrians out of the involved area. Conduct evaluations, if required, at the direction of the Incident Commander
- Establish anti-looting security patrols, when safe to do so, for evacuated areas within the perimeter
- Maintain a Unit log

Joint Fire and Law Enforcement Responsibilities

- Evaluate and determine whether Law Enforcement role will be as an Agency Representative or Unified Incident Commander, depending on the scope of the Incident
- Assign a Law Enforcement supervisor to work closely with the Operations Section Chief or Incident Commander, whomever is determining the areas to be evacuated
- Assess and validate the need for an Evacuation Warning, Evacuation Order, and/or Shelter in Place — Determine the location, potential size, and direction of Incident travel or spread
- Unified Commanders determine potential for Incident spread and request the appropriate resources to complete the evacuation and mitigate the Incident concurrently

Based on the San Diego County Operational Area Evacuation and Repopulation procedure, an evacuation order requires the movement of community members out of a defined area due to an immediate threat to life and property from an emergency incident. An evacuation order issued when there is a potential for or an actual threat to civilian life, within 1 to 2 hours of such determination or when the IC deems it necessary to protect civilians. The purpose of an evacuation warning, in comparison, is to alert community members in a defined area of a potential threat to life and property from an emergency incident. An evacuation warning may be issued when the potential or actual threat to civilian life is more than 2 hours away. The timing of an evacuation order can vary widely between different fires, depending on factors such as fire conditions, fuel availability, wind speed, and other variables. The IC, composed of firefighting experts, will determine the evacuation area and timeline.

Examples of Strategic Evacuation

Methodical and strategic evacuation orders ensure that resources are deployed where needed and support a manageable traffic flow out of the area under threat. This approach is demonstrated through several recent wildfires where evacuation orders were issued to target populations, several examples of recent evacuations are provided below:

Border Fire 32, San Diego County

During the Border Fire 32 in August 2022[8] for example, on August 31st, the San Diego County Sheriff's Department shut down SR-94 at 2:57 p.m. before issuing an evacuation order at 3:28 p.m.[9]. Such road closures are typically implemented to ensure that evacuating traffic has priority and to maintain clear pathways for law enforcement, first responders, and firefighting equipment.

[8] https://x.com/SDSheriff/status/1565096377494818817
[9] https://x.com/SDSheriff/status/1565104232688074752

Lilac Fire December 2017, San Diego County[10]

Early in the fire, Sheriff's deputies and firefighters focused on evacuating and rescuing residents in immediate danger. County and local agencies implemented a phased evacuation of potentially affected areas with 14 separate evacuation campaigns (notifications sent to affected areas) – sequencing of evacuation areas occurring between 12/7/2017 at 1:52 pm to 12/7/2017 10:17 pm. The Oceanside Police Department utilized 3 separate notification campaigns as the fire moved toward and into their jurisdiction between 5:49 pm and 9:19 pm 12/7/2017.

The Sheriff's Department deployed a platoon of 50 deputies, including four sergeants and a lieutenant, 24 hours a day for the first several days of the incident. Sheriff's deputies prepare for wildfires with mandatory annual training, which includes fire behavior, evacuations, and emergency operations

Thomas Fire 2017, Ventura County

During the Thomas Fire, a targeted evacuation order was issued only to areas in immediate danger. Law enforcement first targeted communities in the Carpinteria area with specific emphasis that the evacuation order is only for the identified communities in order to reduce the number of evacuees on roadways being utilized for evacuation. Evacuation orders continued to change throughout the duration of the fire, focused only on the highest risk populations. This approach has been confirmed by numerous fire and law enforcement agencies at project meetings, public hearings, and interviews with Dudek personnel.

Given that the Project's Specific Plan is a comprehensive plan for the long-term development of a new master planned community and all residential and commercial structures within the Project site would be required to adhere to the latest Building Code and Fire Code, paired with the nature of the current phased evacuation approach, it is unlikely that all of the Project would need to evacuate simultaneously during a wildfire scenario. The Otay Ranch General Development Plan (GDP) within the City of Chula Vista, located in San Diego County, exemplifies this scenario. Historical incidents such as the 2007 Harris Fire[11], and the 2023 Border Fire[12] predominantly affected the open spaces, but their progression was largely halted at the fringes of urbanized areas. Notably, during these fire events, evacuation orders were confined to the peripheral areas of the Otay Ranch GDP. Similarly, during the 2024 Max Fire, firefighters concentrated on protecting existing structures, which resulted in the fire being contained at the outskirts of the City of Lancaster[13].

Furthermore, as a Specific Plan, the Project presents enhanced defensibility relative to smaller-scale developments and could potentially serve as a strategic evacuation hub and safety zone for adjacent areas more susceptible to wildfire, such as the Neenach community to the east of the Project site. For instance, in a scenario where a wildfire endangers the Neenach community, Neenach residents could reach the Project site in approximately 10 minutes. Evacuating to the Project site would provide for a significantly shorter evacuation

[10] Lilac Fire After Action Report. County of San Diego 107 pp.
[11] https://www.sandiegocounty.gov/oes/docs/2007_SanDiego_Fire_AAR_Main_Document_FINAL.pdf
[12] https://www.sandiegouniontribune.com/news/public-safety/story/2023-07-28/forward-progress-stopped-on-border-fire-in-east-county-evacuation-warning-lifted
[13] https://ktla.com/news/local-news/max-fire-fire-raging-in-lancaster-threatening-hundreds-of-homes/

compared to the 30 minutes required to reach developed areas to the east such as Antelope Acres or the City of Lancaster.

Evacuation Model Methods and Assumptions

The methodology for fire evacuation analysis is evolving as new data and best practices become available. Before conducting the evacuation analysis, a thorough historical review of fire evacuation behavior and practices was undertaken to ensure the analysis accurately reflects local conditions. The analysis conducted was based on extensive review of best practice research at the time of the analysis. These foundational best practices informed the evacuation analysis, and a selection of the most relevant and recent research is included in **Attachment A**.

According to the research, wildfire evacuation analysis is not a one-size-fits-all approach; certain tools and practices are better suited for jurisdiction-wide analysis, including transportation modeling, roadway capacity-based analysis, GIS analysis, and custom tools. Notably, "A Review of Traffic Models for Wildland-Urban Interface Wildfire Evacuation" (Bergstedt, 2017) identified 12 tools for evacuation analysis, a number that continues to grow as more data and computing power become available.

Vissim, although not the sole tool available for fire evacuation analysis, was chosen for its capability to simulate driver behaviors, particularly undesirable behaviors such as competing for the right-of-way during evacuations. This capability is endorsed by the Bergstedt research paper and is utilized by various agencies, including the Utah Department of Transportation and the Florida Department of Transportation for hurricane evacuation analysis (Bergstedt 2017). Vissim's popularity and widespread use in evacuation analysis are evidenced by its citation in over 700 research papers, reflecting its effectiveness in mirroring human behavior. Despite the availability of other tools, Vissim was deemed the most suitable for this project's evacuation analysis.

In Vissim simulations, roadway capacity is accounted for through multiple model inputs. The model incorporates roadway features and driver behaviors that impact the actual flow of traffic on a road segment. For instance, it includes elements like posted speed limits and reduced speed zones, which are typically found on curvy road sections and at all points where turns are made. These features cause vehicles to slow down or maintain an appropriate speed in these areas. Reduced speed zones simulate the need for vehicles to decelerate to navigate turns, and when combined with driver behavior, they effectively replicate real-world conditions. For example, when a driver slows down while navigating a curve, the following vehicles must also brake, creating a domino effect typical of evacuation traffic characterized by frequent stop-and-go patterns. A comparison between the theoretical roadway capacity obtained from the Centennial Specific Plan Traffic Study conducted by Stantec in May 2017, and the actual roadway processing capacity during an evacuation measured from Vissim is provided in **Attachment B.**

Primary Evacuation Routes

It is assumed that traffic evacuating from both the Project and nearby communities/land uses would use the closest available evacuation routes for leaving the area. Evacuation routes were selected based upon review of the Project site, available evacuation routes, and the quickest way to leave the at-risk areas. The number of evacuation roadways accessible to each village depends on the development phase of the specific plan. **Attachment C** outlines the evacuation

roadways by development phases, while Figure 3 in Attachment C shows available backbone roadways at the full buildout of the specific plan.

No contraflow lanes[14] were assumed, and access for first responders and law enforcement would be via inbound roadways. Two-way travel was assumed, with evacuating vehicles traveling outbound to the designated Safe Zone. It is assumed that first responders, law enforcement or other coordinating agency personnel will conduct traffic control (e.g., direct traffic at identified intersections and on/off ramps) during the evacuation process, as detailed in the County of Los Angeles Operational Area Emergency Operation Plan[15]. Should evacuation managers determine whether contraflow is preferred or necessary, evacuation capacity would increase while evacuation times would decrease.

The Centennial Specific Plan Traffic Study conducted by Stantec in May 2017 and the Centennial Specific Plan Supplemental Traffic Study, both collectively referred to as 2017 Traffic Studies, assumed that the Project would improve SR-138 to a four-lane expressway from I-5 to 240th Street West and to a limited access conventional four-lane highway from 240th Street West to 190th Street West, with right-of-way reserved for a six-lane expressway between Gorman Post Road and 300th Street West, or comparable improvements consistent with the Northwest 138 Corridor. However, to be conservative, it is assumed that SR-138 would remain as a two-lane highway for all analysis scenarios.

Evacuation Time

Fire evacuation orders, like most evacuation events, can be issued at any time, day or night, depending on a wildfire's location and movement, making it unpredictable when an evacuation order might actually occur. According to the "Review of California Wildfire Evacuations from 2017 to 2019[16]" report, the timing of evacuations for the Thomas Fire varied, with a significant portion occurring at night (between 9PM and 4 AM), followed by the morning, 10 AM to noon. **Figure 1** below, Hourly Percent of Evacuees – Thomas Fire, summarizes the evacuation timings for the Thomas Fire.

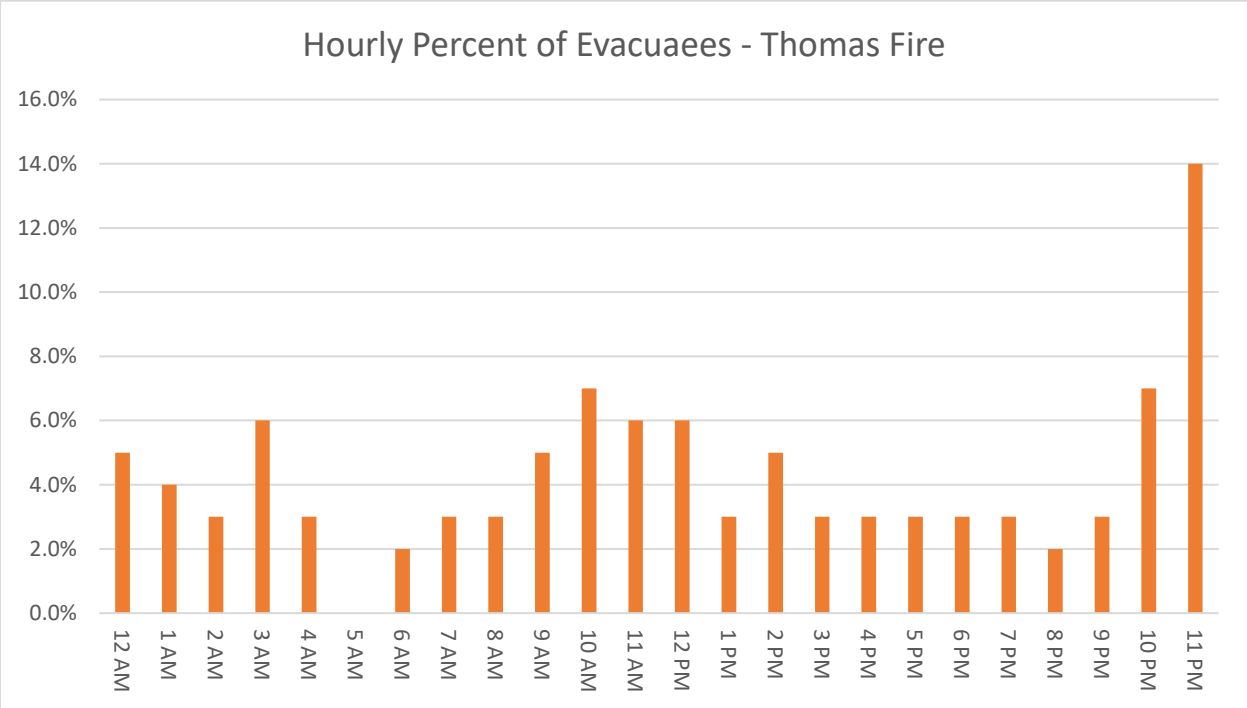
Considering that the Project is a Specific Plan, a conservative analysis assumes the evacuation order would be issued during a weekend noontime period when residents are home and commercial centers are operational. It is assumed that schools are not in session, and that supporting land uses such as parks and recreation areas are primarily utilized by the Project's residents, therefore not generating additional vehicles. In a real evacuation, it is unlikely that all land uses would be at full capacity. This is an extremely conservative approach but is consistent with best practices to understand expected worst-case evacuation scenario timelines.

[14] Contraflow or lane reversal involves directing traffic to use lanes coming from the source of a hazard to move people away from the hazard. Such a strategy can be used to eliminate bottlenecks in communities with road geometries that prevent efficient evacuations or to facilitate traffic flow out of a major urban area. Among the considerations in planning emergency contraflow are whether sufficient traffic control officers are available, potential negative impact on responding fire apparatus, access management, merging, exiting, safety concerns, and labor requirements. Contraflow configurations must be carefully planned based on on-site factors and should not be implemented in an *ad-hoc* fashion. Dudek July 2014. "Wildland Fire Evacuation Procedures Analysis" for City of Santa Barbara, California, page 65.

[15] County of Los Angeles Emergency Operation Plan page 97 stated that the sheriff department responsibilities broad range of tasks, including search and rescue operations, evacuation coordination, traffic control, and ensuring order in affected areas. Deputies are deployed to disaster sites to provide immediate assistance, assess the situation, and support relief efforts. Additionally, they establish a law enforcement command and collaborate with emergency management to establish vital communication channels for disseminating critical information to the public.

[16] https://escholarship.org/uc/item/5w85z07g

Figure 1 – Thomas Fire Evacuation Percentage by Time of Day



Study Area

The selection of the study area was guided by several factors, including each community's or area's access to the evacuation roadway network, proximity to the Wildland Urban Interface (WUI), and distance to SR-138. The study area was divided into 11 evacuation zones, all of which are within the Project's footprint (each representing individual villages within the project), while one zone encompasses the existing land uses to the east of the Project's site.

The use of these evacuation zones aligns with the County of Los Angeles' Genasys Protect Evacuation[17] notification system, an evacuation software that segments the county into different evacuation areas based on development patterns, roadway networks, land uses, and other factors. **Table 1** displays the proposed land use by village, **Figure 2** displays the conceptual phasing plan, and **Figure 3** displays the proposed villages. The zones established for this evaluation are the consultant team's collective professional opinion and are meant to mimic or be similar to how the County may create zones using Genasys. Regardless of the final zone delineations and differences between this study and the final zones, the evacuation scenarios are anticipated to be managed in a similar method.

As shown, the Project consists of 9 villages, institutional/civic land use, business park that will be develop over 10 phases, which consist of the following assumptions:

[17] https://finance.yahoo.com/news/los-angeles-county-awards-5-130000497.html?

- **Phase 1 -** Includes Village 1: 1,825 residential dwelling units, 141,570 SF of commercial, 15 acres school, 38 acres of park, and 87,120 SF of recreation.
- **Phase 2 -** Includes Village 3: 1,872 residential dwelling units, 294,030 SF of commercial, 15 acres school, and a 3 acre park.
- **Phase 3 -** Western portion of Village 7 (Village 7 West), western portion of the Business Park (Business Park West), and buildout of the Institutional and Civic land use: Approximately 723 residential dwelling units, approximately 2,881,000 SF of business park, and approximately 1,568,160 SF of institutional land use.
- **Phase 4 -** Eastern portion of Village 7 (Village 7 East): Approximately 723 residential dwelling units.
- **Phase 5 -** Western portion of Village 9 (Village 9 West): Approximately 787 residential dwelling units.
- **Phase 6 -** Village 6 and central portion of the Business Park (Business Park Central): 1,645 residential dwelling units and approximately 1,920,000 SF of business park.
- **Phase 7A -** Eastern portion of Village 9 (Village 9 East): Approximately 787 residential dwelling units, 10 acres school, and 13 acres of park.
- **Phase 7 -** Western portion of Village 8 (Village 8 West): Approximately 1,421 residential dwelling units
- **Phase 8A –** Eastern portion of the Business Park (Business Park East): approximately 1,822,000 SF of business park.
- **Phase 8 -** Village 2 & southern portion of Village 4 (Village 4 South): Approximately 2,768 residential dwelling units, 98,010 SF of commercial, and 12 acres of park.
- **Phase 9 -** Village 5 and northern portion of Village 4 (Village 4 North): Approximately 5,360 residential dwelling units, 87,120 SF of commercial, 15 acres school, and 31 acres of park.
- **Phase 10 -** Eastern portion of Village 8 (Village 8 East): Approximately 1,422 residential dwelling units, 108,900 SF of commercial, 15 acres school, and 19 acres of park.

Table 1 – Land Use by Village

Village	Land Use	Residential (DU)	Commercial (SF)	Business Park (SF)	Institutional (SF)	School (Acres)	Park (Acres)	Recreation/ Entertainment (SF)
1	VLDR	126						
	LDR	1,210						
	MDR	234						
	HDR	255						
	Total	**1,825**	**141,570**		-	**15**	**38**	**87,120**
2	LDR	930						
	MDR	873						
	HDR	480						
	Total	**2,283**	**98,010**		-	-	**12**	**6,970**
3	MDR	972						
	HDR	600						
	VHDR	300						
	Total	**1,872**	**294,030**		-	**15**	**3**	**0**
4	VLDR	410						
	LDR	560						
	Total	**970**	-		-	-	**9**	**17,424**
5	VLDR	116						
	LDR	1495						
	MDR	2,709						
	HDR	555						
	Total	**4,875**	**87,120**		-	**15**	**22**	-
6	VLDR	286						
	LDR	1,080						
	MDR	279						
	Total	**1,645**	**54,450**		-	**60**	**34**	-
7	VLDR	112						
	LDR	845						
	MDR	324						

Village	Land Use	Residential (DU)	Commercial (SF)	Business Park (SF)	Institutional (SF)	School (Acres)	Park (Acres)	Recreation/ Entertainment (SF)
	HDR	165						
	Total	**1,446**	**163,350**		**-**	**15**	**13**	**8,712**
8	VLDR	96						
	LDR	2,450						
	MDR	297						
	Total	**2,843**	**108,900**		**-**	**15**	**19**	**-**
9	VLDR	124						
	LDR	1,090						
	MDR	360						
	Total	**1,574**	**-**		**-**	**10**	**13**	**10,454**
No Village				**7,363,818**	**1,568,160**			

Figure 2 – Conceptual Phasing Plan

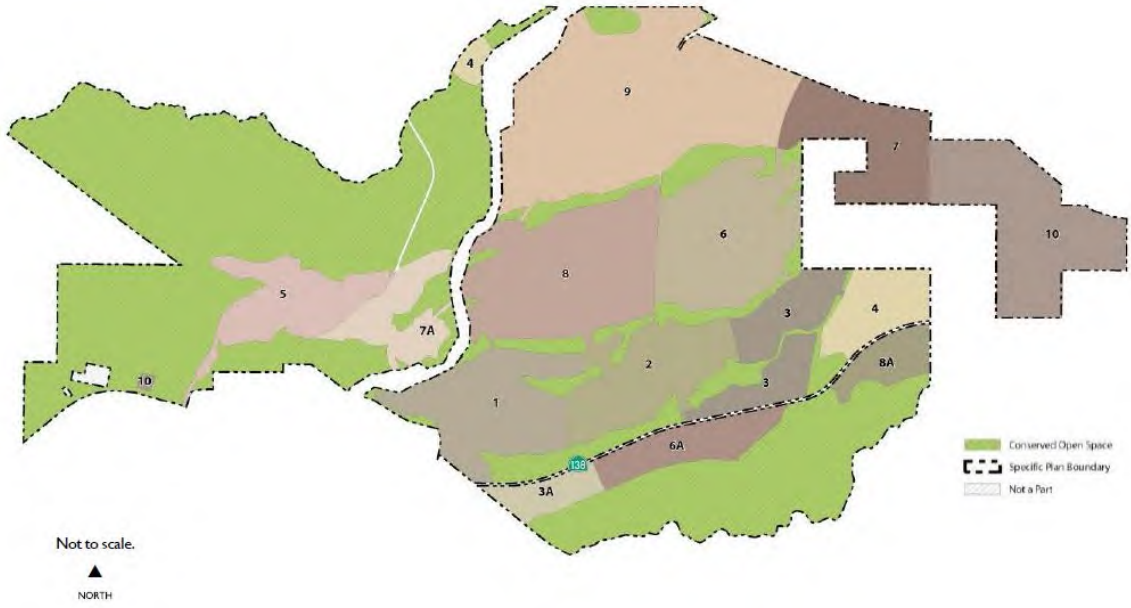
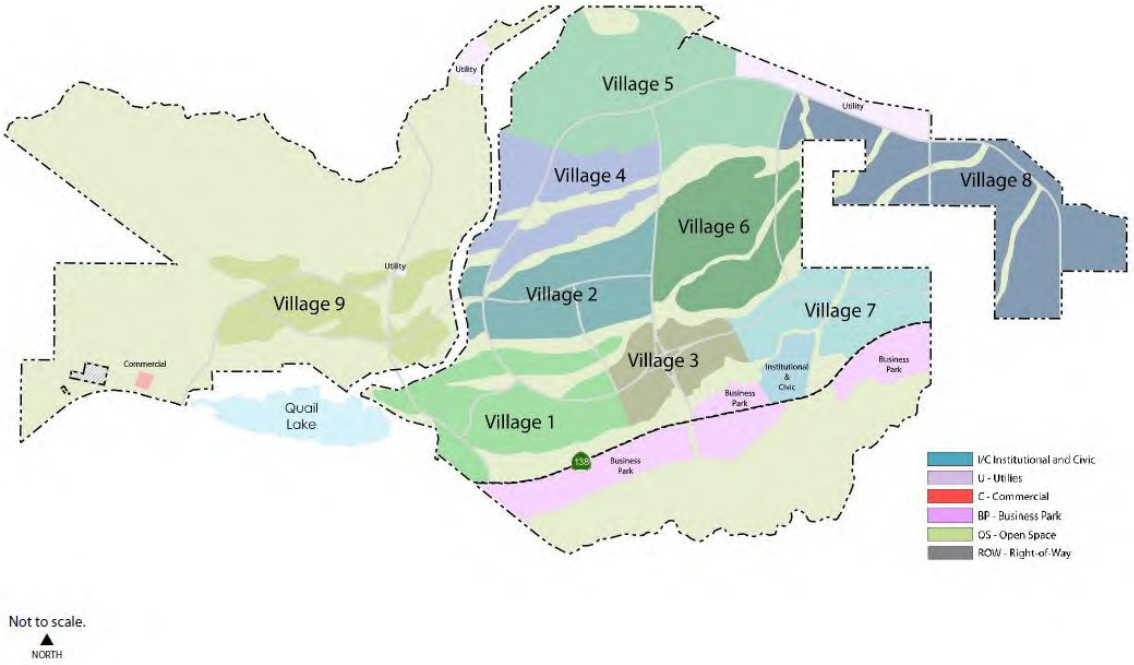


Figure 3 – Proposed Villages



Study Scenarios

As previously discussed, fire evacuation is not a one size fit all approach, and even though mass evacuation provides a conservative analysis, current evacuation practice indicates that this approach is not desirable due to the potential of creating high level of congestion and prevent those in at risk area from evacuating safety. Thus, the analysis presented in this report follow current fire evacuation approaches, which assume that ICP staff and law enforcement would issue targeted evacuation warnings and orders to areas that are at risk instead of a full evacuation of the specific plan.

As the Project would be constructed over multiple years, the development phases were grouped together in order to analyze the different potential evacuation scenarios that may occur as the project is developed over time. The phases are grouped together in set of every two phases, resulting in a total of five different land use scenarios.

Based on a review of historical fire conditions and fire modeling conducted by Dudek, landscapes around the Project site could potentially support wildfire that, in the most likely scenarios, would approach the Project site from the south/southeast, north/northeast, or west/northwest, depending on the fire's point of origination. Therefore, for each of the land use scenarios, an analysis was conducted for each potential direction of fire approach, resulting in a total of 15 different scenarios. These scenarios are summarized in Table 2 below.

Safe Zone

Based on Dudek's review of the area's fire history, fires have halted along developed areas adjacent to wildland fuels and have not historically progressed into the more densely urbanized, irrigated, and hardscaped areas. Specifically, none of the historical fires encroached beyond the periphery areas within the wildland urban interface area of the Los Angeles County. Recent fires such as the Max Fire (2024), Post Fire (2024), Jerry Fire (2019), Merwin Fire (2015), and Lago Fire (2011) were all stopped at or prior to reaching the urbanized area or I-5. Thus, it is assumed that during the earlier phases of the specific plan, evacuees are considered "safe" once their vehicles reach an area outside the evacuation order zone. For scenarios 1 through 3, which would occur early in the project's buildout process, evacuees are considered "safe" when their vehicles arrive at either the I-5/SR-138 interchange to the west, or the community of Neenach to the east. In the later scenarios,which would occur later in the project's buildout process, it is assumed that some evacuees will be directed to other villages or developed areas (e.g., Institutional & Civic) within the project site that are not at risk of fire and/or to offsite locations, In such later scenarios, evacuees are considered "safe" once they arrive at the respective receiving villages or at the onsite or offsite evacuation point otherwise indicated in Table 2.

Evacuating Vehicles

The projected number of vehicles evacuating from or within the study area is based on a combination of various data sources: Parcel Quest's parcel map data for land use, vehicle ownership averages from the US Census Bureau, aerial imagery from Nearmap, and relevant environmental documents. Breakdown of the calculations for evacuating vehicles is as follows:

Existing Residential: This is obtained by multiplying the total number of households (from Parcel Quest parcel map data) with the average vehicle ownership, which stands at 2.07 vehicles per household as per the US Census Bureau.

For this analysis, it is assumed that during the earlier phases of the Project, existing land use to the east of the Project site will evacuate in the same direction as the Project's traffic. Once the Project is developed, the Project site can serve as an evacuation zone for existing land uses that need to evacuate westward toward the Project site. Therefore, the evacuation times for existing land uses are only included in scenarios where the Project's traffic would potentially share the same evacuation roadway as the existing land uses.

Proposed Project: This is calculated by multiplying the quantities of land use by the following sources:

Residential Land Use: Total number of dwelling units x average vehicle ownership.

Nonresidential Land Uses: Total square footage x parking rate derived from the Institute of Transportation Engineer (ITE) Parking Generation Manual.

Land use quantities were obtained from Stantec and Appendix E of the Centennial Specific Plan Traffic Study (November 2017).

Shadow Evacuees: These are individuals who choose to evacuate out of an abundance of caution, even without an official evacuation order. The "Review of California Wildfire Evacuations from 2017 to 2019" report found that approximately 30% of evacuees fall into this category.

For a reasonable analysis, these scenarios assumed that two percent (2%)[18] of the evacuating vehicles are heavy vehicles (trucks with trailers). Two percent is the nationally acceptable ratio of heavy vehicles to all vehicles.

Average vehicle ownership, residential units, and evacuating vehicles calculations are provided in **Attachment D**. **Table 2** displays the number of vehicles evacuating under each scenario.

[18] https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_599.pdf (p.5).

Table 2 – Study Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
1	Phase 1-2	Village 1 & Village 3	South/Southeast	75% via SR-138 westbound toward I-5 25% via internal road toward I-5	Village 1 Village 3 Existing	4,026 4,330 200
2	Phase 1-2	Village 1 & Village 3	North/Northeast	25% via SR-138 westbound toward I-5 25% via internal road toward I-5 25% via internal road toward Lancaster 25% via SR-138 eastbound toward Lancaster	Village 1 Village 3 Existing	4,026 4,330 200
3	Phase 1-2	Village 1 & Village 3	West/Northwest	75% via SR-138 eastbound toward Lancaster 25% via internal road toward Lancaster	Village 1 Village 3 Existing	4,026 4,330 200
4	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	South/Southeast	50% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1	50% of Village 7 Business Park West Institutional & Civic	1,578 981 1,796
5	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1 25% via SR-138 eastbound toward Lancaster	50% of Village 3 Village 7 Existing	2,165 3,156 200
6	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional/Civic land use 50% via SR-138 eastbound toward Lancaster	Village 1 30% of Village 3 Business Park West Existing	4,026 1,299 981 200
7	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	South/Southeast	25% via SR-138 westbound toward I-5 25% via internal roadway toward Village 1 25% via internal roadway toward Village 3 25% via internal roadway toward Village 6	50% of Village 7 Business Park West Business Park Central Institutional & Civic	1,578 981 654 1,796

Table 2 – Study Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
8	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1 and Village 3 25% via SR-138 eastbound toward Lancaster	Village 6 Village 7	3,556 3,156
9	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional & Civic 50% via SR-138 eastbound toward Lancaster	Village 1 Village 9 West Existing	4,026 2,321 200
10	Phase 1-8	Village 1, 3, 7 E & West, Village 9 West, Village 6, Village 9 East, Village 8 West, Village 2, Village 4 South	South/Southeast	25% via SR-138 westbound toward I-5 25% via internal roadway toward Village 1 25% via internal roadway toward Village 3 25% via internal roadway toward Village 6	50% of Village 7 Business Park West Business Park Central Business Park East 30% of the Institutional z& Civic	1,578 981 654 621 539
11	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	North/Northeast	25% via internal roadway toward Village 1 25% via internal roadway toward Village 3 25% via internal roadway toward Village 7 25% via internal roadway toward Institutional & Civic	30% of Village 2 Village 4 South 50% of Village 6 Village 8 West 30% of Village 9	740 2,380 1,778 2,035 1,025
12	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	West/Northwest	25% via internal roadway toward Village 3 25% via internal roadway toward Village 7 25% via internal roadway toward Business Park 25% via internal roadway toward Institutional & Civic	30% of Village 1 30% of Village 2 Village 4 South Village 9	1,208 740 2,380 3,415

Table 2 – Study Scenarios and Evacuating Vehicles Calculation

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles
13	Phase 1-10	Buildout	South/Southeast	25% via SR-138 westbound toward I-5	Business Park West	981
				25% via internal roadway toward Village 1	Business Park Central	654
				25% via internal roadway toward Village 3	Business Park East	621
				25% via internal roadway toward Village 6/Village 5	30% of the Institutional & Civic	539
					50% of Village 7	1,578
					Village 8 East	3,843
14	Phase 1-10	Buildout	North/Northeast	25% via internal roadway toward Village 1/Village 2	30% of Village 4	1,318
				25% via internal roadway toward Village 3	Village 5	10,451
				25% via internal roadway toward Village 7/Institutional & Civic	30% of Village 6	1,067
				25% via SR-138 Westbound toward Business Park	Village 8 West	2,035
					Village 8 East	3,843
15	Phase 1-10	Buildout	West/Northwest	25% via internal roadway toward Village 3	30% of Village 2	740
				25% via internal roadway toward Village 7	50% of Village 4	2,197
				25% via internal roadway toward Business Park	50% of Village 5	5,226
				25% via internal roadway toward Institutional & Civic	Village 9	3,415

Source: CR Associates (2024), US Census Bureau (2023), Google Maps (2023).

Extreme Wildfire Event

The evacuation analysis set forth below assumes wildfire scenarios where a fire is approaching the Centennial site from the north, northwest, southeast, and west. Fire is not anticipated to the east due to landscape disturbance and lack of a continuous fuel bed. This fire condition is the one most likely to require a large-scale evacuation, and the one that creates the most risk to property and humans.

In California, wildfire-related large-scale evacuations are almost exclusively associated with wildfires that occur on extreme fire weather days, also known as "Red Flag Warning" days. These days occur when relative humidity drops to low levels and strong winds from the north/northeast are sustained. With climate change, periods in which such wildfires occur may increase. During Red Flag Warning days, vegetation is more likely to ignite and fire spread is more difficult to control. In the greater Los Angeles region, these extreme weather days typically occur during limited periods in the late summer, fall and, occasionally, in the spring, but may occur at other times on a less frequent basis. Currently, it is not common to experience more than 10 to 15 Red Flag Warning days in a typical year. Wildfires that occur during these periods of extreme weather are driven by winds – referred to as "Santa Ana" winds – that come from the north or east and blow toward the south or west. Fires driven by these winds move very quickly, making them difficult to control. In response to such fires, emergency managers typically activate pre-planned evacuation triggers that provide warnings for down-wind communities to sequentially be notified of potential evacuation and movement to nearby urbanized areas prior to the fire's encroachment.

Wildfires that occur on non-extreme weather days typically behave in a much less aggressive manner and pose fewer dangers to life and property because they include less aggressive fire behavior and are easier to control. Terrain and fuel are typically the wildfire drivers during these conditions. During these non-extreme weather days, vegetation is much more difficult to ignite and does not spread fire as rapidly. In these situations, firefighters have a very high success rate of controlling fires and keeping them under 10 acres. CALFIRE estimates that 90% of all vegetation fires occur during normal, onshore weather conditions and that such fires account for only 10% of the land area burned. Conversely, the 10% of wildfires that occur during extreme fire weather account for 90% of the land area burned. This data highlights that the most dangerous fire conditions are those related to a fire that moves rapidly due to high winds and low humidity, whereas under normal conditions fires are likely to be controlled with no evacuation or possibly limited extent, focused evacuations.

While it is possible that a fire driven by onshore wind (i.e., from the west) could require evacuation of the Project, such an event would be unusual. Moreover, due to the reduced fire behavior during normal weather periods, the evacuation would not be expected to be a large-scale evacuation of large areas.

Approach

To analyze the evacuation events, CRA conducted simulations using *Vissim*, a microscopic, multimodal traffic flow modeling software used to simulate different traffic conditions. In *Vissim* simulations, roadway capacity is accounted for and each vehicle in the traffic system is individually tracked through the model and comprehensive measures of effectiveness, such as average vehicle speed and queueing, are collected on every vehicle during each 0.1-second

of the simulation. This software enables drivers' behaviors during an evacuation to be replicated. A total of 20 simulations were conducted to yield a reasonable sample size to determine the performance of the study area roadways and impacts during evacuation scenarios. To be conservative, CRA assumed a worst-case traffic condition, in which all vehicles belonging to study area households ordered to evacuate would be used in the evacuation, instead of the necessary number of vehicles needed to evacuate the impacted population. Detailed evacuation analysis information is provided in **Attachment E**.

Evacuation Analysis & Results

Based on the analysis methodology described above, **Table 3** reflects evacuation times for each scenario. A summary of the evacuation time for each scenario is provided below:

Table 3 – Evacuation Time

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hours: Minutes)
1	Phase 1-2	Village 1 & Village 3	South/Southeast	75% via SR-138 westbound toward I-5 25% via internal road toward I-5	Village 1 Village 3 Existing	4,026 4,330 200	2:04 3:37 0:42
2	Phase 1-2	Village 1 & Village 3	North/Northeast	25% via SR-138 westbound toward I-5 25% via internal road toward I-5 25% via internal road toward Lancaster 25% via SR-138 eastbound toward Lancaster	Village 1 Village 3 Existing	4,026 4,330 200	1:33 1:34 0:17
3	Phase 1-2	Village 1 & Village 3	West/Northwest	75% via SR-138 eastbound toward Lancaster 25% via internal road toward Lancaster	Village 1 Village 3 Existing	4,026 4,330 200	2:03 1:36 0:17
4	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	South/Southeast	50% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1	50% of Village 7 Business Park West Institutional & Civic	1,578 981 1,796	1:00 1:54 1:46
5	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1 25% via SR-138 eastbound toward Lancaster	50% of Village 3 Village 7 Existing	2,165 3,156 200	1:07 1:23 0:17
6	Phase 1-4	Village 1, Village 3, Village 7, Business Park West, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional/Civic land use 50% via SR-138 eastbound toward Lancaster	Village 1 30% of Village 3 Business Park West Existing	4,026 1,299 981 200	2:26 0:41 2:21 0:17
7	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	South/Southeast	25% via SR-138 westbound toward I-5 25% via internal roadway toward Village 1 25% via internal roadway toward Village 3 25% via internal roadway toward Village 6	50% of Village 7 Business Park West Business Park Central Institutional & Civic	1,578 981 654 1,796	0:39 0:50 1:07 1:20
8	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	North/Northeast	25% via SR-138 westbound toward I-5 50% via internal roadway toward Village 1 and Village 3 25% via SR-138 eastbound toward Lancaster	Village 6 Village 7	3,556 3,156	3:27 1:49
9	Phase 1-6	Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic	West/Northwest	50% via internal roadway toward Village 7 and the Institutional & Civic 50% via SR-138 eastbound toward Lancaster	Village 1 Village 9 West Existing	4,026 2,321 200	1:22 1:11 0:17
10	Phase 1-8	Village 1, 3, 7 E & West, Village 9 West, Village 6, Village 9 East, Village 8 West, Village 2, Village 4 South	South/Southeast	25% via SR-138 westbound toward I-5 25% via internal roadway toward Village 1 25% via internal roadway toward Village 3 25% via internal roadway toward Village 6	50% of Village 7 Business Park West Business Park Central Business Park East 30% of the Institutional & Civic	1,578 981 654 621 539	1:21 1:07 0:47 1:19 0:26

Table 3 – Evacuation Time

Scenario	Phases	Build Land Use	Fire Approach Direction	Evacuation Direction/Routes	Area Under Evacuation	Evacuating Vehicles	Evacuating Time (Hours: Minutes)
11	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	North/Northeast	25% via internal roadway toward Village 1	30% of Village 2	740	0:53
				25% via internal roadway toward Village 3	Village 4 South	2,380	0:53
				25% via internal roadway toward Village 7	50% of Village 6	1,778	0:53
				25% via internal roadway toward Institutional & Civic	Village 8 West	2,035	1:02
					30% of Village 9	1,025	0:49
12	Phase 1-8	Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic	West/Northwest	25% via internal roadway toward Village 3	30% of Village 1	1,208	0:52
				25% via internal roadway toward Village 7	30% of Village 2	740	0:57
				25% via internal roadway toward Business Park	Village 4 South	2,380	0:48
				25% via internal roadway toward Institutional & Civic	Village 9	3,415	2:58
13	Phase 1-10	Buildout	South/Southeast	25% via SR-138 westbound toward I-5	Business Park West	981	1:07
				25% via internal roadway toward Village 1	Business Park Central	654	0:55
				25% via internal roadway toward Village 3	Business Park East	621	1:32
				25% via internal roadway toward Village 6/Village 5	30% of the Institutional & Civic	539	0:26
					50% of Village 7	1,578	1:32
					Village 8 East	3,843	2:20
14	Phase 1-10	Buildout	North/Northeast	25% via internal roadway toward Village 1/Village 2	30% of Village 4	1,318	0:51
				25% via internal roadway toward Village 3	Village 5	10,451	6:41
				25% via internal roadway toward Village 7/Institutional & Civic	30% of Village 6	1,067	0:34
				25% via SR-138 Westbound toward Business Park	Village 8 West	2,035	4:32
					Village 8 East	3,843	3:06
15	Phase 1-10	Buildout	West/Northwest	25% via internal roadway toward Village 3	30% of Village 2	740	1:11
				25% via internal roadway toward Village 7	50% of Village 4	2,197	1:08
				25% via internal roadway toward Business Park	50% of Village 5	5,226	2:37
				25% via internal roadway toward Institutional & Civic	Village 9	3,415	1:53

Analysis and Conclusion

Study of evacuation timeframes and potential increases in evacuation time with a proposed project are relatively new CEQA focus areas. Public safety, not time, is generally the guiding consideration for evaluating impacts related to emergency evacuation. 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.

In any populated area, safely undertaking large-scale evacuations may take several hours or more and require moving people long distances to designated safety 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[19]" 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. 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[20], the average evacuation time for the Creek Fire was found to be 3 hours and 40 minutes, involving 115,000 people[21]. For the Thomas Fire, the average time was 4 hours and 25 minutes, impacting 104,607 individuals. Per the FEIR, the estimated population for the proposed Project would be 55,000 people, significantly less than the population that was evacuated during the Creek Fire.

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 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. There are no established thresholds for evacuation times for this Project or at the time of this plan's preparation, for any California community, to the knowledge of the authors. This is primarily because every location and fire scenario are unique. While it may take one community 20 minutes to evacuate safely, it is not a valid assumption to consider a 3-hour evacuation for another community as unsafe. The 3-hour evacuation can be very safe while the 20-minute evacuation may be unsafe due to the conditions and exposures along the evacuation routes.

Notwithstanding evacuation challenges and variables, both the City of Los Angeles and Los Angeles County have had great success in safely managing both mass evacuations and targeted evacuations. For example, the 2020 Lake Fire resulted in evacuation of several

[19] https://escholarship.org/uc/item/5w85z07g
[20] https://zenodo.org/record/4408243
[21] https://abc7.com/sylmar-brush-fire-creek-kagel-canyon/2740550/

neighborhood[22] with zero fatalities[23]. It should be noted that other variables can impact the number of fatalities during an evacuation. For Instance, some individuals may choose to stay behind to defend their property or adopt a wait-and-see approach[24]. Such individual decisions could delay evacuation to a point where it becomes too late for that individual to leave safely[25].

Best practices learned from previous wildfire events have resulted in a system that is many times more capable of managing evacuations. With the best practices 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 avoided, and those populations most at risk are able to safely evacuate.

Due to its location, the Project would also provide the responding emergency managers (e.g., incident commander, Los Angeles 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. This would provide emergency managers with a safer alternative to risking a late evacuation.

This information will be provided to law enforcement and fire agencies for use in pre-planning scenarios to better inform in the field decisions made pursuant to adopted Emergency Response Plans. Emergency personnel who issue an evacuation order may consider these time estimates in determining when and where to issue evacuation orders. In a real evacuation scenario, emergency managers may use alternative actions/options to further expedite evacuation. Such actions may include providing additional lead time in issuing evacuation orders, prioritizing area at higher risks, providing alternative signal control at downstream intersections, utilizing additional off-site routes or directing traffic to roadways with additional capacity, implementing contra-flow lanes, issuing "shelter-in-place" orders when determined to be safer than evacuation, or considering the possibility of a delayed evacuation where parts of the population could be directed to remain on-site until the fire burns through the fuels around the evacuation route. These options require "in the field" determinations of when evacuations are needed and how they are phased to maximize efficiency. Overall, safe evacuation of the Project and surrounding community is possible in all modeled scenarios.

Limitations

In coordination with fire professionals at Dudek, CRA has presented a conservative analysis simulating evacuation during an extreme wildfire event. However, as discussed above, wildfires are variable events. The underlying planning principle for fire preparedness, given the dynamic nature of a fire, is to demonstrate the availability of multiple route alternatives

[22] https://www.latimes.com/california/story/2020-08-14/additional-evacuations-ordered-in-explosive-lake-fire
[23] https://web.archive.org/web/20200922095200/https://inciweb.nwcg.gov/incident/6953/
[24] Preparing for wildfire evacuation and alternatives: Exploring influences on residents' intended evacuation behaviors and mitigations (https://doi.org/10.1016/j.ijdrr.2021.102177) Table 2 indicates that the majority of the surveyed individuals strongly agree with the stay and defend statements.
[25] National Institute of Standards and Technology – Department of Commerce – WUI Fire Evacuation and Sheltering Consideration Assessment, Planning, and Execution (August 2023) – Evacuation Alternatives

and response strategies to permit emergency professionals to manage their response according to the specific circumstances. The Project area provides ample route and response alternatives that were not considered in this model. Emergency responders will coordinate the safest possible evacuation based on the dynamic circumstances of the actual event, including the appropriate phasing of the evacuation, and utilization of the most appropriate ingress and egress routes for area residents and emergency responders.

The breadth of route alternatives and response strategies available to emergency professionals to manage a potential fire in the City/County cannot and should not be evaluated using this evacuation analysis alone. A comprehensive view of Project fire safety is gained by understanding this memorandum, the Project's Wildfire Evacuation Study (Dudek 2023), along with the standard protocols and "in-the-field" decision making of emergency responders as detailed in the County[26] and nearby cities Emergency Response Plans documents.

This travel time analysis presents a reasonable vehicle travel time estimate based on professional judgment made by CRA, Dudek, and fire operations experts with experience participating in evacuations in Southern California. Changing any number of these assumptions can lengthen or shorten the average vehicle travel time.

For Instance, a situation could arise in which professionals *may* choose to utilize additional roadways for evacuation not utilized in the analyses and *may also* choose to guide vehicle trips to more or different route permutations relative to what has been modeled in this analysis. A phased evacuation is also likely to be implemented, which improves the orderly flow of traffic in an evacuation scenario.

The net result of changing the variables selected could yield an average evacuation travel time shorter or longer than the results detailed in the analysis. Many factors can shorten or lengthen the vehicle time from the results shown herein. For example:

1. Changing the evacuation area affected by the evacuation order would affect the results. For Instance, emergency managers could order an early evacuation of land uses located in higher risks area, such as the Southern Oaks community. Thus, by the time an evacuation order is established for the proposed Project, there would be less vehicles on the road.
2. Increasing or decreasing the number of path permutations and percentage of the population utilizing each route that leads out of the immediate area could shorten or lengthen vehicle travel time relative to the results shown herein.
3. Emergency professionals electing to reserve certain travel lanes for emergency vehicle ingress for periods of time could affect the travel time relative to the results shown herein.
4. Assuming evacuees utilize fewer or more vehicles to evacuate from their homes relative to the vehicle utilization rate selected in the analysis would shorten or lengthen vehicle travel time relative to the results shown herein.

[26] County of Los Angeles Emergency Operation Plan: http://LosAngelescountyca.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=&MeetingID=2048&MediaPosition=3715.315&ID=10490&CssClass= County of Los Angeles Emergency Management Plan: chrome- https://rivcoready.org/sites/g/files/aldnop181/files/EMD%202022-2025%20Strategic%20Plan.pdf

5. Changing the mix of vehicle trips allocated to each evacuation route could shorten or lengthen vehicle travel time relative to the results shown herein.
6. Assuming different road condition adjustment factors could shorten or lengthen the vehicle travel time relative to the results shown herein.
7. Assuming fewer people are at home when the evacuation notice is given would reduce the number of vehicle trips and shorten vehicle travel time relative to the results shown herein. For instance, an evacuation during daytime hours could result in fewer outbound trips than assumed in this analysis
8. Assuming some portion of vehicle trips are made in advance of the evacuation notice would reduce the number of vehicle trips relative to the results shown herein.
9. Assuming emergency professionals elect to implement contraflow on certain roadways to open up additional lanes for emergency evacuation egress could reduce the travel time results shown herein.

This evacuation time analysis is necessarily limited in scope given the numerous and unpredictable variables inherent in a wildfire and evacuation event. Because of this unpredictability, modeling evacuation behaviors and times is inherently speculative, though this report represents a reasonable forecast of multiple evacuation scenarios based on fire modeling results. However, as discussed above, it is not anticipated that the Project will significantly impact the safe evacuation of the proposed or existing surrounding communities based on evacuation times and other qualitative considerations.

Prepared by

Phuong Nguyen, PE
Senior Transportation Engineer
CR Associates

Michael Huff
Principal – Forestry and Fire Protection
Dudek

Attachment A
Best Practices Research

Reference & Analysis Tool Selection

CRA has compiled an extensive list of research and findings on best practices for both wildfire and standard evacuation analyses. These foundational best practices informed our evacuation analysis assumption and approaches. A list of the relevant and recent research is included at the end this section.

Local Guidelines References

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Attachment B
Roadway Capacity Calculation

This section offers a comparison between the normal roadway capacity, as utilized in the Centennial Specific Plan Traffic Study by Stantec (2017), and the roadway evacuation capacity measured using the Vissim microsimulation model. The roadway capacity utilized for the traffic study is based on a stable traffic flow under non-evacuation conditions. According to Tables 1-3 and 2-1 of the Traffic Study, the service flow rate for SR-138, between Gorman Post Road and 300th Street West, is 1,904 vehicles per hour per lane or 476 vehicles every 15 minutes. An excerpt from the traffic study is provided below:

SR-138									
60	Btw. Jct I-5 & Gorman Post Rd	2M	2,100	n/a	21%	1.5	0.91	1.00	1,904
61	Btw. Gorman Post Rd & Old Ridge Route Rd	1M	2,100	n/a	21%	1.5	0.91	1.00	1,904
62	Btw. Old Ridge Route Rd & 300th St W	1M	2,100	n/a	21%	1.5	0.91	1.00	1,904
63	Btw. 300th St W & Three Pts Rd	1M	2,100	n/a	21%	1.5	0.91	1.00	1,904
64	Btw. Three Pts Rd & 245th St (Ave F)	1M	2,100	n/a	21%	1.5	0.91	1.00	1,904
65	Btw. 245th St W & 170th St W	1M	2,100	n/a	21%	1.5	0.91	1.00	1,904
66	Btw. 170th St W & 110th St W	1M	2,100	n/a	14%	1.5	0.93	1.00	1,962
67	Btw. 110th St W & 60th W	1M	2,100	n/a	14%	1.5	0.93	1.00	1,962
68	Btw. 60th W & Jct Rte 14 North	1M	2,100	n/a	14%	1.5	0.93	1.00	1,962

(Continued)

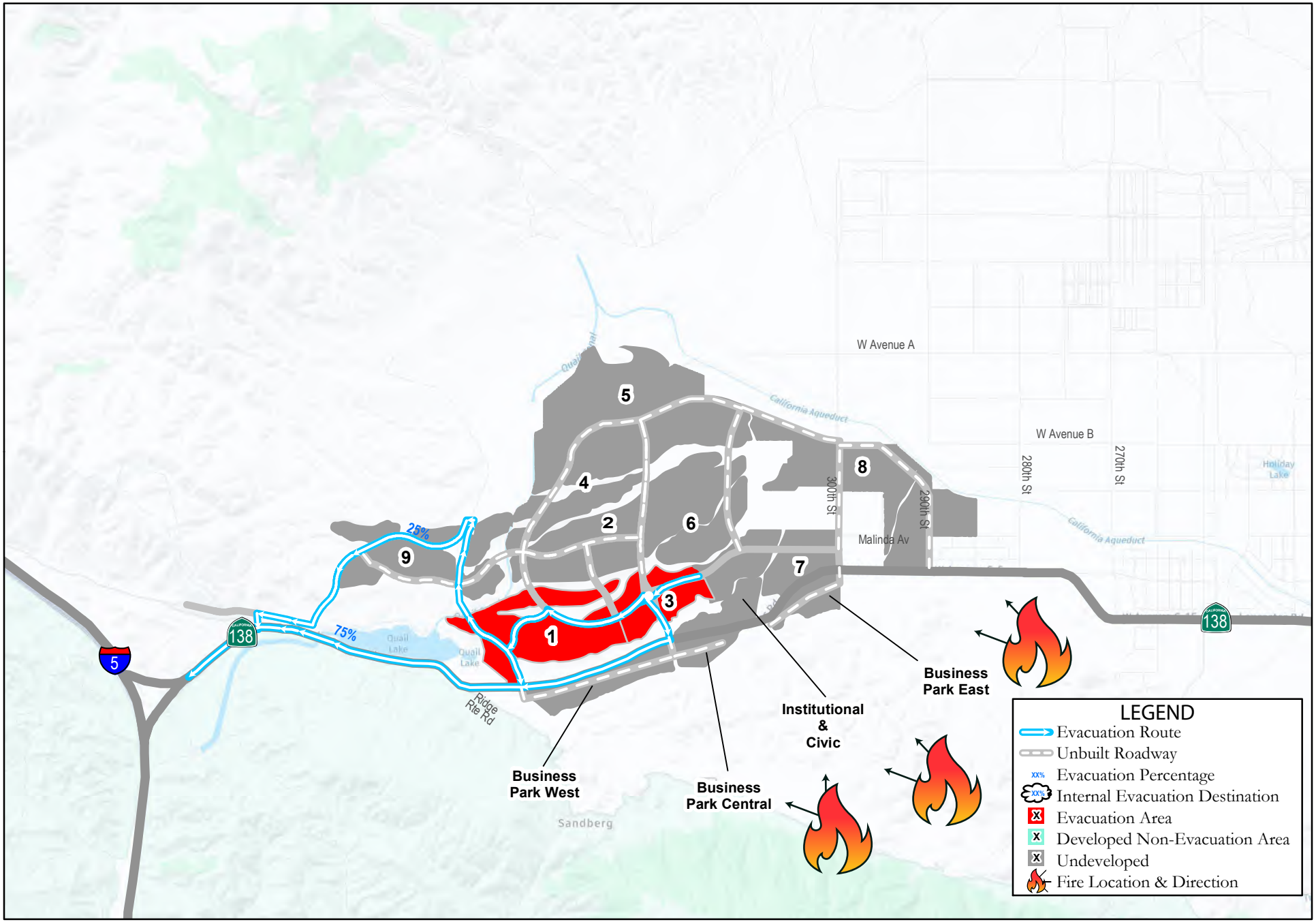
The evacuation capacity of each roadway varies due to factors such as stop-and-go traffic, yielding behavior, downstream or upstream congestion, and other driver behaviors that influence the actual number of vehicles passing through a specific roadway segment. The table below compares the capacity of SR-138 under non-evacuation conditions to that during evacuation scenarios, with the evacuation capacity directly measured from the Vissim microsimulation model.

SR-138 Segment	Function Classification	Number of Evacuating Lane	Traffic Study Roadway Capacity per 15 minutes	Evacuating Vehicles every 15 minutes (900 seconds)[27]					
				1800	2700	3600	4500	5400	6300
Gorman Post Road and Central Access	2-Ln Roadway	1	450	192	129	131	133	137	358
Central Access and 300th Street West	2-Ln Roadway	1	450	362	367	381	372	379	354

As shown, the evacuation roadway processing capacity is lower than the stable flow conditions due to the reasons mentioned above.

[27] Traffic volumes measured at each roadway segment every 900 seconds or 15 minutes

Attachment C
Project Phasing and Evacuation Area



Tejon Ranch Evacuation Technical Memorandum

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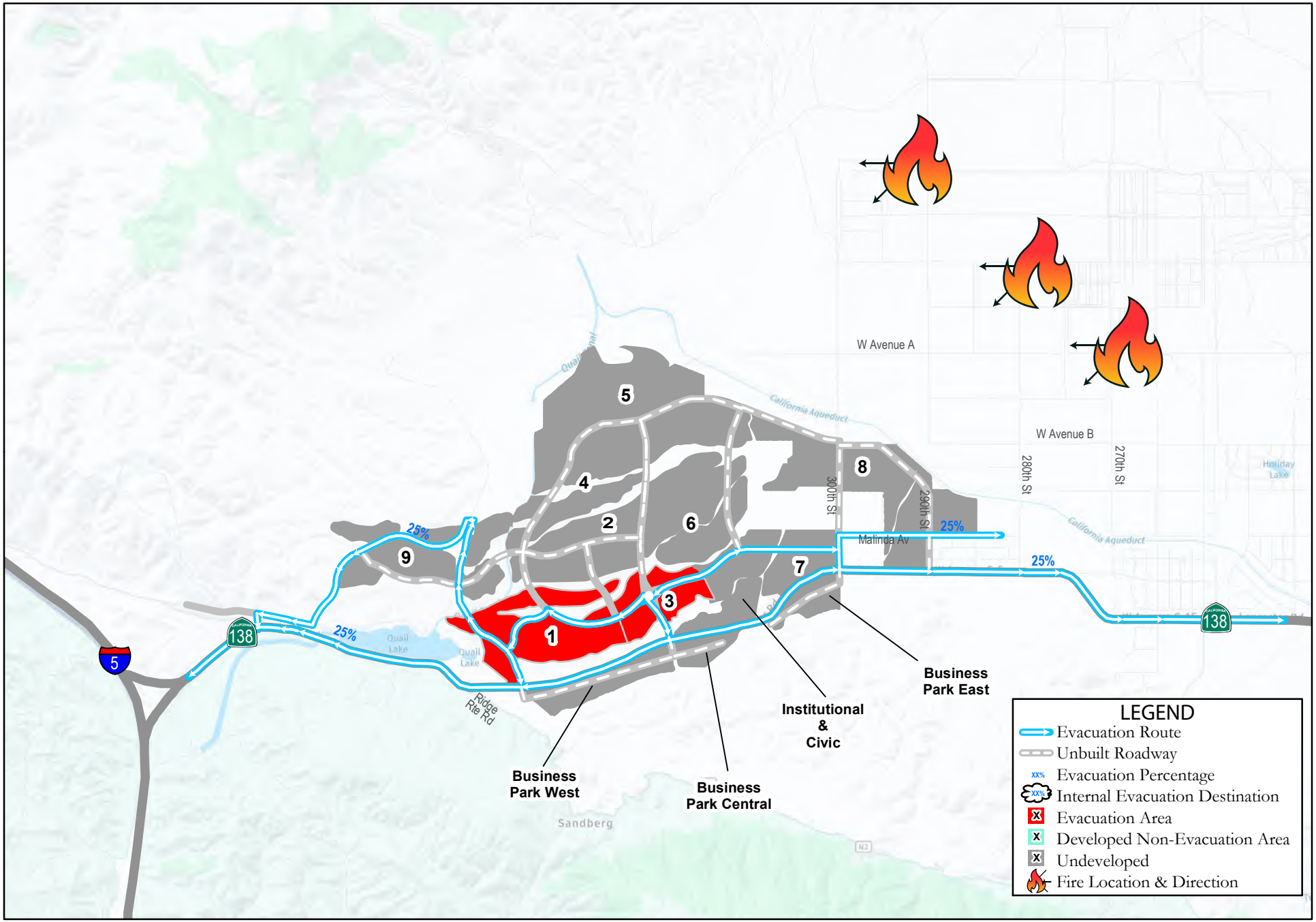
Evacuation Areas and Routes
Scenario 1



Tejon Ranch Evacuation Technical Memorandum

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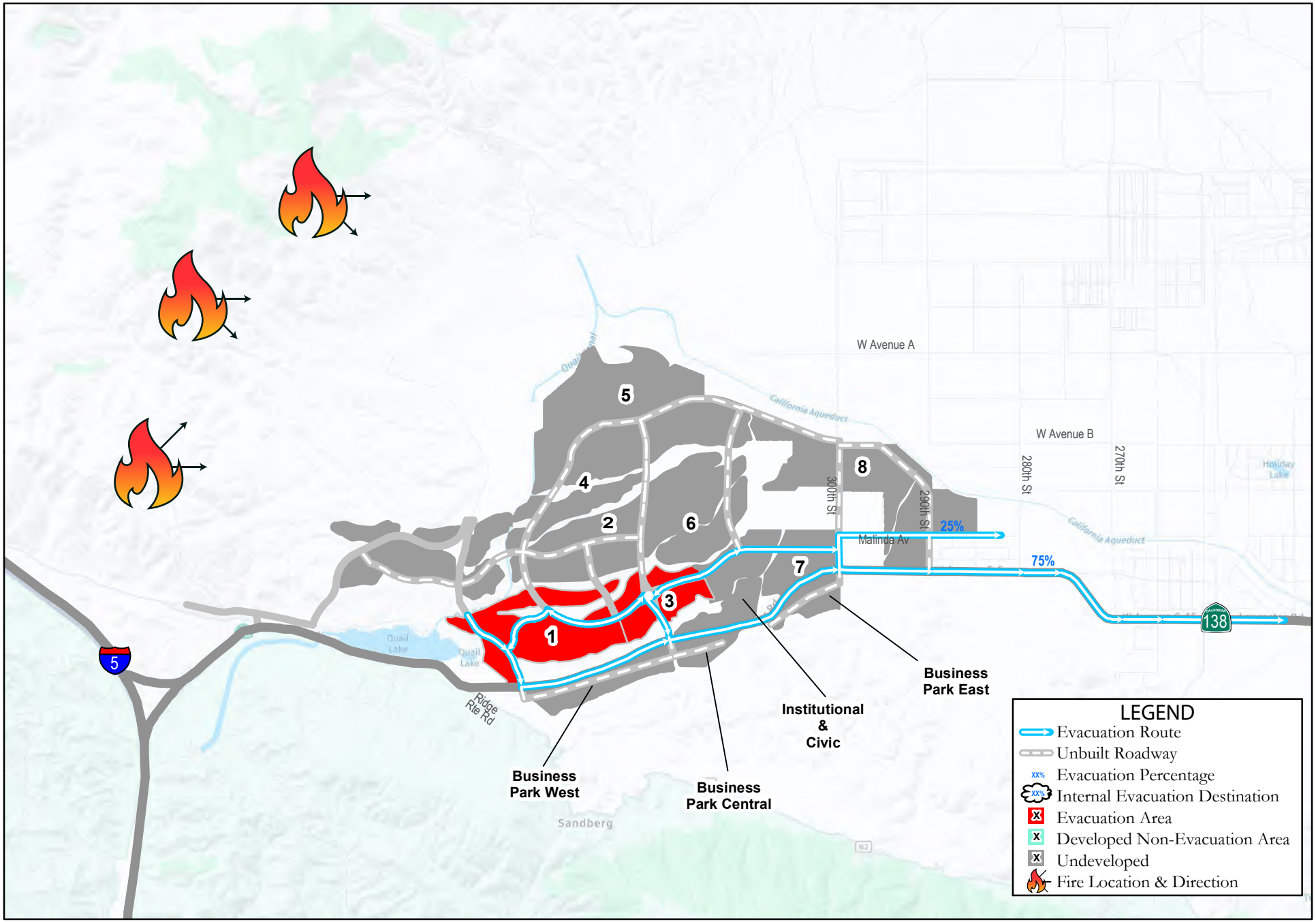
Evacuation Areas and Routes
Scenario 2



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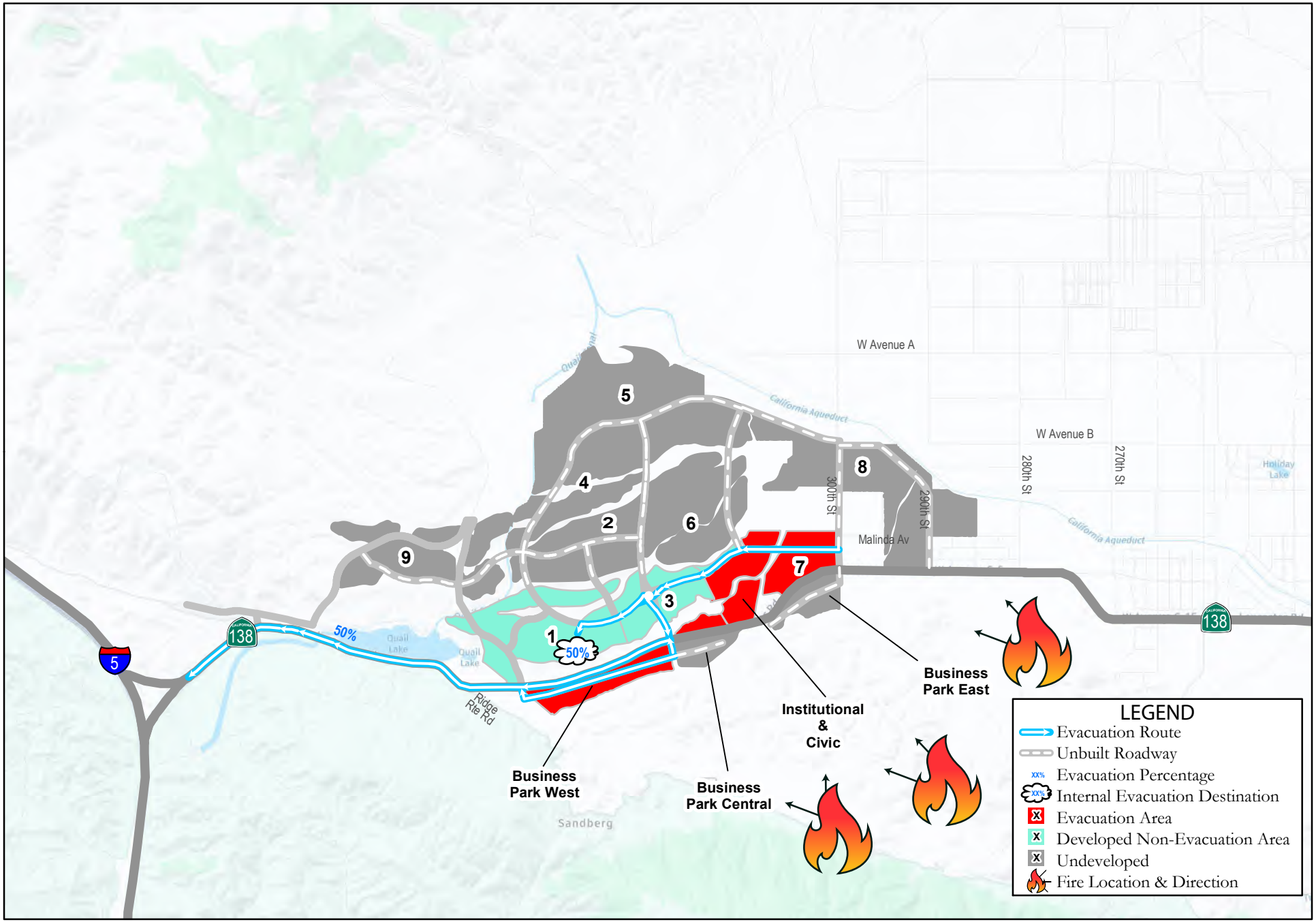
Evacuation Areas and Routes
Scenario 3



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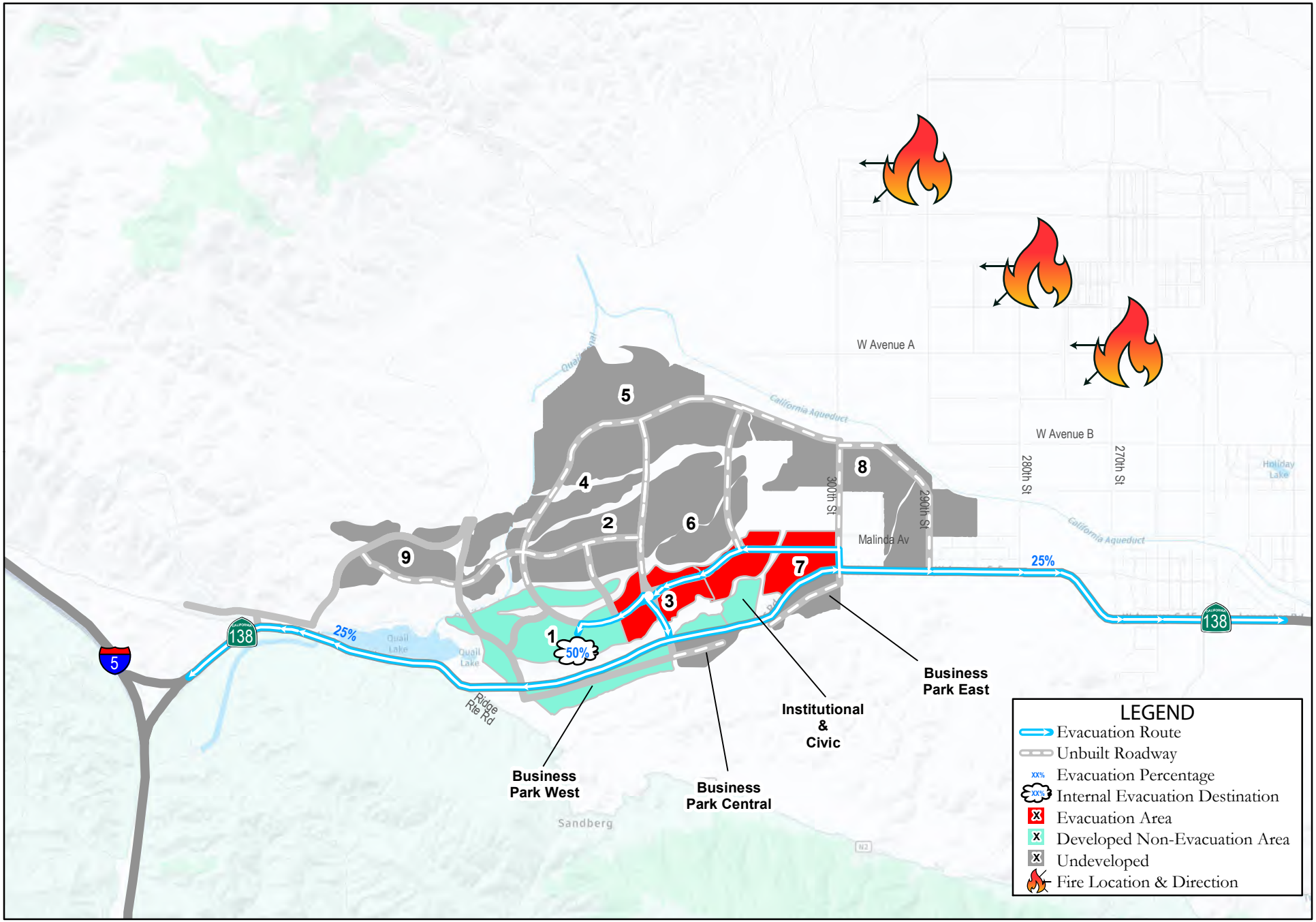
Evacuation Areas and Routes
Scenario 4



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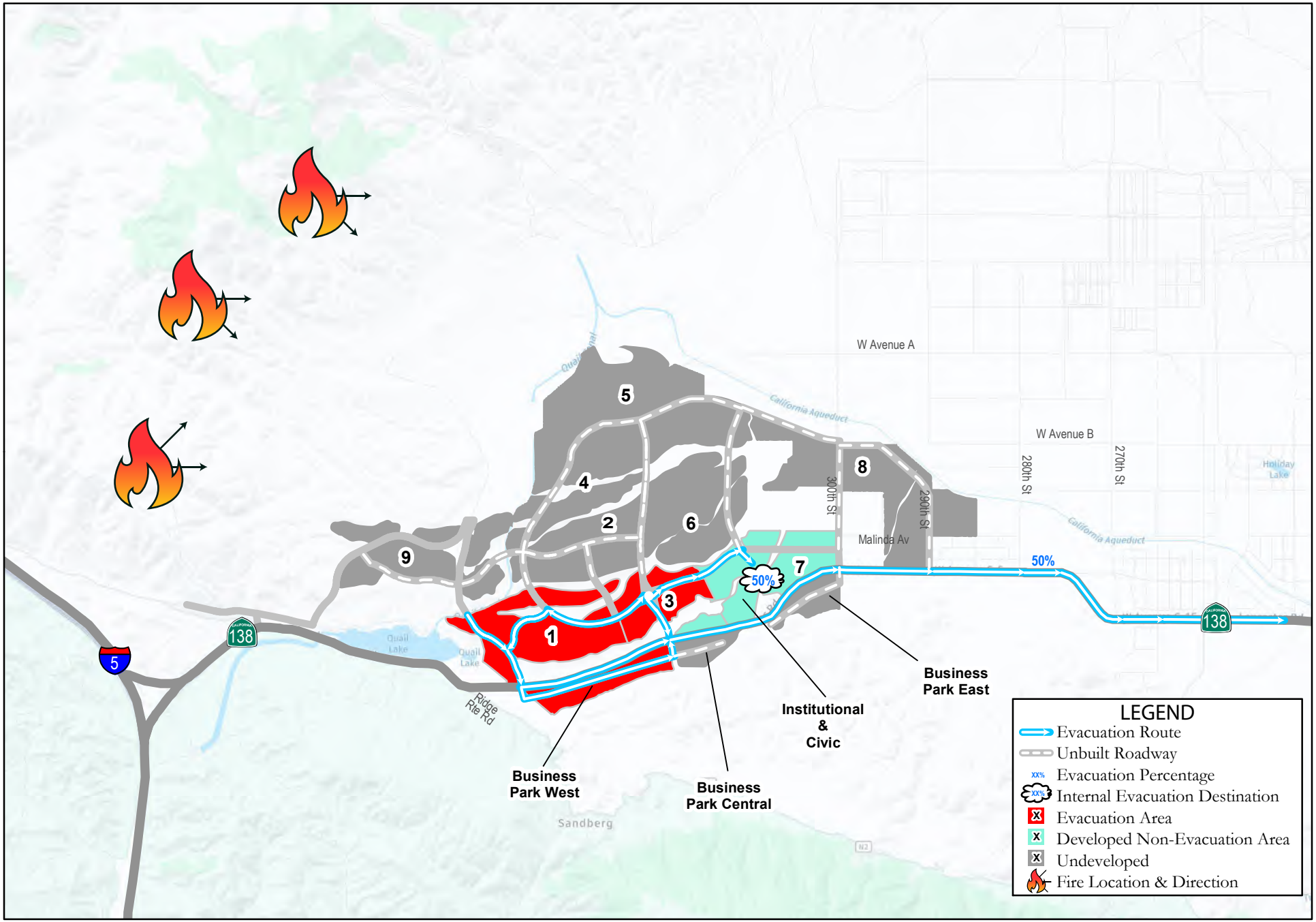
Evacuation Areas and Routes
Scenario 5



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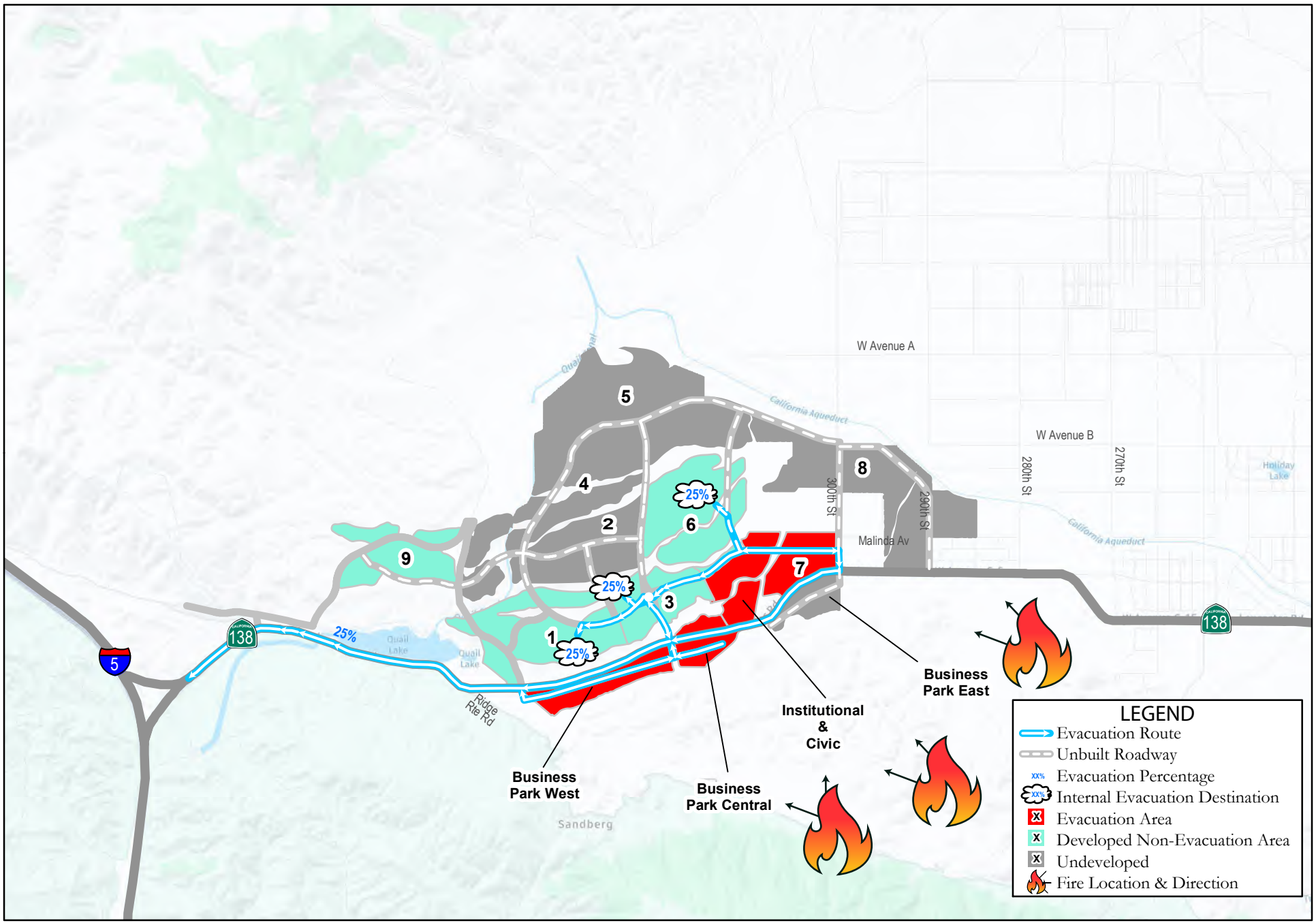
Evacuation Areas and Routes
Scenario 6



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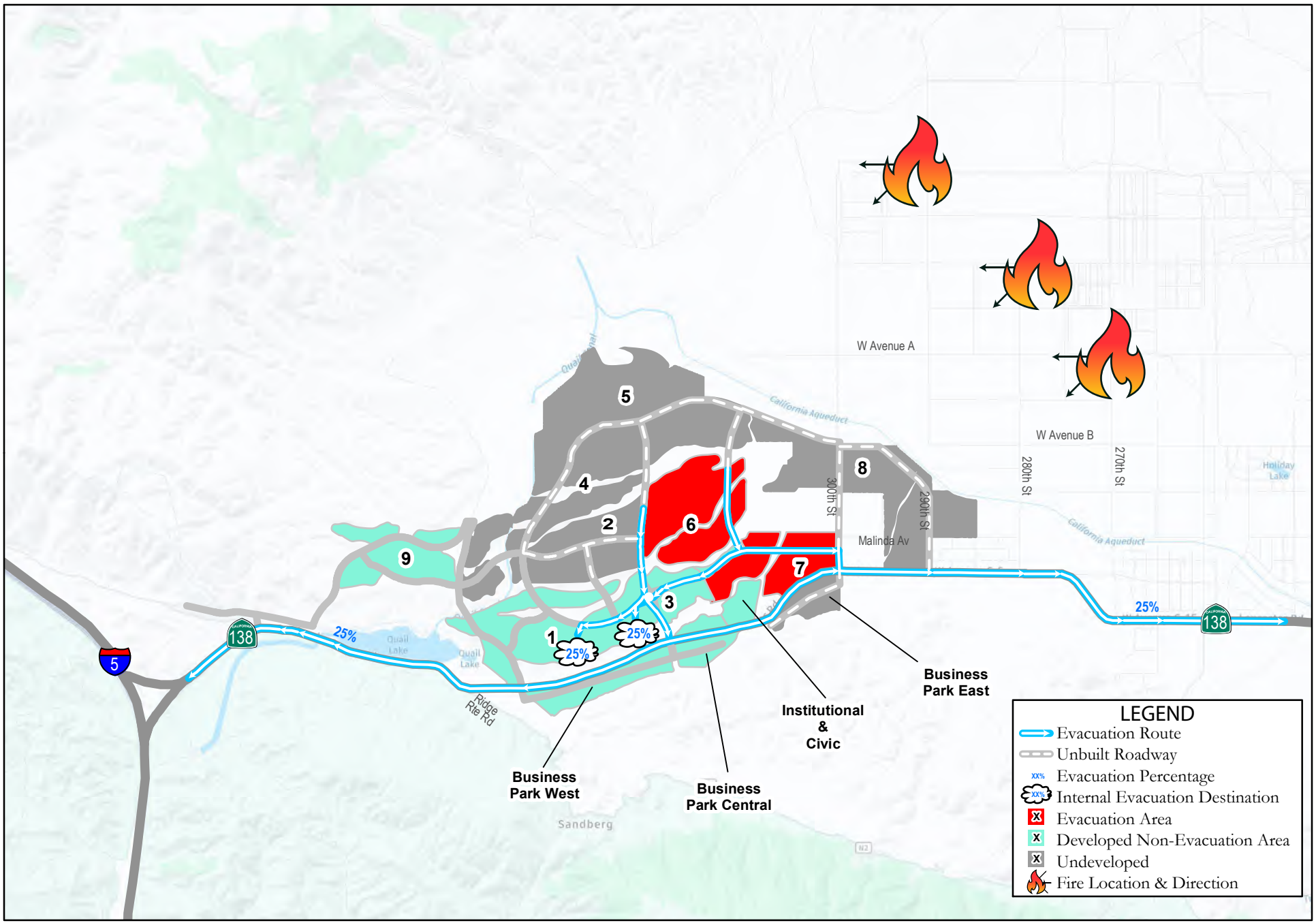
Evacuation Areas and Routes
Scenario 7



Tejon Ranch Evacuation Technical Memorandum

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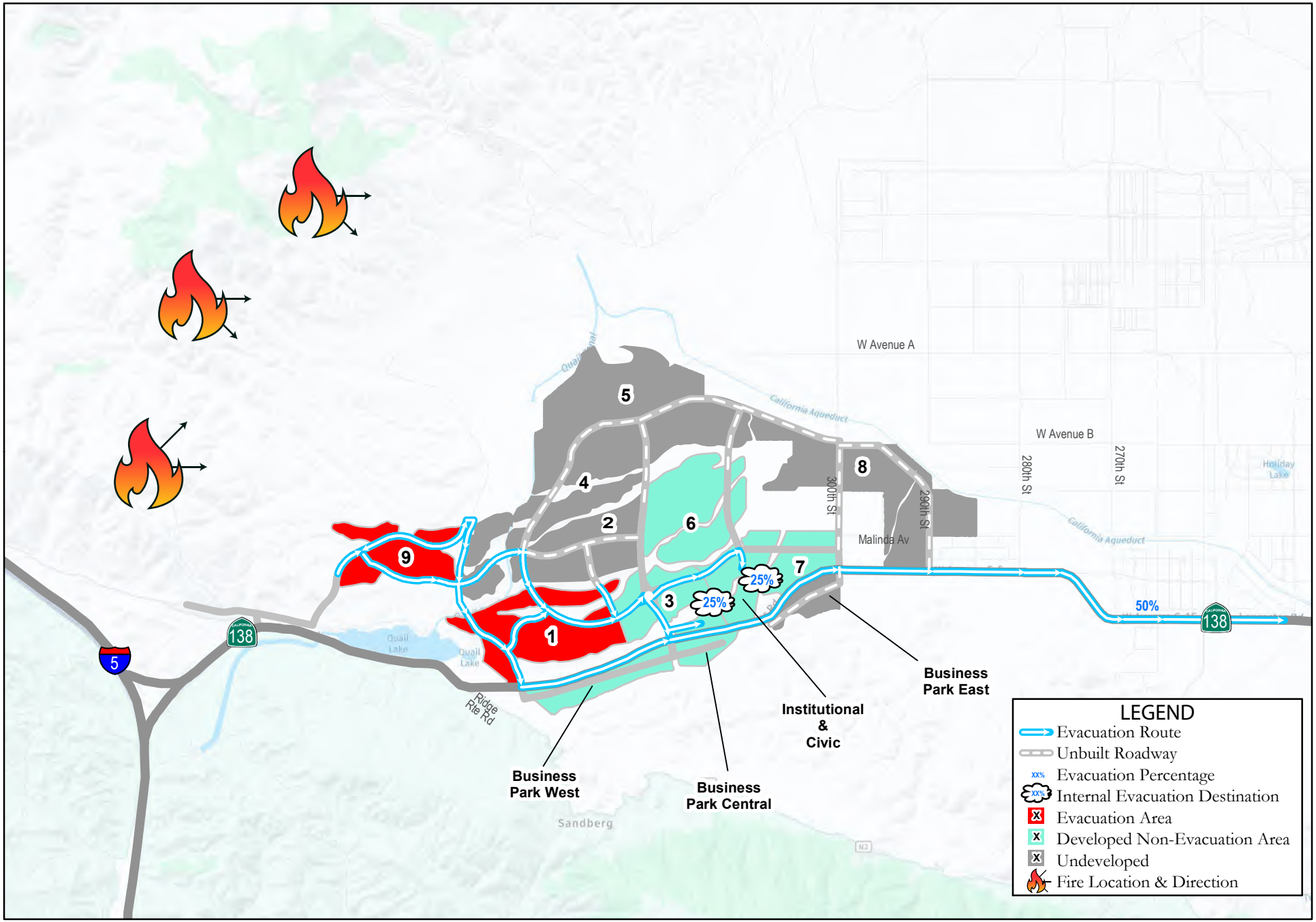
Evacuation Areas and Routes
Scenario 8



Tejon Ranch Evacuation Technical Memorandum

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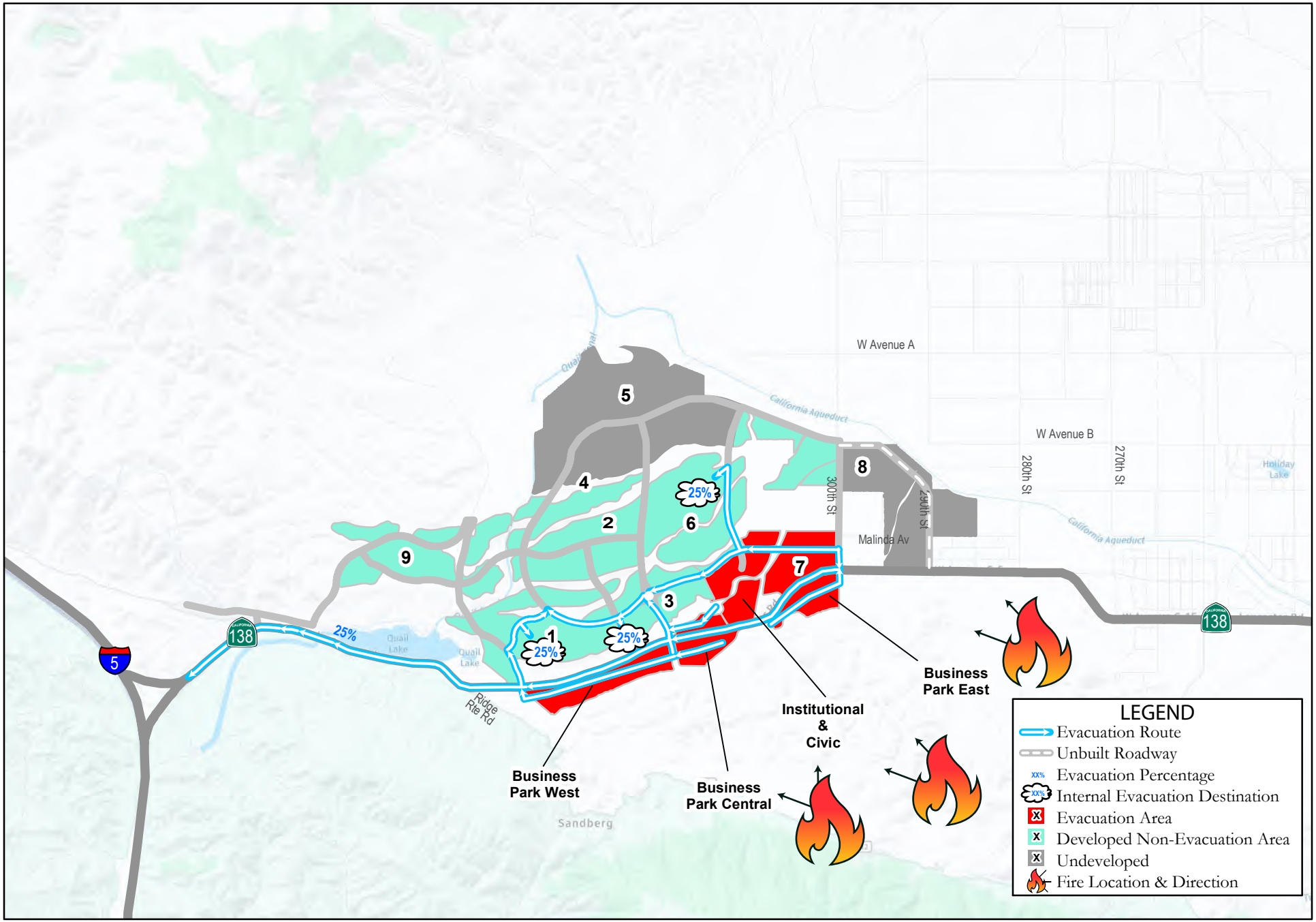
Evacuation Areas and Routes
Scenario 9



Tejon Ranch Evacuation Technical Memorandum

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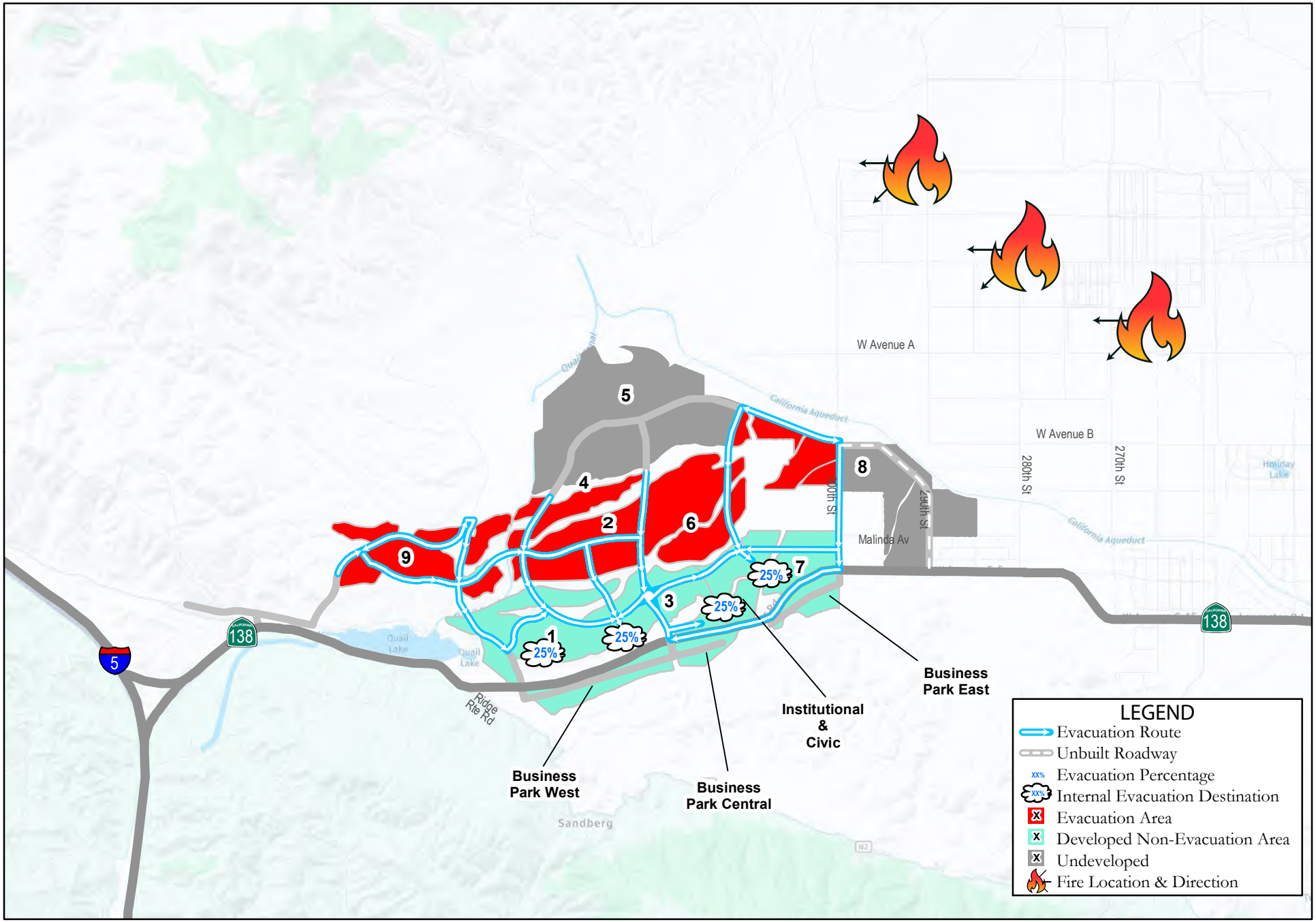
Evacuation Areas and Routes
Scenario 10



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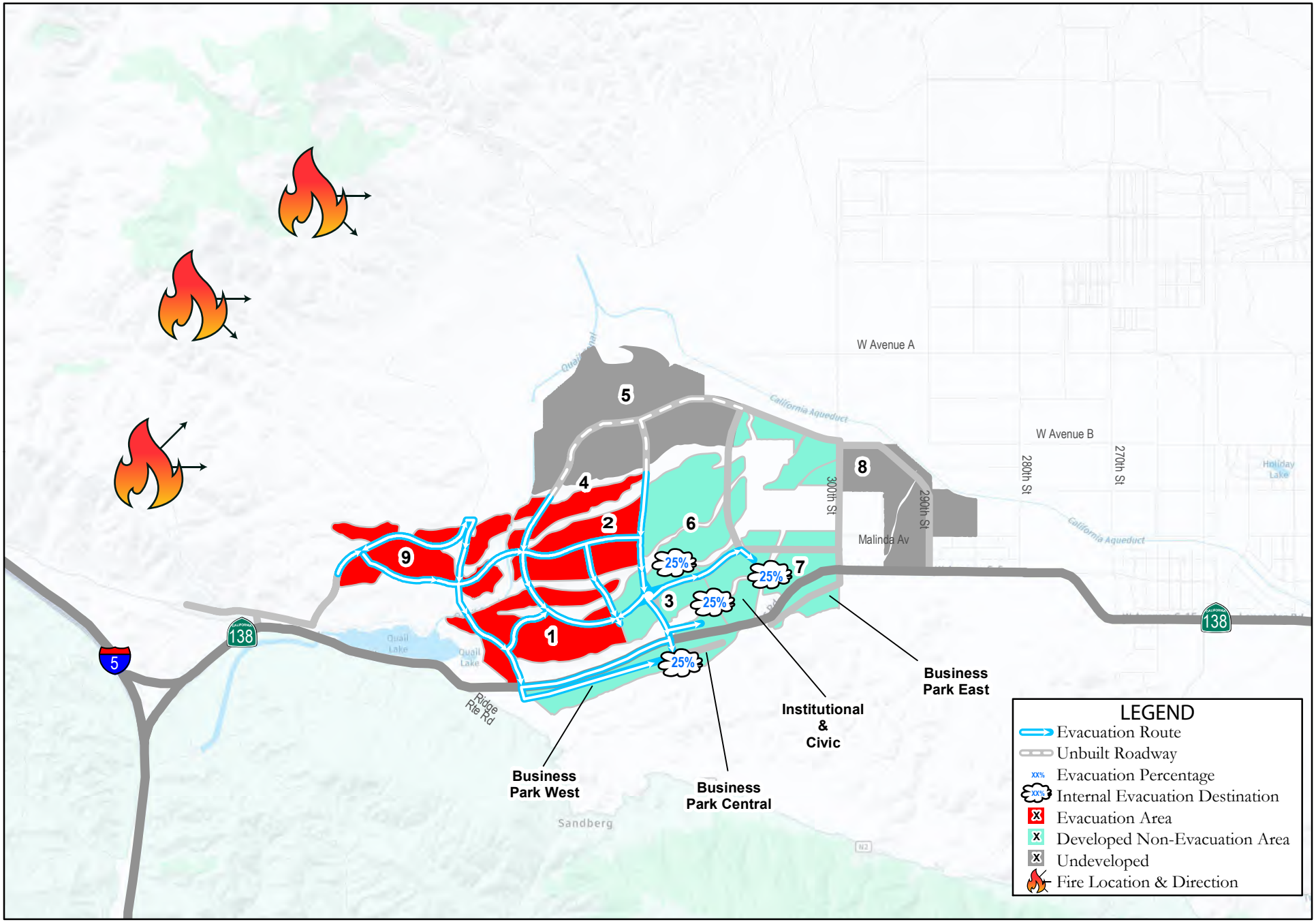
Evacuation Areas and Routes
Scenario 11



Tejon Ranch Evacuation Technical Memorandum

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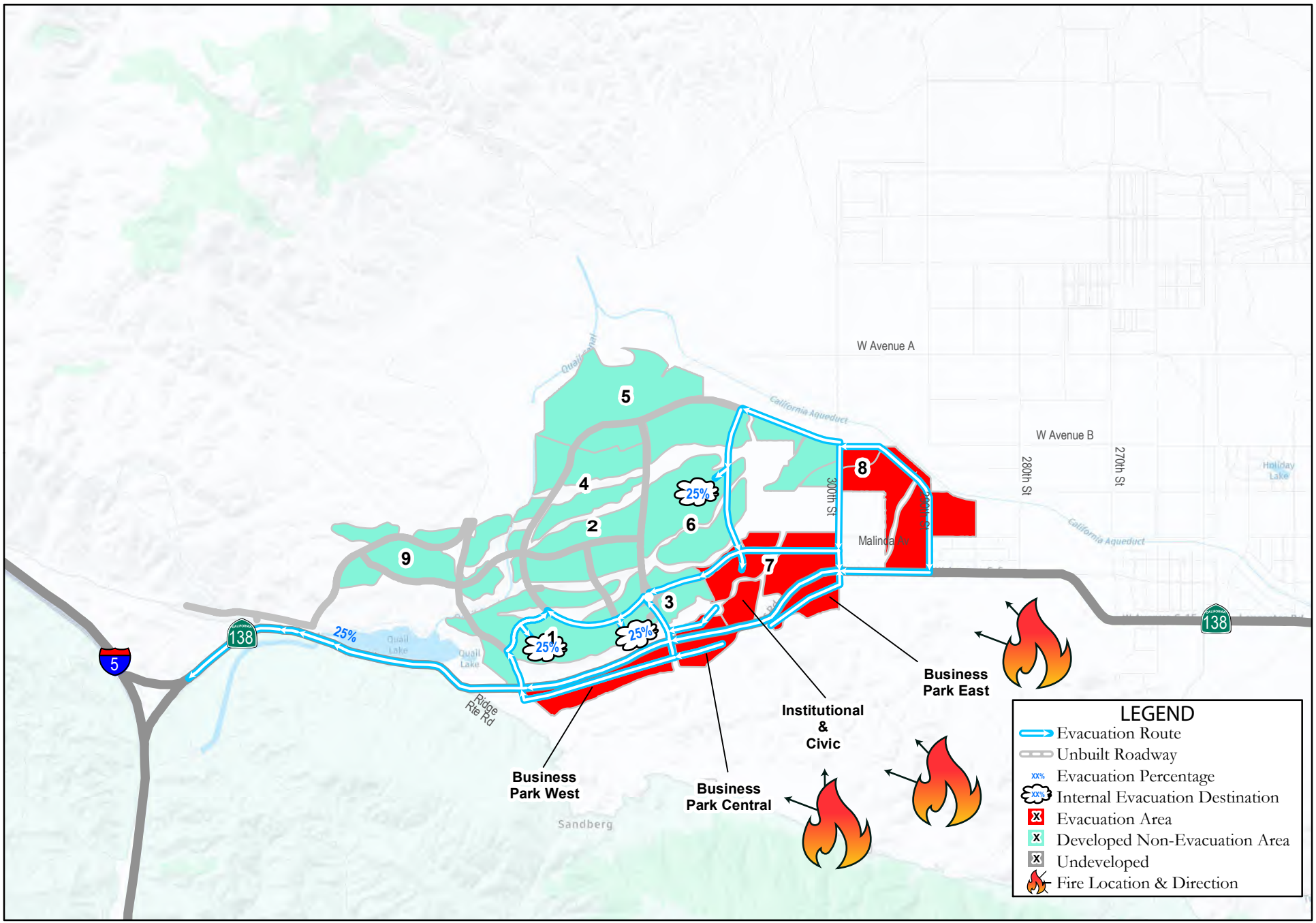
Evacuation Areas and Routes
Scenario 12



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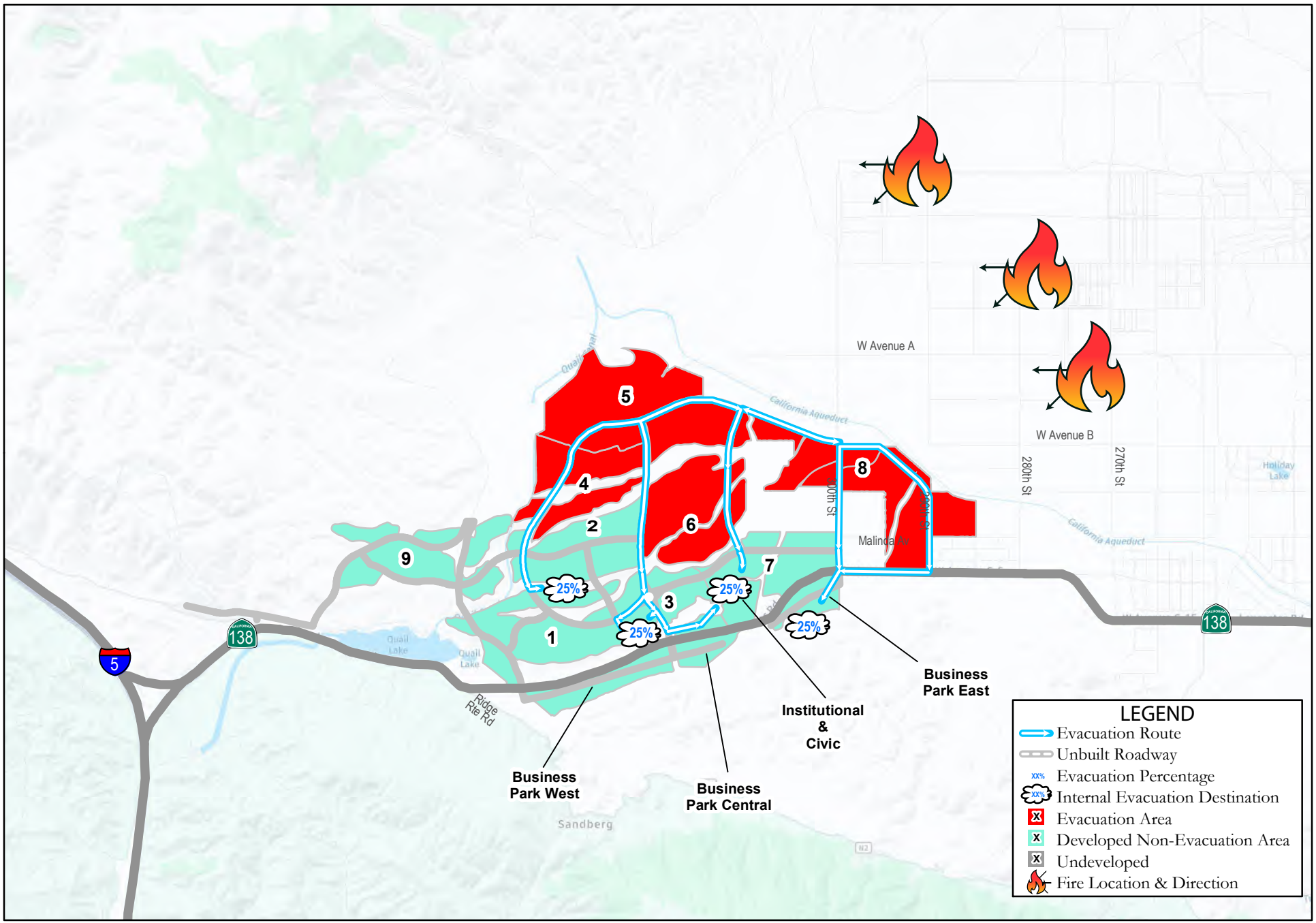
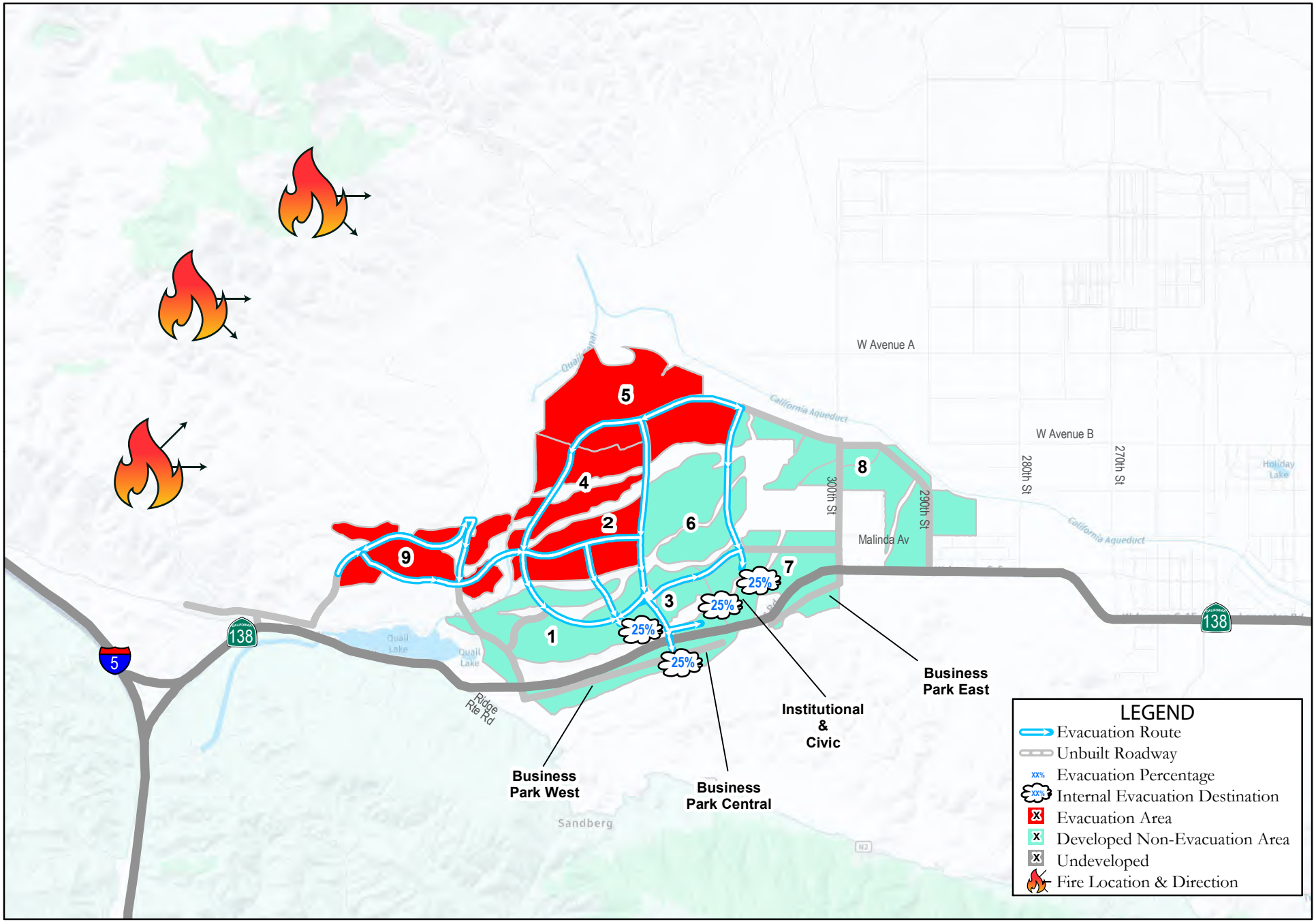
Evacuation Areas and Routes
Scenario 13


W Avenue A
W Avenue B
California Aqueduct
280th St
270th St
Holiday Lake
Malinda Rd
Quail Lake
Ridge Rte Rd
Sandberg
5
138
1
2
3
4
5
6
7
8
9
25%
25%
25%
25%
Business Park West
Business Park Central
Institutional & Civic
Business Park East
LEGEND
Evacuation Route
Unbuilt Roadway
XX% Evacuation Percentage
XX% Internal Evacuation Destination
Evacuation Area
Developed Non-Evacuation Area
Undeveloped
Fire Location & Direction



Tejon Ranch Evacuation Technical Memorandum

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Evacuation Areas and Routes
Scenario 15

Attachment D
Average vehicle ownership, residential units, and evacuating vehicles calculations

Average Vehicle Ownership Calculation

The average vehicle ownership rate was sourced from the US Census American Community Survey for the City of Lancaster, the nearest developed area to the Project site. It is assumed that residents of the Project will have a similar vehicle ownership rate to that of Lancaster.

TABLE ID:	B25044
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2022
DATASET:	ACSDT1Y2022
PRODUCT:	ACS 1-Year Estimates Detailed Tables
UNIVERSE:	Occupied housing units
MLA:	U.S. Census Bureau. "Tenure by Vehicles Available." American Community Survey, ACS 1-Year Estimates Detailed Tables, Table B25044, 2022, . Accessed on November 11, 2023.
FTP URL:	None
API URL:	https://api.census.gov/data/2022/acs/acs1

USER SELECTIONS

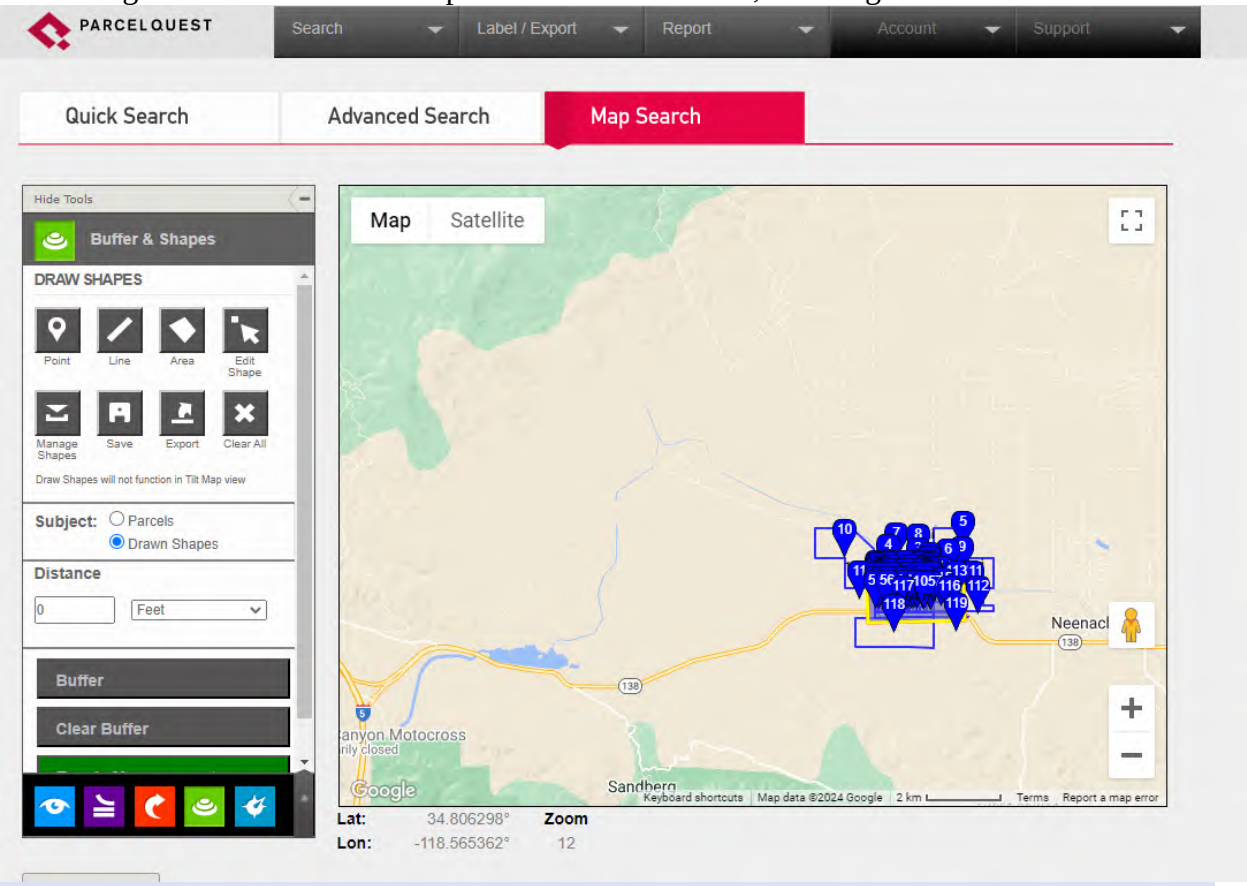
TOPICS	Owner/Renter (Tenure)
GEOS	Lancaster city, California

Vehicle Ownership by Household Type (Owner vs. Renter)	Number of Households	Total Vehicles
Owner occupied:	32,020	
No vehicle available	609	-
1 vehicle available	6,734	6,734
2 vehicles available	13,414	26,828
3 vehicles available	6,430	19,290
4 vehicles available	2,887	11,548
5 or more vehicles available	1,946	9,730
Renter occupied:	19,648	
No vehicle available	1,392	-
1 vehicle available	8,506	8,506
2 vehicles available	6,756	13,512
3 vehicles available	1,962	5,886
4 vehicles available	423	1,692
5 or more vehicles available	609	3,045
Total	51,668	106,771
Veh per Household	2.07	

Evacuation Vehicles Calculation

Evacuating Vehicles from Existing Land Use

The image and table below present the area, number of dwelling units, acreage, and building area for the existing land use located east of the Tejon Ranch Project. As indicated, there are 64 residential dwelling units in total, which, when multiplied by the average vehicle ownership of 2.07, would amount to 133 vehicles. However, based on an aerial image review, some properties have more than two vehicles on-site. Therefore, as a conservative estimate, the total number of evacuating vehicles was rounded up to the nearest hundred, resulting in 200 vehicles.



Land Use Type	Dwelling Units	Acres	Building Area
AGRICULTURAL	1	2.496	1128
MISCELLANEOUS		23.518	
OFFICE	1	6.351	1440
RESID. MOBILE/MANUFACTURED HOMES	26	89.824	43719
RESID. SINGLE FAMILY	38	121.369	67283
RETAIL SALES	1	0.459	900
VACANT		1988.155	
Grand Total	**67**	**2232.172**	**114470**

Evacuating Vehicles from the Proposed Project

This section summarizes the estimated number of vehicles to be evacuated under different scenarios. The number of evacuating vehicles was determined by multiplying the amount of land

use by either the average vehicle ownership rate for residential areas or the parking rate from the Institute of Transportation Engineers Parking Generation Manual for non-residential areas. The table below shows the average vehicle ownership or parking rate for various land uses.

Short Name	ID	Amount type[28]	Description	ITE Category	Vehicle Generation Rate	Modified Vehicle Generation Rate[29]
VLDR	1	DU	1. VLDR - Very Low Density Residential	N/A	2.07	2.07
LDR	2	DU	2. LDR - Low Density Residential	N/A	2.07	2.07
MDR	3	DU	3. MDR - Medium Density Residential	N/A	2.07	2.07
HDR	4	DU	4. HDR - High Density Residential	N/A	2.07	2.07
VHDR	5	DU	5. VHDR - Very High Density Residential	N/A	2.07	2.07
C	6	TSF	6. C-Commercial	Shopping Center	1.95	1.01
R/E	7	TSF	7. CR - Commercial Recreation	Shopping Center	1.95	1.01
BP	8	TSF	8. BP - Business Park	General Light Industrial	0.65	0.34
PF	9	ACRE	9. PF - Public Facilities	Recreational Community Center	2.07	1.08
I/C	10	TSF	10. CI - Civic	Recreational Community Center	2.07	1.08
K-8 SCHOOL	11	-	11. K-8 School	N/A	Assume not in operation	0
HIGH SCHOOL	12	-	12. High School	N/A	Assume not in operation	0
PARK	13	ACRE	13. Park	Public Park	0.47	0.24

It's important to note that the parking generation rates for non-residential land uses were adjusted to account for the internal trip generation rate provided in the traffic study. Since the traffic study indicated that approximately 48% of the total trips would be internal, it is assumed that the parking generation rate would reflect a similar proportion of internal capture. For example, if a resident drives to a commercial shopping center within the development, that vehicle would not be at home during an evacuation order. Therefore, the parking generation rate was adjusted with the internal capture rate to avoid double-counting evacuating vehicles. Excerpts from the Institute of Transportation Engineers Parking Generation Manual for relevant land uses are provided below.

[28] DU = Dwelling Unit, TSF = Thousand Square Feet
[29] 52% of the full rate, based on the internal capture percentage derived from the traffic study.

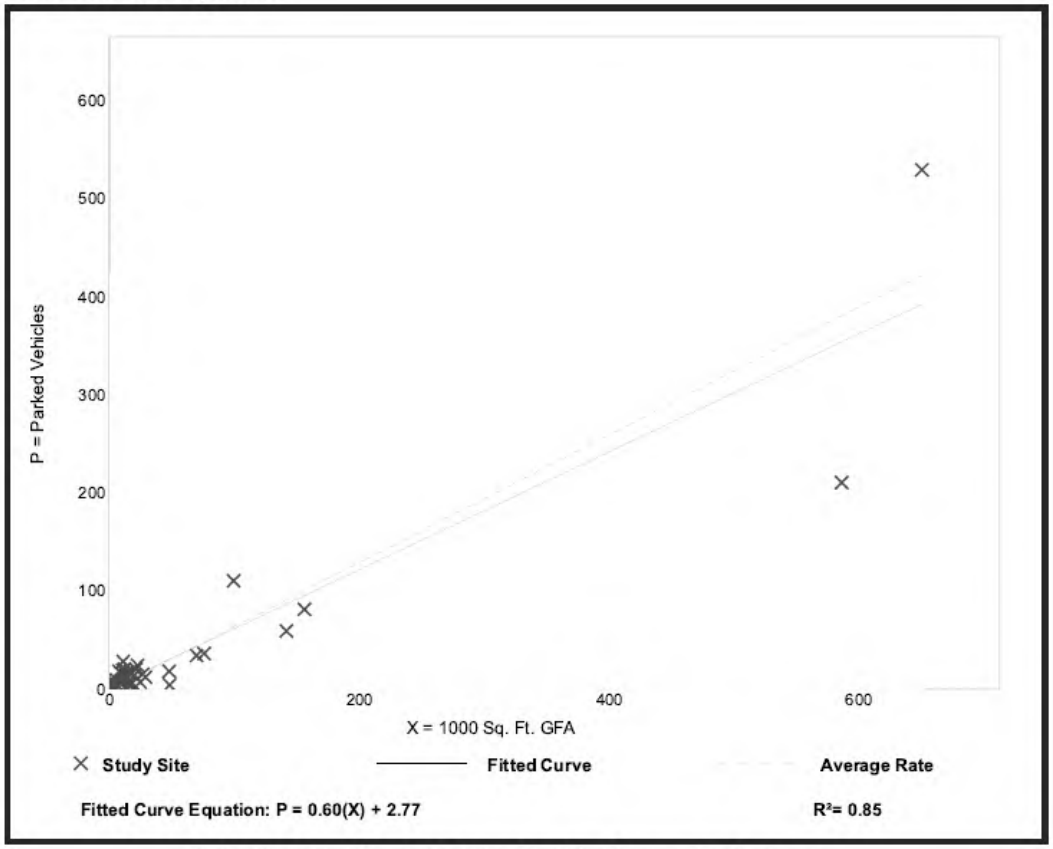
General Light Industrial
(110)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 40
Avg. 1000 Sq. Ft. GFA: 56

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.65	0.11 - 7.89	0.58 / 1.94	0.52 - 0.78	0.41 (63%)

Data Plot and Equation



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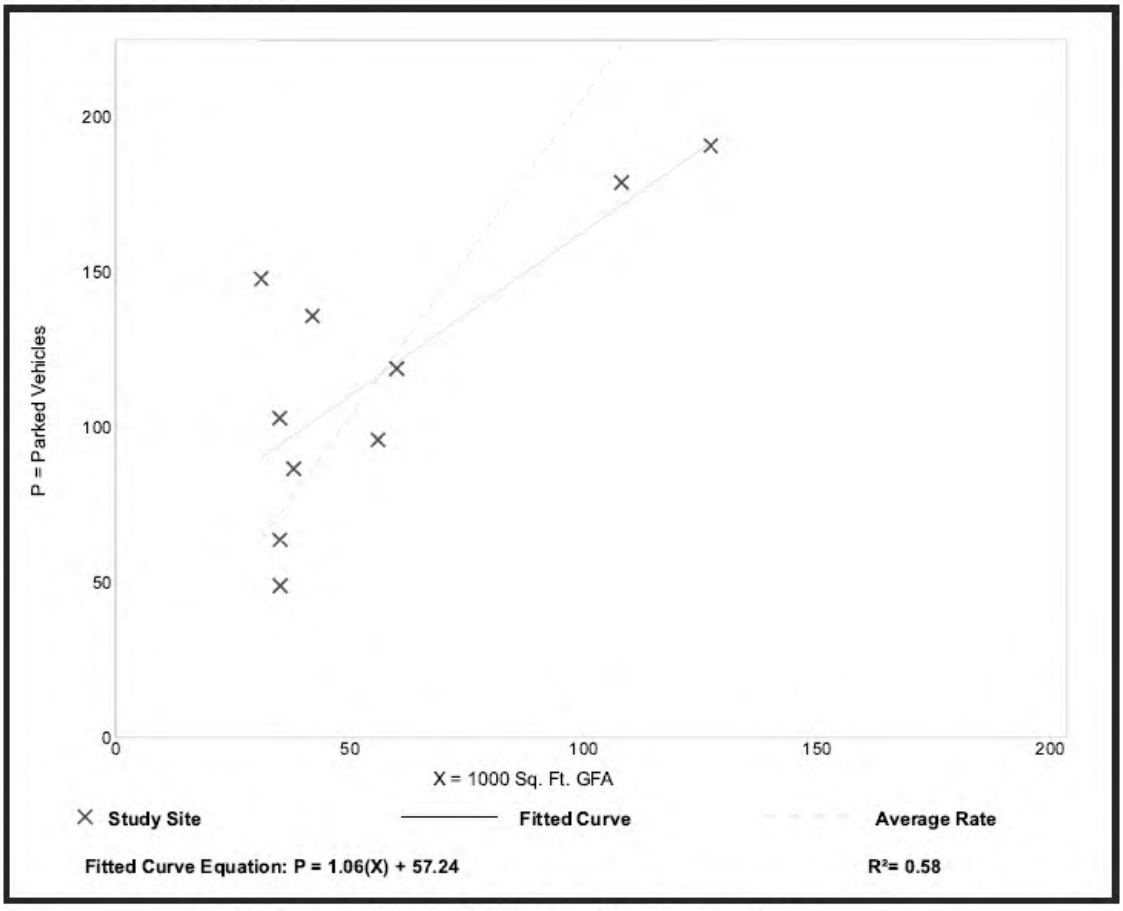
Recreational Community Center
(495)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. 1000 Sq. Ft. GFA: 57

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.07	1.40 - 4.77	1.69 / 3.78	***	0.88 (43%)

Data Plot and Equation



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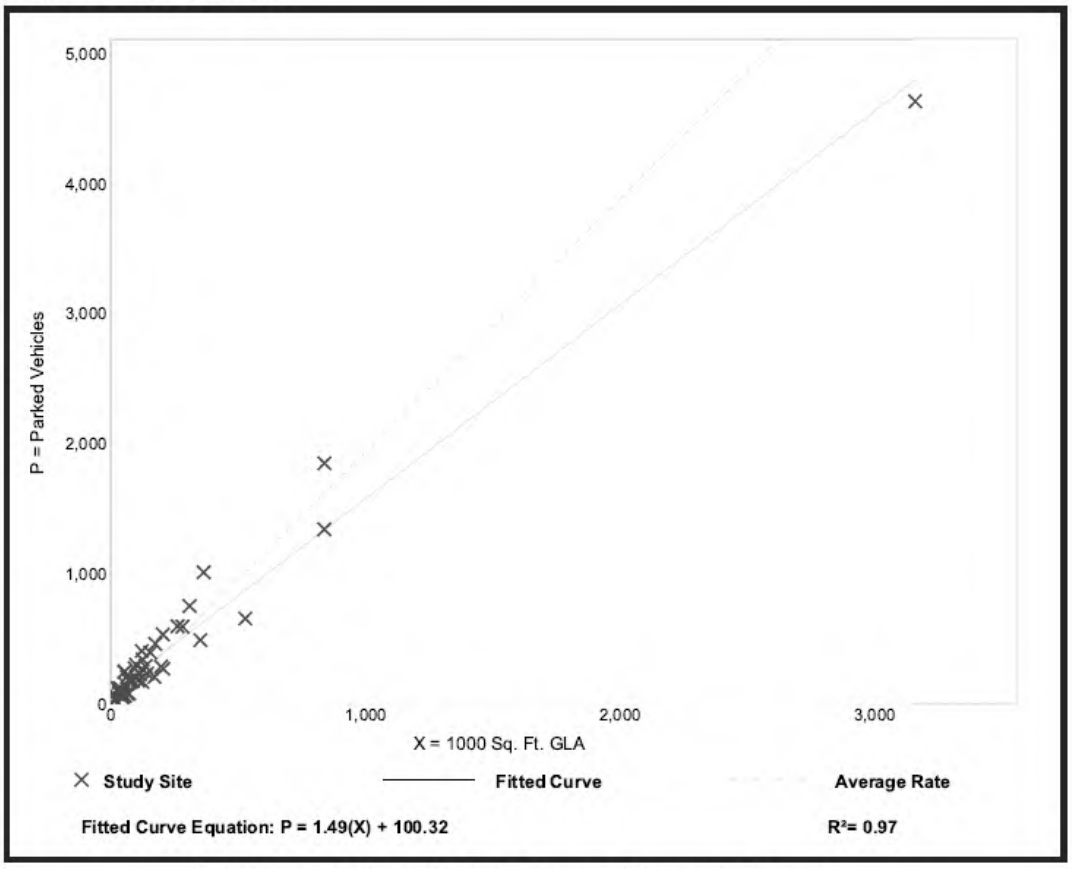
Shopping Center - Non-December
(820)

Peak Period Parking Demand vs: **1000 Sq. Ft. GLA**
On a: **Weekday (Monday - Thursday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. 1000 Sq. Ft. GLA: 218

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.95	1.27 - 7.98	1.99 / 3.68	1.73 - 2.17	0.75 (38%)

Data Plot and Equation



Parking Generation Manual, 6th Edition • Institute of Transportation Engineers

Project Evacuation Vehicle Generation Rate

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
1	9W	87.12	TSF	6. C-Commercial	1.01	88
2	9W	240	DU	2. LDR - Low Density Residential	2.07	497
2	9W	5	ACRE	13. Park	0.24	2
3	9W	360	DU	3. MDR - Medium Density Residential	2.07	746
4	9W	205	DU	2. LDR - Low Density Residential	2.07	425
5	9W	10.454	TSF	7. CR - Commercial Recreation	1.01	11
6	9W	8	ACRE	13. Park	0.24	2
7	9W	500	STU	11. K-8 School	0	0
9	9W	175	DU	2. LDR - Low Density Residential	2.07	363
11	9	180	DU	2. LDR - Low Density Residential	2.07	373
12	9	70	DU	2. LDR - Low Density Residential	2.07	145
13	9	255	DU	2. LDR - Low Density Residential	2.07	528
14	9W	90	DU	1. VLDR - Very Low Density Residential	2.07	187
20	9	44	ACRE	9. PF - Public Facilities	1.08	48
31	1	25	ACRE	13. Park	0.24	6
32	1	46	DU	2. LDR - Low Density Residential	2.07	96
33	1	46	DU	2. LDR - Low Density Residential	2.07	96
34	1	368	DU	2. LDR - Low Density Residential	2.07	762
34	1	5	ACRE	13. Park	0.24	2
35	1	87.12	TSF	7. CR - Commercial Recreation	1.01	88
36	1	141.57	TSF	6. C-Commercial	1.01	143
37	1	255	DU	4. HDR - High Density Residential	2.07	528
37	1	8	ACRE	13. Park	0.24	2
38	1	234	DU	3. MDR - Medium Density Residential	2.07	485
39	1	435	DU	2. LDR - Low Density Residential	2.07	901
40	1	95	DU	1. VLDR - Very Low Density Residential	2.07	197

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
41	1	110	DU	2. LDR - Low Density Residential	2.07	228
42	1	31	DU	1. VLDR - Very Low Density Residential	2.07	65
43	1	1500	STU	11. K-8 School	0	0
43	1	8	ACRE	13. Park	0.24	2
44	1	205	DU	2. LDR - Low Density Residential	2.07	425
51	3	2	ACRE	13. Park	0.24	1
52	3	34.848	TSF	10. CI - Civic	1.08	38
53	3	34.848	TSF	10. CI - Civic	1.08	38
54	3	34.848	TSF	10. CI - Civic	1.08	38
55	3	34.848	TSF	10. CI - Civic	1.08	38
56	3	98.01	TSF	6. C-Commercial	1.01	99
57	3	98.01	TSF	6. C-Commercial	1.01	99
58	3	98.01	TSF	6. C-Commercial	1.01	99
59	3	1500	STU	11. K-8 School	0	0
60	3	285	DU	4. HDR - High Density Residential	2.07	590
60	3	5	ACRE	13. Park	0.24	2
61	3	315	DU	4. HDR - High Density Residential	2.07	653
62	3	300	DU	5. VHDR - Very High Density Residential	2.07	621
63	3	243	DU	3. MDR - Medium Density Residential	2.07	504
64	3	198	DU	3. MDR - Medium Density Residential	2.07	410
65	3	333	DU	3. MDR - Medium Density Residential	2.07	690
66	3	198	DU	3. MDR - Medium Density Residential	2.07	410
71	2	1500	STU	11. K-8 School	0	0
72	2	9	ACRE	13. Park	0.24	3
73	2	65	DU	2. LDR - Low Density Residential	2.07	135
74	4S	90	DU	2. LDR - Low Density Residential	2.07	187
74	4S	99	DU	3. MDR - Medium Density Residential	2.07	205
74	4S	5	ACRE	13. Park	0.24	2

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
75	2	282	DU	2. LDR - Low Density Residential	2.07	584
76	2	189	DU	3. MDR - Medium Density Residential	2.07	392
76	2	5	ACRE	13. Park	0.24	2
77	4S	270	DU	4. HDR - High Density Residential	2.07	559
78	2	283	DU	2. LDR - Low Density Residential	2.07	586
79	2	369	DU	3. MDR - Medium Density Residential	2.07	764
79	2	5	ACRE	13. Park	0.24	2
80	4S	99	DU	3. MDR - Medium Density Residential	2.07	205
80	4S	98.01	TSF	6. C-Commercial	1.01	99
80	4S	6.97	TSF	7. CR - Commercial Recreation	1.01	8
81	4S	117	DU	3. MDR - Medium Density Residential	2.07	243
81	4S	210	DU	4. HDR - High Density Residential	2.07	435
81	4S	2	ACRE	13. Park	0.24	1
82	4S	210	DU	2. LDR - Low Density Residential	2.07	435
82	4S	3	ACRE	13. Park	0.24	1
91	4	48	DU	1. VLDR - Very Low Density Residential	2.07	100
92	4	208	DU	1. VLDR - Very Low Density Residential	2.07	431
92	4	10	ACRE	13. Park	0.24	3
93	4	94	DU	1. VLDR - Very Low Density Residential	2.07	195
94	4	60	DU	1. VLDR - Very Low Density Residential	2.07	125
95	4	370	DU	2. LDR - Low Density Residential	2.07	766
96	4	190	DU	2. LDR - Low Density Residential	2.07	394
97	5	210	DU	2. LDR - Low Density Residential	2.07	435
97	5	8.712	TSF	7. CR - Commercial Recreation	1.01	9
98	5	150	DU	2. LDR - Low Density Residential	2.07	311
98	5	8.712	TSF	7. CR - Commercial Recreation	1.01	9
99	5	315	DU	3. MDR - Medium Density Residential	2.07	653
99	5	5	ACRE	13. Park	0.24	2

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
100	5	432	DU	3. MDR - Medium Density Residential	2.07	895
111	5	230	DU	2. LDR - Low Density Residential	2.07	477
112	5	44	DU	1. VLDR - Very Low Density Residential	2.07	92
113	5	423	DU	3. MDR - Medium Density Residential	2.07	876
113	5	5	ACRE	13. Park	0.24	2
114	5	603	DU	3. MDR - Medium Density Residential	2.07	1249
115	5	555	DU	4. HDR - High Density Residential	2.07	1149
116	5	87.12	TSF	6. C-Commercial	1.01	88
117	5	8	ACRE	13. Park	0.24	2
118	5	1500	STU	11. K-8 School	0	0
119	5	459	DU	3. MDR - Medium Density Residential	2.07	951
120	5	72	DU	1. VLDR - Very Low Density Residential	2.07	150
120	5	5	ACRE	13. Park	0.24	2
121	5	459	DU	3. MDR - Medium Density Residential	2.07	951
122	5	160	DU	2. LDR - Low Density Residential	2.07	332
122	5	5	ACRE	13. Park	0.24	2
123	5	185	DU	2. LDR - Low Density Residential	2.07	383
124	5	95	DU	2. LDR - Low Density Residential	2.07	197
124	5	5	ACRE	13. Park	0.24	2
125	5	200	DU	2. LDR - Low Density Residential	2.07	414
126	5	95	DU	2. LDR - Low Density Residential	2.07	197
127	5	300	DU	2. LDR - Low Density Residential	2.07	621
131	8W	110	DU	2. LDR - Low Density Residential	2.07	228
132	8W	120	DU	2. LDR - Low Density Residential	2.07	249
133	8W	60	DU	2. LDR - Low Density Residential	2.07	125
134	8W	102	ACRE	9. PF - Public Facilities	1.08	111
135	8W	75	DU	2. LDR - Low Density Residential	2.07	156
136	8W	297	DU	3. MDR - Medium Density Residential	2.07	615

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
136	8W	6	ACRE	13. Park	0.24	2
137	8W	100	DU	2. LDR - Low Density Residential	2.07	207
138	8W	1500	STU	11. K-8 School	0	0
139	8	108.9	TSF	6. C-Commercial	1.01	110
140	8	445	DU	2. LDR - Low Density Residential	2.07	922
141	8	70	DU	2. LDR - Low Density Residential	2.07	145
142	8	45	ACRE	9. PF - Public Facilities	1.08	49
143	8	215	DU	2. LDR - Low Density Residential	2.07	446
143	8	5	ACRE	13. Park	0.24	2
144	8	240	DU	2. LDR - Low Density Residential	2.07	497
144	8	5	ACRE	13. Park	0.24	2
145	8	130	DU	1. VLDR - Very Low Density Residential	2.07	270
146	8	355	DU	2. LDR - Low Density Residential	2.07	735
147	8	320	DU	2. LDR - Low Density Residential	2.07	663
147	8	5	ACRE	13. Park	0.24	2
148	8W	165	DU	2. LDR - Low Density Residential	2.07	342
151	7	90	DU	2. LDR - Low Density Residential	2.07	187
152	7	265	DU	2. LDR - Low Density Residential	2.07	549
152	7	4	ACRE	13. Park	0.24	1
153	7	60	DU	1. VLDR - Very Low Density Residential	2.07	125
154	7	235	DU	2. LDR - Low Density Residential	2.07	487
155	7	163.35	TSF	6. C-Commercial	1.01	165
156	7	255	DU	2. LDR - Low Density Residential	2.07	528
157	7	315	DU	3. MDR - Medium Density Residential	2.07	653
157	7	165	DU	4. HDR - High Density Residential	2.07	342
158	7	8.712	TSF	7. CR - Commercial Recreation	1.01	9
158	7	6	ACRE	13. Park	0.24	2
159	7	52	DU	1. VLDR - Very Low Density Residential	2.07	108

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
161	6	25	ACRE	13. Park	0.24	6
162	6	425	DU	2. LDR - Low Density Residential	2.07	880
163	6	265	DU	2. LDR - Low Density Residential	2.07	549
163	6	2	ACRE	13. Park	0.24	1
164	6	81	DU	3. MDR - Medium Density Residential	2.07	168
164	6	1	ACRE	13. Park	0.24	1
164	6	54.45	TSF	6. C-Commercial	1.01	55
165	6	144	DU	3. MDR - Medium Density Residential	2.07	299
166	6	3500	STU	12. High School	0	0
167	6	34	DU	1. VLDR - Very Low Density Residential	2.07	71
168	6	34	DU	1. VLDR - Very Low Density Residential	2.07	71
168	6	5	ACRE	13. Park	0.24	2
169	6	56	DU	1. VLDR - Very Low Density Residential	2.07	116
170	6	40	DU	1. VLDR - Very Low Density Residential	2.07	83
171	6	205	DU	2. LDR - Low Density Residential	2.07	425
172	6	24	DU	1. VLDR - Very Low Density Residential	2.07	50
173	6	195	DU	2. LDR - Low Density Residential	2.07	404
173	6	81	DU	3. MDR - Medium Density Residential	2.07	168
173	6	2	ACRE	13. Park	0.24	1
174	6	30	DU	1. VLDR - Very Low Density Residential	2.07	63
174	6	5	ACRE	13. Park	0.24	2
175	6	68	DU	1. VLDR - Very Low Density Residential	2.07	141
181	IC	738.979	TSF	8. BP - Business Park	0.34	252
182	IC	1428.77	TSF	10. CI - Civic	1.08	1544
183	BP1	960.498	TSF	8. BP - Business Park	0.34	327
184	BP1	960.498	TSF	8. BP - Business Park	0.34	327
185	BP1	960.498	TSF	8. BP - Business Park	0.34	327
186	BP2	960.498	TSF	8. BP - Business Park	0.34	327

TAZ No.	Village	Amount	Unit	LU Name	Modified Vehicle Generation Rate	Total Vehicles
187	BP2	960.498	TSF	8. BP - Business Park	0.34	327
189	BP3	622.037	TSF	8. BP - Business Park	0.34	212
190	BP3	1200.312	TSF	8. BP - Business Park	0.34	409

Attachment E
Evacuation Analysis Worksheets

The tables below present the evacuation results for each scenario. The displayed times represent the maximum evacuation time for the area being evacuated, meaning the time when the last vehicle from a specific village or area crossed the "finish" line. The times are shown as the total number of seconds since the evacuation order was issued.

Scenario 1

- Phases: 1-2
- Build Land Use: Village 1 & Village 3
- Fire Approach Direction: South/Southeast
- Area Under Evacuation: Village 1, Village 3, Existing

Destination Point / Run Number	Existing	Village 1	Village 3
1	2004.5	12945.3	16419.5
2	1645.8	7116.4	12814.4
3	1520.7	7571.7	12873.4
4	1672.2	7181.2	12819.1
5	1872.9	7035.6	12914.7
6	1669	7250.6	12642.9
7	1672.1	7547.2	13168
8	1955.6	7270.5	13164.1
9	1894.6	6860.8	12962.4
10	1746.2	7244.8	13118.6
11	1751	6980	12739
12	1802.3	7275.8	12949.9
13	1806	7379.3	13009.4
14	1751.9	7112.7	12789.3
15	1677.6	7138	12809.1
16	1843.4	7251.7	12886.5
17	1742.2	6825.3	12596.1
18	1760.5	7214.1	12725.6
19	1743.9	6860.7	12777.2
20	1785.8	7404.8	12734.4
Average end time of 20 runs in seconds	1765.91	7473.325	13045.68
Average end time of 20 runs in hours : minutes	0:29	2:04	3:37

Scenario 2

- **Phases:** 1-2
- **Build Land Use:** Village 1 & Village 3
- **Fire Approach Direction:** North/Northeast
- **Area Under Evacuation:** Village 1, Village 3, Existing

Destination Point / Number of Runs	Existing	Village 1	Village 3
1	1043.9	5691.4	5485.1
2	977.4	5717	5851.5
3	1014.2	5581.3	5566.7
4	1060.5	5584.5	5851.6
5	1057	5838.2	5556
6	1059.1	5679.9	5782.9
7	971.8	5592.3	5727.1
8	1054.9	5471.9	5628.4
9	1026.1	5592.6	5920.9
10	1050.8	5597.1	5658.1
11	1017.7	5730.5	5748.8
12	954.5	5619.9	5654.1
13	1010.2	5552.1	5760.3
14	1010.8	5522	5514.1
15	1013.6	5543.9	5810.5
16	968.6	5464.7	5464.8
17	1039.6	5669.2	5578.6
18	1075.2	5440.3	5531.5
19	1015	5679.7	5631.5
20	1022.6	5456.5	5508.7
Average end time of 20 runs in seconds	1022.175	5601.25	5661.56
Average end time of 20 runs in hours : minutes	0:17	1:33	1:34

Scenario 3

- **Phases:** 1-2
- **Build Land Use:** Village 1 & Village 3
- **Fire Approach Direction:** West/Northwest
- **Area Under Evacuation:** Village 1, Village 3, Existing

Destination Point / Number of Runs	Existing	Village 1	Village 3
1	1043.9	7513.7	5756.1
2	977.4	7433.5	5789
3	1014.2	7408.2	5755.3
4	1060.5	7213.6	5817.2
5	1057	7350.9	5816.9
6	1059.1	7461	5841.3
7	971.8	7367.1	5938.9
8	1054.9	7265	5977.5
9	1026.1	7483.7	5810.9
10	1050.8	7464.4	5818.6
11	1017.7	7471.1	5827
12	954.5	7410	5785.6
13	1010.2	7284.9	5794.4
14	1010.8	7535.8	5786.2
15	1013.6	7336.1	5727.3
16	968.6	7306.5	5709.9
17	1039.6	7358.6	5667.8
18	1075.2	7334.7	5676
19	1015	7372.4	5695.2
20	1022.6	7352.8	5784
Average end time of 20 runs in seconds	1022.175	7386.2	5788.755
Average end time of 20 runs in hours : minutes	0:17	2:03	1:36

Scenario 4

- **Phases:** 1-4
- **Build Land Use:** Village 1, Village 3, Village 7, Business Park West, Institutional & Civic
- **Fire Approach Direction:** South/Southeast
- **Area Under Evacuation:** 50% of Village 7, Business Park West, Institutional & Civic

Destination Point / Number of Runs	50% of Village 7	western portion of Business Park	Institutional & Civic
1	3799.3	6716.4	5959.5
2	3790.8	6767.6	6530.8
3	3555.3	6955.3	6442.1
4	3759	6858.7	6152.8
5	3643.1	6856.9	6534.8
6	3670.1	6617.8	6323.1
7	3616.5	6900.2	6493.9
8	3750.2	6907.4	6497.9
9	3546.2	6753.8	6245
10	3643.9	6774.1	6203.9
11	3518.4	6963.9	6580.6
12	3582.6	6853.3	6037.8
13	3560.7	6890.5	6212.9
14	3734.6	6819.7	6269.6
15	3514.8	6945.8	6689.4
16	3689.3	6715	6302
17	3792.7	6999.6	6513.5
18	3671.3	6858.1	6305.9
19	3605	6838.5	6431.4
20	3634	7049.1	6812
Average end time of 20 runs in seconds	3653.89	6852.085	6376.945
Average end time of 20 runs in hours : minutes	1:00	1:54	1:46

Scenario 5

- **Phases:** 1-4
- **Build Land Use:** Village 1, Village 3, Village 7, Business Park West, Institutional & Civic
- **Fire Approach Direction:** North/Northeast
- **Area Under Evacuation:** 50% of Village 3, Village 7, Existing

Destination Point / Number of Runs	Existing	Village 3 Exit @ Village 1	Village 7 Exit @ Village 1	Village 7 @ Lancaster	V7 Exit @ I5
1	1082.8	3875.4	3893.7	2269.1	5126.4
2	1082.8	3875.4	3893.7	2269.1	5126.4
3	1096.1	4088	3857.5	2314.6	4917.1
4	1047.8	4203.3	3860.2	2446.6	5021.6
5	1077.7	3867.5	3867.8	2233	5029.9
6	1090.8	4169.5	3700.2	2382.6	4945
7	1092.1	4019.7	3949	2339.5	5131.5
8	1097.4	4032.5	3883.4	2295.6	5030
9	1064.8	4238.4	3811.2	2253.6	4983.2
10	1087.6	3939.8	3773.4	2413.1	5062.1
11	1087.3	4010.5	3858.3	2194.6	4900.6
12	1100	4071.7	3698.2	2302.9	4944
13	1069.8	4008	3848.2	2207.2	5044.5
14	1035.4	3975.3	3777.1	2223.6	4986.8
15	1070.6	4158.1	3869.4	2204.5	4939.9
16	1075.5	4202.9	3779.7	2353.8	5105.2
17	1074.2	3956.7	3833.4	2194	5021.8
18	1060.4	3747	3769.4	2314.2	5011.2
19	1082.6	3867.6	3845	2407.9	5115.3
20	1098.8	3600.4	3901.3	2323.5	5020.1
Average end time of 20 runs in seconds	1078.73	3995.385	3833.505	2297.15	5023.13
Average end time of 20 runs in hours : minutes	0:17	1:06	1:03	0:38	1:23

Scenario 6

- **Phases:** 1-4
- **Build Land Use:** Village 1, Village 3, Village 7, Business Park West, Institutional & Civic
- **Fire Approach Direction:** West/Northwest
- **Area Under Evacuation:** Village 1, 30% of Village 3, Business Park West, Existing

Destination Point / Number of Runs	Existing Exit East	Village 1 Exit East	30% of Village 3	Business Park West
1	1063.8	8673.7	2495.7	8394.7
2	1063.8	8673.7	2495.7	8394.7
3	1063.8	8673.7	2495.7	8394.7
4	1058.3	8814.1	2418.6	8497.6
5	1066.9	8756.4	2367.1	8403.3
6	1063.9	8623.1	2517.3	8389.1
7	1061.9	8546.6	2467.6	8391.1
8	1076.5	8771.9	2469.4	8439.4
9	1064.1	8895.1	2524.9	8497.5
10	1060.2	8647.8	2482.2	8304.2
11	1060.5	8796.7	2499.4	8538.2
12	1064.3	8788.7	2555.4	8529.8
13	1068.5	8865.8	2524.4	8725.1
14	1058	8902.7	2491	8672.9
15	1062.4	8821.9	2463.1	8608.7
16	1064.4	8756.8	2405.3	8538.4
17	1058.5	8952.6	2488.8	8792.2
18	1066.7	8776.6	2422.6	8579.6
19	1061.8	8820.5	2417.2	8595.6
20	1067.2	8698	2405.7	8459
Average end time of 20 runs in seconds	1063.775	8762.82	2470.355	8507.29
Average end time of 20 runs in hours : minutes	0:17	2:26	0:41	2:21

Scenario 7

- **Phases:** 1-6
- **Build Land Use:** Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic
- **Fire Approach Direction:** South/Southeast
- **Area Under Evacuation:** 50% of Village 7, Business Park West, Business Park Central, Institutional & Civic

Destination Point / Number of Runs	Village 7 Exit	Business West Exit	Central Business Exit	Civic Exit @ V3
1	2486.8	2982.1	3914.1	4735.7
2	2370.7	3030.5	4083.8	5027.2
3	2432.6	2951.7	4061.8	4780.5
4	2325.3	3017.6	3980.8	4829.8
5	2348.8	3017.9	3981.6	4832.5
6	2473.9	3018.1	4088.6	4794.6
7	2342	2973.9	3996.5	4838.6
8	2246.3	2933.4	4091.5	4993.9
9	2469.6	2924.1	4093	4706.7
10	2418.2	3047.8	4064.5	4877.2
11	2334.7	3044	4031.4	4789.8
12	2320.2	3029.8	4037.3	4829.4
13	2316.6	2967.2	3963.9	4684.1
14	2350.6	2992.7	4126.2	4944.8
15	2365.4	3072.7	4022	4789.6
16	2319.7	3036.7	3930.1	4788.1
17	2371.1	3105.8	3970.3	4951.4
18	2390.7	2984.8	4124.6	4911.1
19	2398.6	3007.3	3930.1	4788.1
20	2419.2	3048.8	4065.5	4878.2
Average end time of 20 runs in seconds	2375.05	3009.345	4027.88	4838.565
Average end time of 20 runs in hours : minutes	0:39	0:50	1:07	1:20

Scenario 8

- **Phases:** 1-6
- **Build Land Use:** Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic
- **Fire Approach Direction:** North/Northeast
- **Area Under Evacuation:** Village 6, Village 7

Destination Point / Number of Runs	Village 7 @ Lancaster	Village 6 @ V3	Village 6 @ V1	Village 6 @ I5
1	6630.8	12140.4	10255.3	12156.9
2	6573	12008.1	8989.8	12023.8
3	6688.5	12427.6	8918	12446.1
4	6495.3	12737.6	8982.9	12729.9
5	6582.6	12613.3	9334.3	12610.8
6	6612.2	12459.1	10191.4	12489.6
7	6610.7	12185.3	9234.8	12223.9
8	6491.3	12140.7	8678.1	12159.7
9	6691.8	12450.1	8967	12460.4
10	6373.7	12412.8	9062.6	12431.6
11	6472.3	12330.8	9273.5	12338.8
12	6492	12301	8898.1	12326.4
13	6511.2	12358.9	9049.1	12377.1
14	6468.2	12539.4	9214.8	12561.1
15	6636.5	12532.1	9027.3	12565.7
16	6544.4	12626.8	10214	12620.9
17	6585.4	12353.4	10253.9	12369.2
18	6918.4	12463.6	10295.7	12491.8
19	6660.8	12671	9127.8	12680.6
20	6469.7	12445.3	10239.4	12461.8
Average end time of 20 runs in seconds	6575.44	12409.87	9410.39	12426.31
Average end time of 20 runs in hours : minutes	1:49	3:26	2:36	3:27

Scenario 9

- **Phases:** 1-6
- **Build Land Use:** Village 1, Village 3, Village 6, Village 7, Village 9 West, Business Park West, Business Park Central, Institutional & Civic
- **Fire Approach Direction:** West/Northwest
- **Area Under Evacuation:** Village 1, Village 9 West, Existing

Destination Point / Number of Runs	Village 9 @ Village 3	Village 9 @ SR-135 / Business Park	Village 1 @ Village 3	Existing Exit
1	4266.4	3475.1	5052.1	1082.8
2	4171	3487.9	4880.9	1096.1
3	4267.2	3539.4	4894.1	1047.8
4	4318.3	3387.4	4834.8	1077.7
5	4215.9	3447.9	5043.5	1090.8
6	4214.6	3528.4	4962	1092.1
7	4530.6	3534	5057	1097.4
8	4336.3	3549.9	5042.8	1064.8
9	4082.2	3709.1	4801.9	1087.6
10	4218.4	3583.2	4912.4	1087.3
11	4250.2	3362.4	4990.2	1100
12	4380.1	3382.5	5009.4	1069.8
13	4292.5	3681	4926.7	1035.4
14	4215.9	3640.9	4940.2	1070.6
15	4207.2	3562.7	4831.1	1075.5
16	4236.9	3448.6	4894.2	1074.2
17	4183.9	3415.4	4892.1	1060.4
18	4356	3379.9	5018.6	1082.6
19	4218	3511.2	4863.3	1098.8
20	4299.6	3538.2	5024.3	1062.3
Average end time of 20 runs in seconds	4263.06	3508.255	4943.58	1077.7
Average end time of 20 runs in hours : minutes	1:11	0:58	1:22	0:17

Scenario 10

- **Phases:** 1-8
- **Build Land Use:** Village 1, Village 3, Village 7 E & West, Village 9 West, Village 6, Village 9 East, Village 8 West, Village 2, Village 4 South
- **Fire Approach Direction:** South/Southeast
- **Area Under Evacuation:** 50% of Village 7, Business Park West, Business Park Central, Business Park East, 30% of Institutional & Civic

Destination Point / Number of Runs	Village 7 Exit @ V6	Business West (1) Exit	Central Business Exit @ V1	Business East @V6	Civic Exit @ V3
1	4682	3967.3	2973.6	4859.6	1595.2
2	4510.9	4022.4	2855.7	4685.3	1637.6
3	4562.8	3966.7	2799.5	4646.4	1590.2
4	4502.9	4060.4	2870.9	4770.4	1589.9
5	4611.9	4003.2	2858.5	4725.1	1551.3
6	4696.6	4057.3	2842	4855.4	1489.1
7	4499.8	3975.8	2831.2	4736.3	1643.1
8	4461.4	3931.4	2876.4	4773.1	1615.8
9	4599.4	4003.3	2856	4693.1	1492.8
10	4639.6	4044.5	2847.6	4840.7	1586
11	4546.6	4085.5	2855.3	4679.1	1558.6
12	4538.6	4069.9	3009.1	4750.9	1454.5
13	4595.3	3988.8	2784.9	4865.4	1471.6
14	4501.8	4019.2	3000.5	4731.6	1615.7
15	4467.7	4058.5	2779.5	4628.8	1548.6
16	4521.9	4073	2933.8	4784.8	1549.4
17	4672.7	4093.8	2857.9	4910	1577
18	4561.4	4043.8	2832.3	4734.6	1563.1
19	4531.9	4080.5	2866.9	4782.1	1545
20	4315.2	3960.2	2879.7	4432.5	1664.1
Average end time of 20 runs in seconds	4551.02	4025.275	2870.565	4744.26	1566.93
Average end time of 20 runs in hours : minutes	1:15	1:07	0:47	1:19	0:26

Scenario 11

- **Phases:** 1-8
- **Build Land Use:** Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic
- **Fire Approach Direction:** North/Northeast
- **Area Under Evacuation:** 30% of Village 2, Village 4 South, 50% of Village 6, Village 8 West, 30% of Village 9

Destination Point / Number of Runs	Village 2 Exit	Village 4 Exit	Village 6 Exit	Village 8 Exit	Village 9 Exit
1	3199.2	3181.6	3204.2	3630.8	3008.1
2	3199.2	3181.6	3204.2	3630.8	3008.1
3	3322.1	3442.5	3316.1	3674.9	2923.8
4	3209	3316.6	3211.8	3778.5	2968.9
5	3211.2	3311.2	3191.2	3925.4	2960.7
6	3295.4	3264.1	3297.4	3746.1	3001
7	3118.8	3233.9	3106.1	3672.3	3038
8	3197.9	3118.2	3194.4	3646.7	3034.7
9	3233.7	3369.4	3224	3585.2	3079.1
10	3181.7	3016.2	3175.3	3706.5	2969.2
11	3150.9	3360.4	3133.9	3781.7	2961.9
12	3176.9	3426.5	3177.1	3745.1	2887.9
13	3137.6	3123.6	3134.9	3729.1	2860.2
14	3162.6	3091.5	3159.7	3723.5	2881.1
15	3229.2	3312	3229	3657.1	2895.7
16	3249.1	3218.4	3249.5	3633.4	2866.7
17	3259.7	3292.3	3260.3	3803.9	2846.1
18	3180.2	3089.8	3178	3725	2892.5
19	3204.3	3172.8	3213.6	3757.4	2936
20	3197	3187	3195.7	3844.5	2957.4
Average end time of 20 runs in seconds	3205.785	3235.48	3202.82	3719.895	2948.855
Average end time of 20 runs in hours : minutes	0:53	0:53	0:53	1:02	0:49

Scenario 12

- **Phases:** 1-8
- **Build Land Use:** Village 1, Village 2, Village 3, Village 6, Village 7, Village 9, Village 8 West, Village 4 South, Business Park West, Business Park Central, Business Park East, Institutional & Civic
- **Fire Approach Direction:** West/Northwest
- **Area Under Evacuation:** 30% of Village 1, 30% of Village 2, Village 4 South, Village 9

Destination Point / Number of Runs	Village 1 Exit @ Village 7	Village 2 Exit	Village 4 Exit	Village 9 Exit
1	3145.9	3421.3	2929.6	10626.3
2	3145.9	3421.3	2929.6	10626.3
3	3290.2	3717.4	3108.8	10674.9
4	3406	3444	2959.2	10670.8
5	3210.9	3479.5	2895.8	10676.9
6	3053.1	3290.7	2880.4	10752.8
7	3188.9	3396.1	2961.1	10852.7
8	3219.2	3368	2819.5	10863.7
9	3052.7	3646.8	3026.6	10761.9
10	3010.7	3384.1	2773.6	10593.5
11	2944.8	3481.6	2941.6	10522.7
12	3036.2	3532.4	2989.8	10750.7
13	3319.7	3318.6	2897.3	10692.6
14	3090.4	3399.6	2819.3	10664
15	3125.2	3520.4	3038.7	10589.1
16	3275.8	3327.7	2954.3	10611.1
17	3121.6	3484.5	2806.4	10652
18	2996.9	3523.3	2965.6	10692.5
19	3121.3	3453.7	2959.9	10697.9
20	3186.3	3190.1	2788.4	10679.8
Average end time of 20 runs in seconds	3147.085	3440.055	2922.275	10682.61
Average end time of 20 runs in hours : minutes	0:52	0:57	0:48	2:58

Scenario 13

- **Phases:** 1-10
- **Build Land Use:** Buildout
- **Fire Approach Direction:** South/Southeast
- **Area Under Evacuation:** Business Park West, Business Park Central, Business Park East, 30% of Institutional & Civic, 50% of Village 7, Village 8 East

Destination Point / Number of Runs	Business West (1) Exit	Central Business Exit @ V1	Business East Exit	Civic Exit @ V3	Village 7 Exit @ V6	Village 8 Exit
1	3967.3	3283.8	5631.8	1585.8	5804	8477.7
2	3967.3	3138.6	5631.8	1619.3	5804	8477.7
3	4022.4	3397	5508.5	1712.6	5402.7	8328.5
4	3966.7	3329	5382.4	1593	5864.6	8531.8
5	4060.4	3181.2	5437.5	1606.8	5388.9	8566.9
6	4003.2	3162	5596.4	1583.7	5599.1	8501.2
7	4057.3	3379.7	5566.4	1472.9	5549.3	8627.1
8	3975.8	3452.8	5536.6	1723.5	5336.2	8366.4
9	3931.4	3346.8	5444.7	1580.9	5242.8	8310.2
10	4003.3	3275.9	5541.6	1506.8	5941.4	8575.4
11	4044.5	3406.2	5621.1	1570.6	5568.8	8609.4
12	4085.5	3352.3	5506.9	1587.2	5458.8	8481
13	4069.9	3450.4	5470.5	1472.1	5562	8411.3
14	3988.8	3146.1	5643.8	1466.6	5381	8301.2
15	4019.2	3484	5520.7	1604.4	5388	8227.4
16	4058.5	3310.5	5313.5	1600.2	5733.2	8362.8
17	4073	3219.3	5456.7	1565.1	5330.4	8372.5
18	4093.8	3200.4	5665.2	1606.4	5684.1	8673.5
19	4043.8	3443.6	5540.5	1621.3	5839.4	8499.3
20	4080.5	3314.7	5479.1	1598.5	5591	8442.7
Average end time of 20 runs in seconds	4025.63	3313.715	5524.785	1583.885	5573.485	8457.2
Average end time of 20 runs in hours : minutes	1:07	0:55	1:32	0:26	1:32	2:20

Scenario 14

- **Phases:** 1-10
- **Build Land Use:** Buildout
- **Fire Approach Direction:** North/Northeast
- **Area Under Evacuation:** 30% of Village 4, Village 5, 30% of Village 6, Village 8 West, Village 8 East

Destination Point / Number of Runs	Village 4 Exit	Village 5 Exit	Village 6 Exit	Village 8 West Exit	Village 8 East Exit
1	3091.9	24651.8	2114.8	16260.3	12377.7
2	3091.9	24651.8	2114.8	16260.3	12377.7
3	2909.5	24282.6	1929.5	16780.7	11188.4
4	3073.5	24467.4	2104.5	16409.1	10924.8
5	3093.2	24166.7	2327.3	16565.2	10892.7
6	3141.7	23930.2	2207.7	16091.7	11342.7
7	3106.4	23763.4	1911.6	15660.6	11040.6
8	2985.8	24136	1958.6	15824.1	11233.1
9	3238.1	24166.3	1901.5	16881.6	10964.6
10	3739.5	24016.3	1939.6	16709.5	10968.3
11	2962.4	24045.7	2109.7	15747.4	10994.6
12	3055	23932.5	2033.5	16515.9	11084.8
13	3067.7	23981.2	2019.5	16141.2	11243.7
14	2836.8	23915.1	1895.1	16050.9	11039.2
15	2949.5	24324.3	2107.3	16530.2	11086
16	3030.8	24000.4	2011.8	16781.7	10847.4
17	3269.9	24057.6	2134.6	16460.2	10594.2
18	3133.4	23799	2097.1	16993.5	10938
19	2882.7	23777.8	1979.3	16224.7	10808.4
20	2968.6	24054.6	2000.6	16682.4	11263.5
Average end time of 20 runs in seconds	3081.415	24106.035	2044.92	16378.56	11160.52
Average end time of 20 runs in hours : minutes	0:51	6:41	0:34	4:32	3:06

Scenario 15

- **Phases:** 1-10
- **Build Land Use:** Buildout
- **Fire Approach Direction:** West/Northwest
- **Area Under Evacuation:** 30% of Village 2, 50% of Village 4, 50% of Village 5, Village 9

Destination Point / Number of Runs	Village 2 Exit	Village 4 Exit	Village 5 Exit	Village 9 Exit
1	3992.5	4042	9477.5	6793.2
2	3992.5	4042	9477.5	6793.2
3	4628.9	3828.5	10401.8	6706.2
4	4177.9	4230.9	10427.9	6791.9
5	4164.2	4329.8	9421.6	6739.6
6	4604.2	4343.1	9269	6913.2
7	4300.2	4042.7	9102.8	7037.9
8	4483.7	3679.9	9315.8	7172.6
9	4706	4026	9217.8	7037.9
10	4251.1	4207.3	9279.9	6813.3
11	4258.7	4069.9	9313.9	6665.3
12	4450.6	4130.6	9235.2	6856.5
13	4094.5	4070.7	9266	6793.3
14	4555.3	4030.2	9355.9	6967.6
15	4187.3	3993.8	9458.5	6667.1
16	3923.5	4151	9324.7	6708.8
17	4541.3	4135.3	9389.7	6704.1
18	4295.6	4403.2	9341.2	6859.4
19	4234.8	4032.1	9447	6833
20	4221.1	4072.4	9359	6850.3
Average end time of 20 runs in seconds	4303.195	4093.07	9444.135	6835.22
Average end time of 20 runs in hours : minutes	1:11	1:08	2:37	1:53