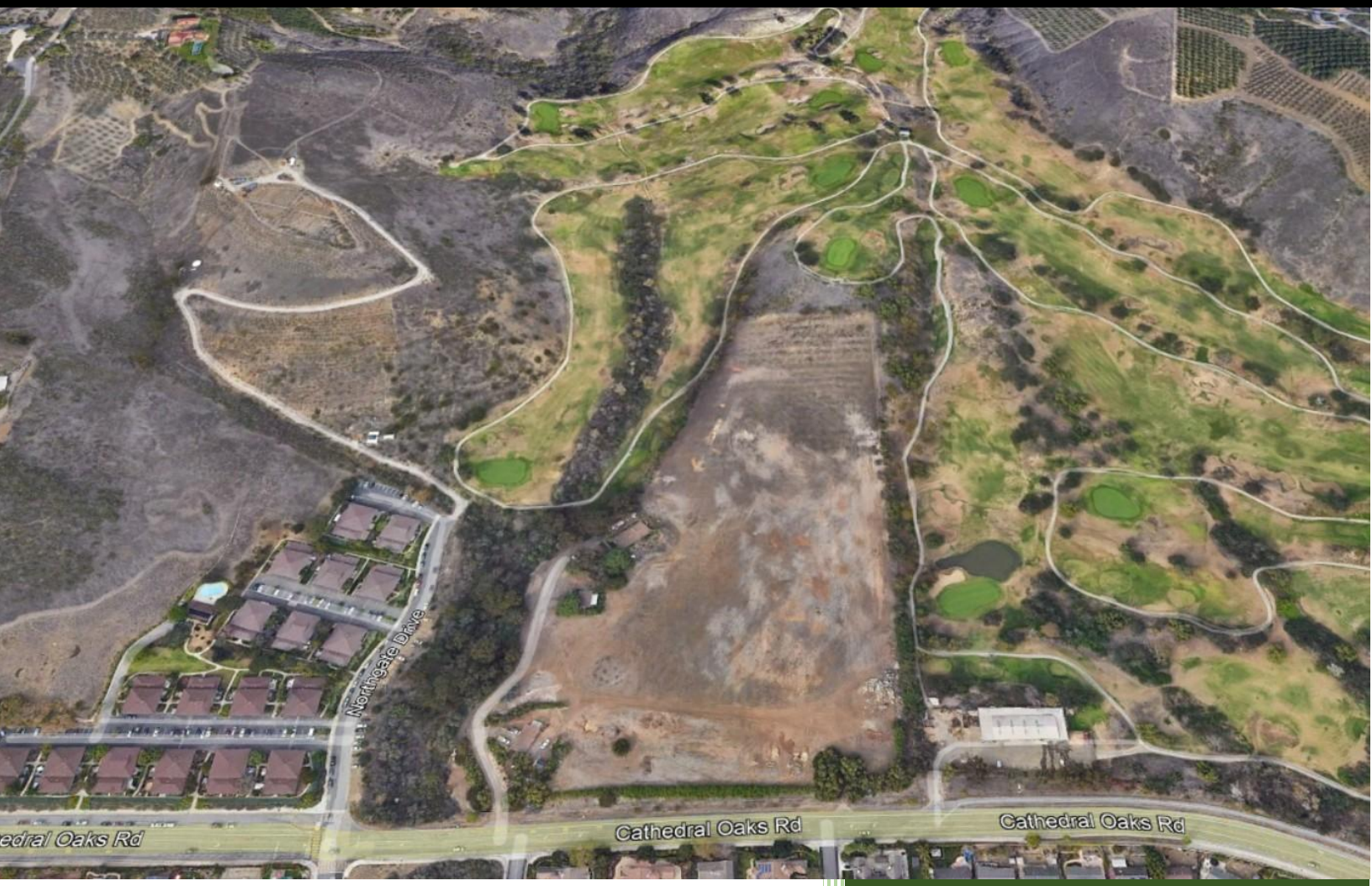
Appendix G

Fire Safety & Wildland Fire Protection Plan

Shelby Property
Tract #32,045
City of Goleta, CA

Fire Safety & Wildland Fire Protection Plan



Revised

October 30, 2025

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Shelby Property Tract #32,045

City of Goleta, CA

Fire Safety & Wildland Fire Protection Plan

Revised

October 30, 2025

Prepared by

Resolute Associates LLC
FROM VISION TO ACTION

San Luis Obispo, CA

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Contents

Executive Summary

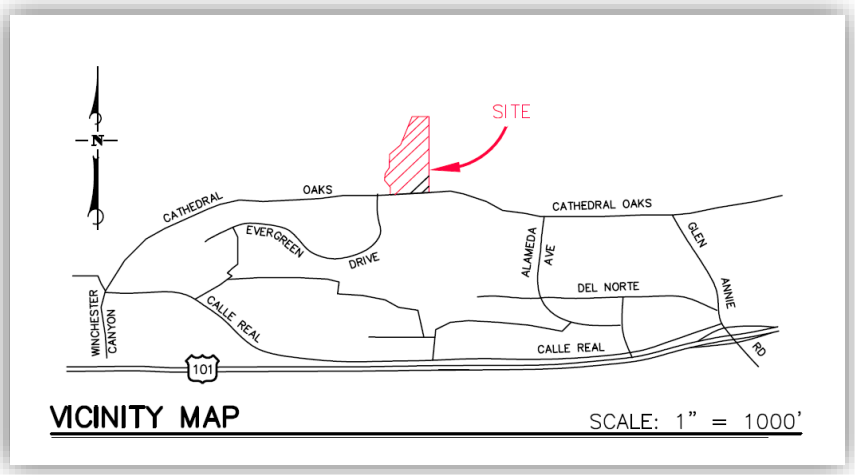
Resolute Associates[1] performed an in-depth analysis of the fire protection factors related to the Shelby Property subdivision, Tract #32,045, City of Goleta (Project). The purpose of this analysis is to assess the risks for this site and surrounding area, and to identify prevention and mitigation methods to provide the highest level of fire safety possible for this Project. The result of this analysis is contained in this Fire Safety & Wildland Fire Protection Plan (Plan).

This Plan utilized the State of California Office of the Attorney General *Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*[2] as a guidance on the completion of this report. This includes section C. *Analyzing the project's impact on evacuation and emergency access.*

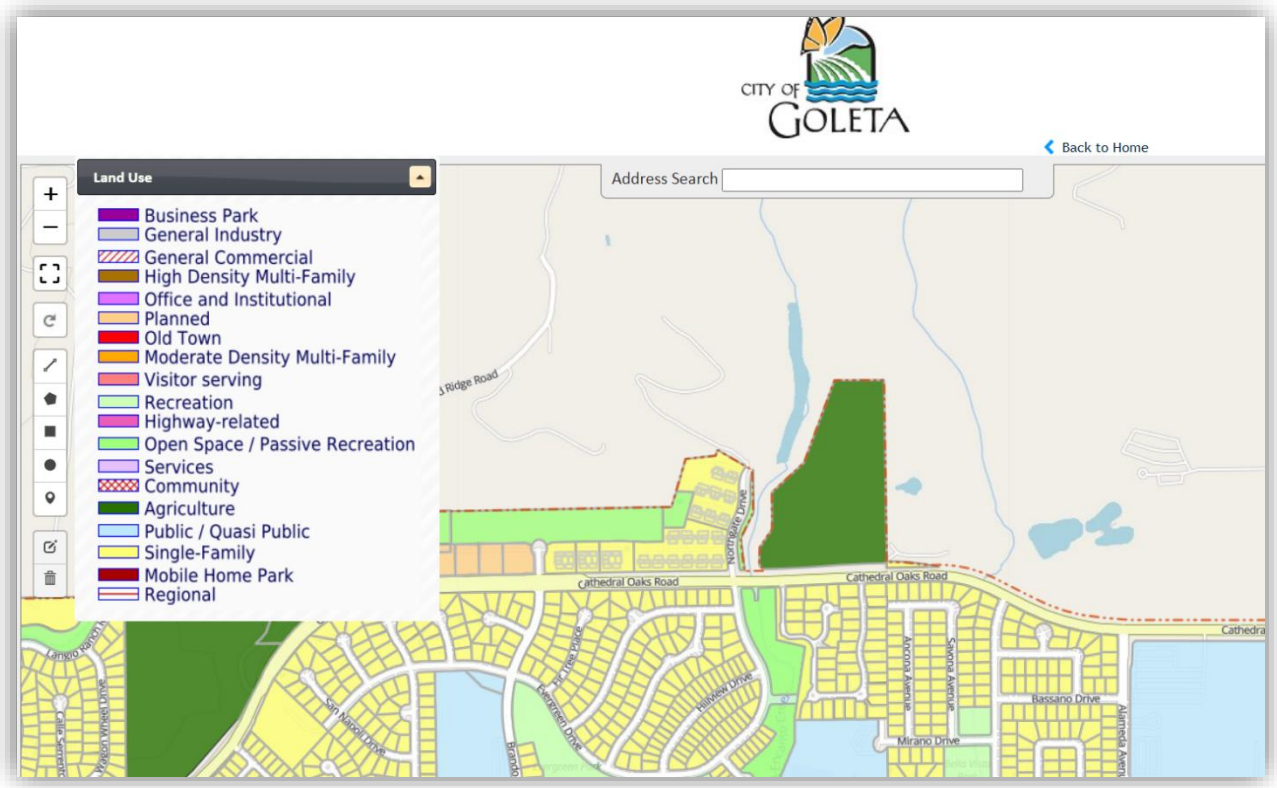
The analysis for the completion of this Plan also utilized applicable fire and building codes, accepted fire protection principles, and fire and environmental protection best management practices.

This Plan also demonstrates that the Project provides the fire protection and life safety measures designed to mitigate wildfire hazards for properties under construction that are required by the Santa Barbara County Fire Wildfire Protection Plan requirements.[3] This includes a Project-specific wildfire hazard assessment that considers location, topography, aspect, climatic and fire history. This Plan also identify conformance with the most restrictive wildfire protection regulation, statute, and local ordinance.

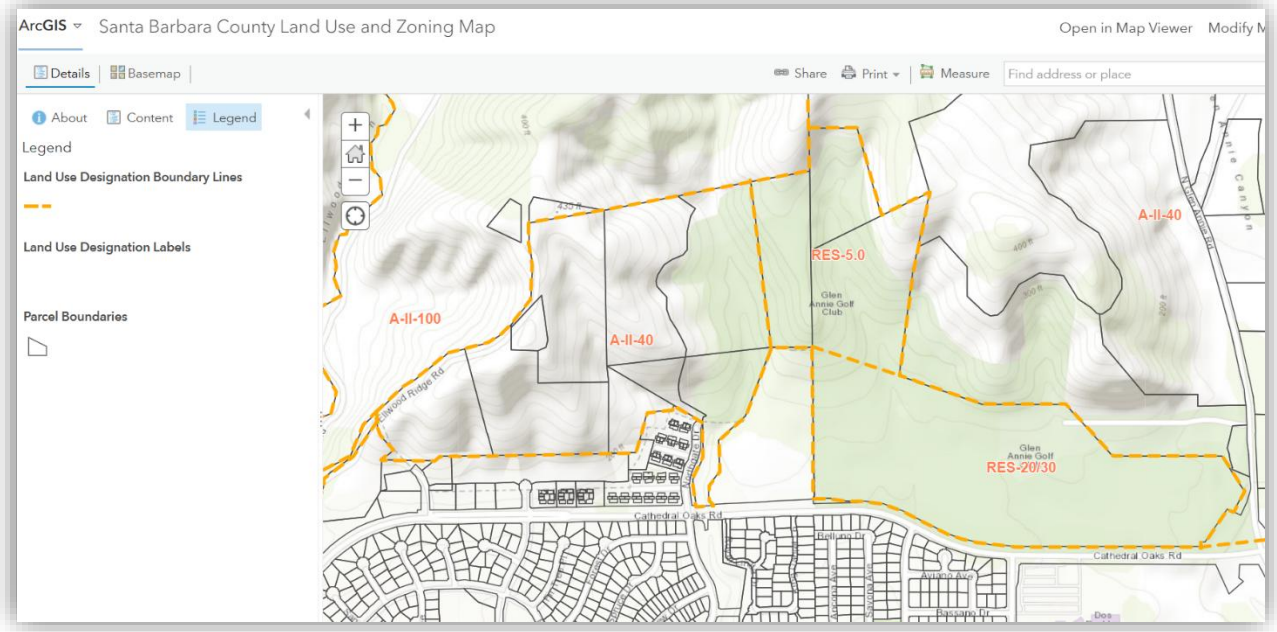
The primary authors of this report are Robert Lewin, Resolute Associates' Principal, Fire Protection Specialist and Emergency Planner and Dennis O'Neil, Fire Protection Specialist and Fire Behavior Analyst. Further information on the authors background can be found at https://resoluteassoc.com/associates.



[1] https://resoluteassoc.com/
[2] Wildfire guidance final (3).pdf
[3] https://sbcfire.com/wp-content/uploads/2024/06/Standard-6-Defensible-Space.pdf



City of Goleta current land use designation



County of Santa Barbara surrounding property land use designation

Land Use Designation	Land Use Class	Land Use Type	Land Use Description
A-II-100	Open Land Uses	Agriculture	Agriculture II/Minimum parcel size-100 acres
A-II-40	Open Land Uses	Agriculture	Agriculture II/Minimum parcel size-40 acres
RES-5.0	Residential	Residential	5.0 units/acre
RES-20/30	Residential	Residential	Minimum 20 units/acre, Maximum 30 units/acre

The key components of this Plan are the implementation of fire protection at the neighborhood level and at the individual residence level.

Neighborhood Level Protection

- Adequate emergency ingress and egress
- Fire protection system requirements (e.g., hydrants)
- Community alerting
- Fire resistive construction requirements throughout the Project
- Fire ignition prevention
- Community outreach and education
- Habitat best management practices
- Property owner agreement to ensure future efforts for continuous fire safety
- Riparian area native vegetation maintenance
- Street signage

Individual Residence Level

- Fire resistive construction
- Fire resistive landscaping
- Fire protection systems (e.g., fire sprinklers)
- Clear addressing
- Defensible space


VESTING TENTATIVE TRACT MAP #32,046
AND
FINAL DEVELOPMENT PLAN
SEPTEMBER 16, 2025
P.N. 01-023.01
SHEET 2 OF 6 SHEETS
MAP SHEET LEGEND
LEGEND
TYPICAL PRIVATE STREET SECTION
ROADS "A", "B", "C" & "D"
NORTHGATE DR.
ROYAL LINDA DR.
SEE SHEET 3
SEE SHEET 4
SEE SHEET 4
SEE SHEET 5

Introduction & Background

The Shelby Property Tract #32,045, located in the northwestern edge of the City of Goleta, CA is a proposed subdivision of a parcel into 59 lots, 56 for single family residential development and three for open space or common areas. The gross Project area is 15.80 acres. The net area of the tract map is 14.38 acres and there is an additional 1.42 acres of public right-of-way. The properties north, west and east of the Project are located in unincorporated Santa Barbara County. The Project will be served by the Santa Barbara County Fire Department and the Goleta Water District.

On February 24, 2025, the California State Fire Marshal released an updated Fire Hazard Severity Zone (FHSZ) map for Local Responsibility Areas, including for the City of Goleta. Previously the area was not designated in a FHSZ and therefore was not required to comply with all the Wildland Urban Interface (WUI) regulations. The newly released map does now designate that the Project is located mostly in a Very High FHSZ and partially in a High FHSZ. Therefore, the Project will now need to comply with WUI regulations for a Local Responsibility Area including California Building Code Chapter 7A standards for buildings and provide defensible space around each home.

General Information

Definitions

City of Goleta Community Wildfire Protection Plan (CWPP) 2012 – The CWPP provides a comprehensive, scientifically based analysis of wildfire related to the hazards and risk in the wildland-urban interface (WUI) areas for the City of Goleta, CA.

Chapter 7A of the California Building Code - establishes minimum standards to protect life and property for a building located in a Wildland-Urban Interface Fire Area by increasing its ability to resist the intrusion of flames or burning embers.

Dead-end Road- A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.

Defensible Space- The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires.

Fire Apparatus Access Road- A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and emergency vehicle access road.

Fire Hazard Severity Zone- Geographical areas designated pursuant to California Public Resources Codes, Sections 4201 through 4204, and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189.

Fuel Modification or Treatment Area- An area where the configuration of flammable vegetation has been reduced or modified, providing reduced fire intensity and duration.

Fire Protection Plan- A document prepared for a specific project or development proposed for a Wildland-Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure as well as other threats.

Greenbelts- A facility or land-use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. It includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hydrant- A valved connection on a water supply or storage system, having two and a half (2 ½) inch and four and a half (4 ½) inch outlets, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Ignition Resistant Materials- A type of building material that resists ignition or sustained flaming combustion sufficiently to reduce losses from WUI conflagrations under worst-case weather and fuel conditions with wildfire exposure of burning embers and small flames.

Local Responsibility Area (LRA)- Local Responsibility Areas (LRA) are incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract.

Occupancy- The purpose for which a building, or part thereof, is used or intended to be used.

Open Space- Open space includes all unbuilt areas, whether publicly or privately owned, protected, or unprotected. Open space lands include forests and grasslands, farms and ranches, streams and rivers, and parks. They provide ecosystem services, support agricultural and forest production, and offer opportunities for recreation.

State Responsibility Area- Lands that are classified by the Board of Forestry and Fire Protection pursuant to Public Resources Code Section 4125, where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the state (CAL FIRE).

Turnaround- A road or driveway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb (cul-de-sac).

Turnouts- A widening in a road or driveway to allow vehicles to pass.

Vertical Clearance- The minimum specified height of a bridge or overhead projection above the road or driveway.

Wildfire- Any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property or resources as defined in Public Resources Code, Sections 4103 and 4104.

Wildfire Exposure- One or a combination of radiant heat, convective heat, direct flame contact and burning embers being projected by vegetation fire to a structure and its immediate environment.

Wildland-Urban Interface (WUI) Fire Area- A geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code, Sections 4201 through 4204, and Government Code, Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires.

First Responder Capabilities

The closest fire station to the Project is Santa Barbara County Fire Station #14 located at:

320 N. Los Carneros Rd.
Goleta, CA 93117

Station 14 services the area South of Los Padres National Forest, North of Hollister Avenue, East of Glen Annie Road and West of Fairview Avenue. The station is staffed by three firefighters including a paramedic who cross staff a municipal Type 1 fire engine and a wildland Type 3 fire engine.

Santa Barbara County Fire response and activity statistics for 2024:

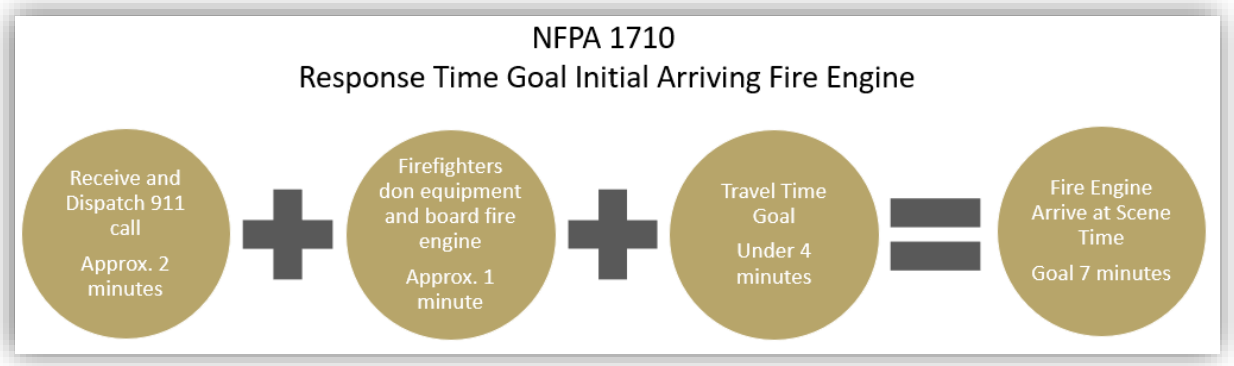
- Total Incidents, 17,082
- Rescue/EMS, 9,915
- Fires, 372
- Public Service Calls, 1,416
- Vehicle Accidents, 843
- Public Concern, 3,969

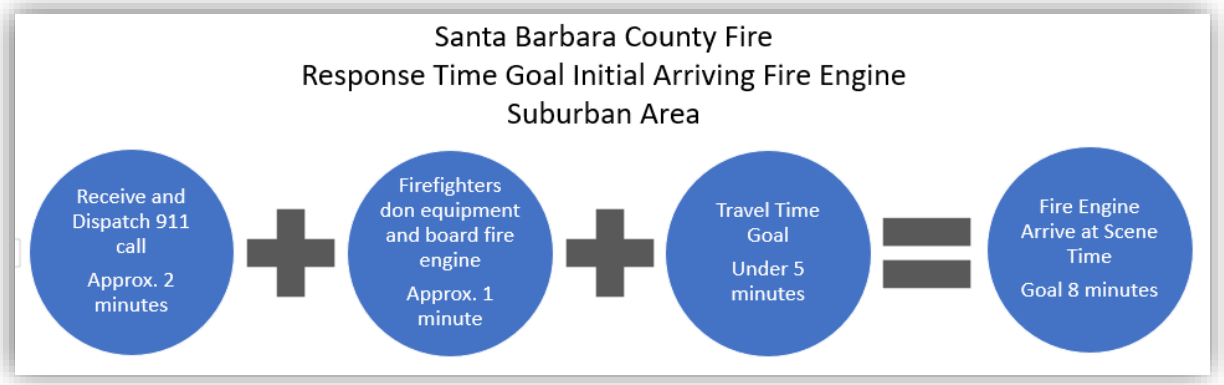
Fire Department Response Time

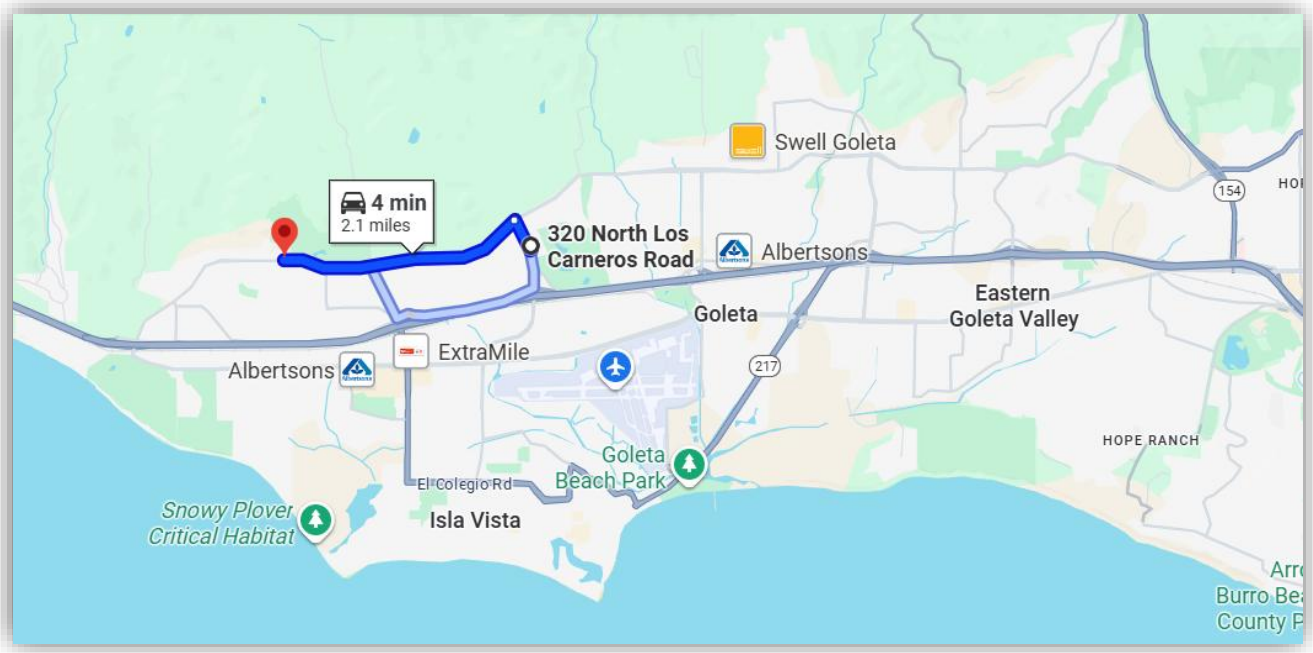
The National Fire Protection Association (NFPA) 1710 recommends that the first fire engine arrives within seven minutes or less of a 911 call.[4] The response time goal for the Santa Barbara County Fire Department is also 7 minutes for urban areas and 8 minutes for suburban areas. The travel time from the closest fire station, Fire station 14 in Goleta, is four minutes. With a 3-minute dispatch and turnout time it is within the County Fire and NFPA response time goal. To mitigate the Project's impact it is

[4] https://www.iaff.org/wp-content/uploads/Departments/Fire_EMS_Department/30541_Summary_Sheet_NFPA_1710_standard.pdf

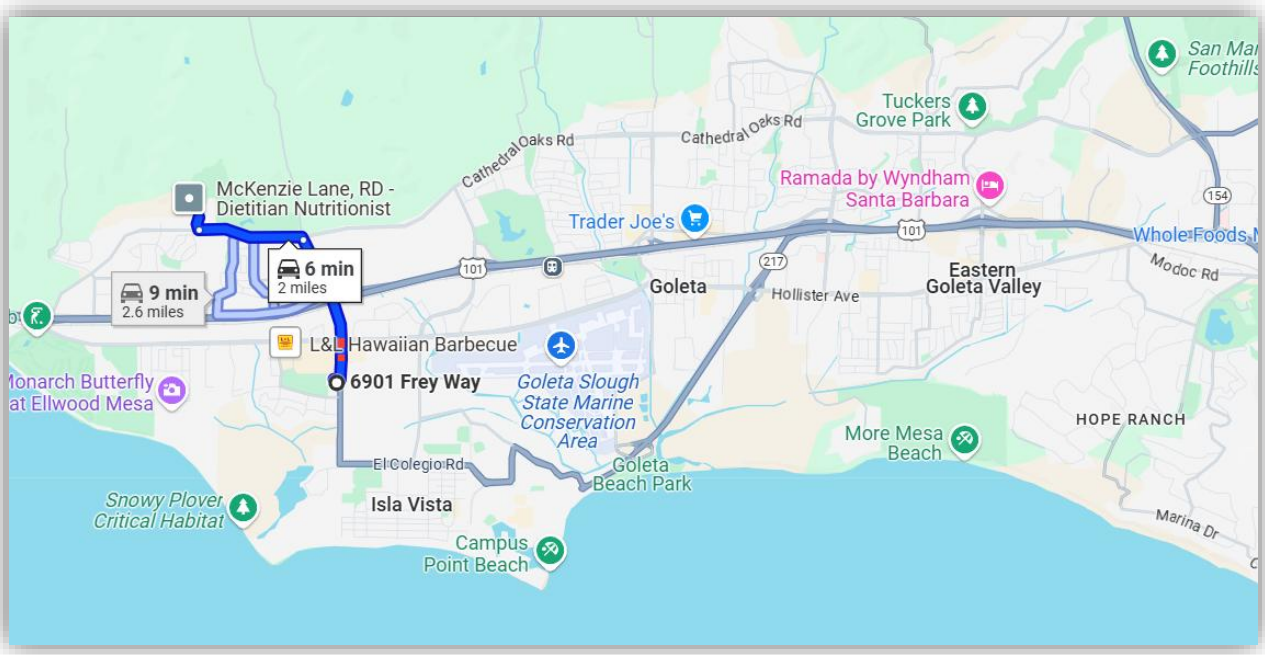
required to will provide fire mitigation development fees that will help fund fire protection infrastructure that could help fund the new proposed fire station in Goleta.



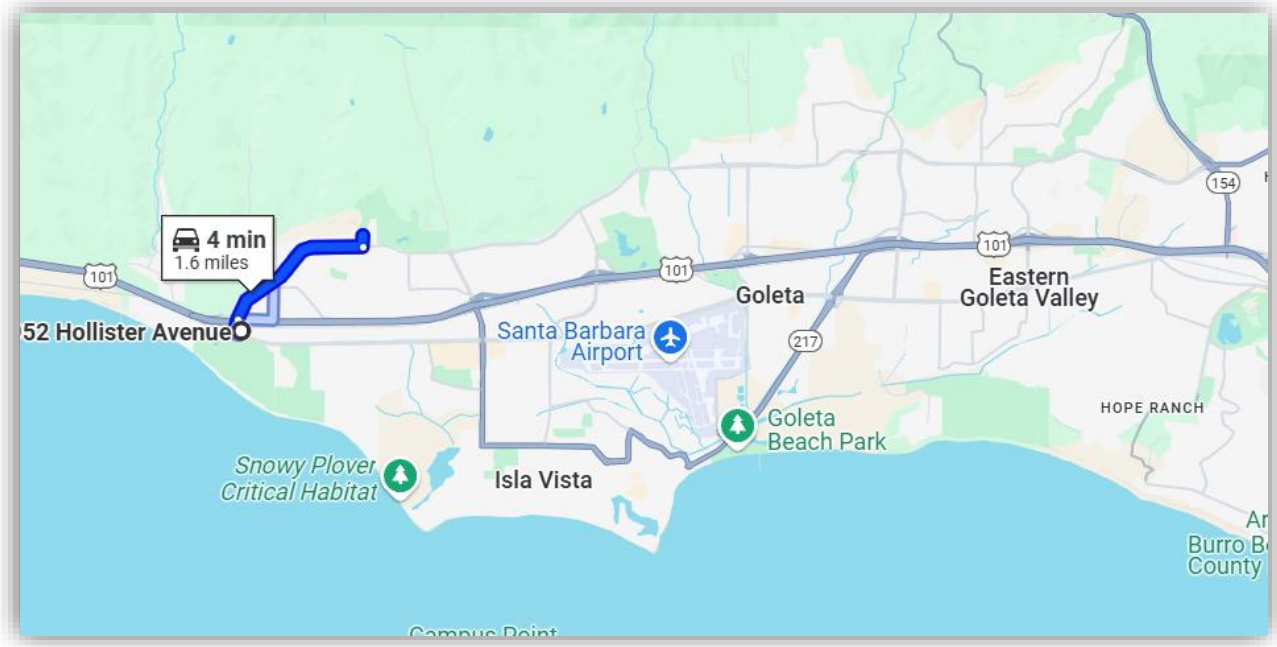




Closest Fire Station - Santa Barbara County Fire Station 14



Santa Barbara County Fire Station 11



Santa Barbara County Fire Proposed New Goleta Station

Emergency Medical Services

Ambulance services are primarily provided by American Medical Response (AMR). AMR Station 5 in Goleta is located at 7200 Hollister Ave. They are contracted by Santa Barbara County to provide

emergency medical transport services. The closest fire engine to the Project responds with a paramedic firefighter.

Law Enforcement

Primary law enforcement responsibility for the Project is by the Santa Barbara County Sheriff's Department. The City of Goleta contracts with the Sheriff's Department. The Sheriff's dispatch center is the Public Safety Answering Point (PSAP) answers emergency and non-emergency calls for the City.

The subdivision will have private roads, so traffic enforcement, including parking, will be the responsibility of the property owners. State law allows the towing of vehicles on private roads for vehicles parked in a fire lane when properly posted. The private roads within the subdivision will be posted with red curbs near fire hydrants. [5]

Fire Safe Codes and Ordinances

Fire laws are in place to protect life and property. Some codes exist to extinguish a hostile fire, and others are to alert and provide time for occupants to escape. Full application of the California Building Code, California Fire Code will apply to the Project. NFPA standards called out in these codes will be required.

Residential building code compliance is overseen by the City of Goleta Building and Safety Division and Title 15 Building and Construction, Chapter 15.01 Building Code. Fire Marshal responsibilities are provided by the Santa Barbara County Fire Department.

State Government Code 51182 Maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line unless required by local ordinance unless required locally. The Santa Barbara County Fire requires that the adjoining property owners maintain 100 foot defensible space from structures on adjoining properties. (section 3.5.2 Adjacent Property of Development Standard #6).[6]

Chapter 7A of the California Building Code (CBC) and Chapter R337 of the California Residential Code (CRC) contain standards associated with the construction of buildings in wildfire prone areas as identified as either a State Responsibility Area Fire Hazard Severity Zone (Moderate, High, or Very High) or a Local Responsibility Areas High and Very High Fire Hazard Severity Zone. The proposed subdivision as of March 10, 2025 is now within a Very High Fire Severity Zone; therefore, the Project will comply with all regulations that come with that designation including full compliance with[7]:

- The California Building Code, 2022 Edition as adopted by the City of Goleta under Title 15 Building and Construction, Chapter 15.01 Building Code with amendments.[8] Specifically:

[5] https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=11.&title=&part=&chapter=9.&article

[6] https://sbcfire.com/wp-content/uploads/2024/06/Standard-6-Defensible-Space.pdf

[7] https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones

[8] https://ecode360.com/44353374#44353379

- The California Building Code (CBC) Chapter 7A Materials and Construction Methods for Exterior Wildfire Exposure[9], and
- The California Residential Code (CRC) Section R337 Materials and Construction Methods for Exterior Wildfire Exposure[10]

The purpose of these codes is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any WUI to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

WUI Requirements

Chapter 7A of the California Building Code (CBC) and Chapter R337 of the California Residential Code (CRC) contain standards associated with the construction of buildings in wildfire prone areas as identified as either a State Responsibility Area Fire Hazard Severity Zone (Moderate, High, or Very High) or a Local Responsibility Area designated High or Very High Fire Hazard Severity Zone.[11] This Project is now within a designated Very High Fire Hazard Severity Zone. Requirements include:

705A.2 Roof coverings.

Where the roofing profile has an airspace under the roof covering, installed over a combustible deck, a 72 lb. (32.7 kg) cap sheet complying with ASTM D3909 Standard Specification for "Asphalt Rolled Roofing (Glass Felt) Surfaced with Mineral Granules," shall be installed over the roof deck. Bird stops shall be used at the eaves when the profile fits, to prevent debris at the eave. Hip and ridge caps shall be mudded in to prevent intrusion of fire or embers.

706A.1 Vents

Where provided, ventilation openings for enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, underfloor ventilation, foundations and crawl spaces, or any other opening intended to permit ventilation, either in a horizontal or vertical plane, shall be in accordance with Section 1202 and Sections 706A.1 through 706A.2 to resist building ignition from the intrusion of burning embers and flame through the ventilation openings.

Residential Sprinklers. CFC 903.3.1.3 / CRC R313.2[12]

NFPA 13D Automatic sprinkler systems installed in one- and two-family dwellings, Group R-3, and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D as amended in Chapter 35.

Ignition-Resistant Construction. CBC 704A

Must be an approved ignition-resistant material with the requirements of chapter 704A.

[9] https://up.codes/viewer/california/ca-building-code-2016/chapter/7A/sfm-materials-and-construction-methods-for-exterior-wildfire-exposure#7A
[10] https://up.codes/s/materials-and-construction-methods-for-exterior-wildfire-exposure
[11] https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0
[12] California Fire Code requirement for all residential construction

Decking. CBC 709A

Shall be constructed with ignition-resistant or non-combustible materials.

Exterior Windows, Skylights and Doors. CBC 708A

708A.2.1 Exterior windows, skylights, and exterior glazed door assembly requirements.

Exterior windows, skylights, and exterior glazed door assemblies shall comply with one of the following requirements:

1. Be constructed of multipane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, or
2. Be constructed of glass block units, or
3. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
4. Be tested to meet the performance requirements of SFM Standard 12-7A-2.

Addressing

All homes must have clear address identification in compliance with section 505 of the California Fire Code (CFC). *"New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole, or other sign or means shall be used to identify the structure. Address identification shall be maintained."*

Street Sign

All road name signs shall be installed per the prevailing standard requirements.

Hydrant and Water Storage

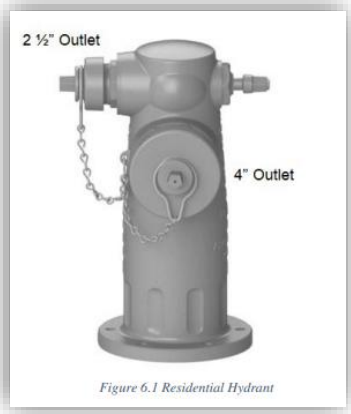
The subdivision's domestic and fire water storage and delivery will be provided by the Goleta Water District public water system. The water system will exceed the minimum fire flow requirements of Appendix B of the California Fire Code for this subdivision. The Project will provide a new watermain throughout the Project as required to service the homes and the required fire hydrants.[13] The water system will be maintained by the Goleta Water District.

- **Residential one- and two-family areas** will have a minimum fire-flow requirement of 500 gallons per minute(gpm) for ½-hour at 20 psi residual pressure for homes under 3,600 square feet. (CFC Table B105.1(1))[14]

[13] https://www.goletawater.com/doc/12202/

[14] https://codes.iccsafe.org/s/CAFC2022P1/appendix-b-fire-flow-requirements-for-buildings/CAFC2022P1-Pt07-AppxB-SecB105

Hydrants are required to be spaced no more than 500 feet for residential occupancy under 3,600 square feet with a minimum fire flow of 500 GPM with a minimum residual pressure of 20 PSI. The Project meets and exceeds this requirement. The hydrant system will be in compliance with all requirements of Santa Barbara County Fire Development Standard #2[15] and Goleta Water District Code.[16] Because the Project includes only one- and two-family dwellings all hydrants are required to only have one 2 ½ inch National Standard hose thread and one 4 inch outlet. A blue reflective marker located 90 degrees to the hydrant and shall be placed eighteen (18) inches from the center line of the street. Curb faces shall be painted red to seven and a half (7.5) feet on either side of the hydrant. The centerline of the riser shall be normally two (2) feet behind the curb face and no hydrant shall be installed closer than five (5) feet from the edge of driveways.



Type of hydrant required

Fire Smart Landscaping & Fuel Modification

The landscape plan is designed to comply with Goleta Municipal Code 17.32.060 Fire Fuel Modification Plan requirement. Except for the riparian area, the entire Project area is engineered, and no native vegetation remains within the Project site. See the Open Space Areas section for fire management of the riparian area.

The objective for the Project landscape plan is to create both a drought-tolerant landscape and a fire resistive landscape. Combining the two goals is referred to as a Fire-Smart Landscape. Developing a Fire-Smart landscape involves choosing and placing fire-resistant plants that thrive in California's dry climate.

Selecting the right plant traits for each specific location in the landscape will be considered when choosing plants for this Project with fire prevention in mind. Considerations:

- **Moisture content:** Select plants with leaves that retain moisture, as they're less likely to catch fire.
- **Waxes & oils:** Plants high in waxes, oils, and resins can be more flammable.
- **Growth structure:** Open-growth plants may have lower fire risk than dense ones.
- **Growth speed:** Fast-growing plants need more space and maintenance.
- **Height potential:** Identify how tall a plant can get to ensure it fits the space.
- **Shedding habits:** Do not use plants that shed bark or leaves need frequent cleanup to reduce fire hazards.

The Fire-Smart landscape must be well maintained to reduce the ability of the landscape to contribute to a fire's spread. The fuel moisture in the plants must be high enough to resist ignition from embers or radiant heat. Potentially, even high enough to act as a positive heat sink that may slow a fire's spread.

Avoiding specific species that are prone to ignition from flying embers or that produce flying embers if they ignite is important for creating a fire resistive landscape. A list of fire resistive and non-invasive plants is included as part of the overall landscape design for public areas. Homeowners will be required to utilize this list in their landscaping. This list could be similar to those identified on the Sustainable

[15] https://sbcfire.com/wp-content/uploads/2023/07/Fire-Hydrant-Spacing-and-Flow-Rates.pdf
[16] https://www.goletawater.com/doc/1212/

Defensible Space webpage.[17] Santa Barbara County Fire Development Standard #6[18] provides a list of Undesirable Plants[19] and requires that these plants are not used in the landscape.

Organic mulches provide a fuel bed for flaming embers. They also are capable of becoming flying embers once ignited. Therefore, they will only be used in areas away from structures. No organic mulches will be used in the Zero defensible space zone and limited use in Zone 1, 30-feet from the structures.

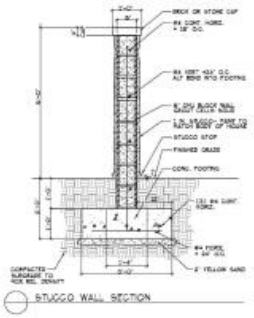
Hardscaping will use limited combustible materials in or near structures. While not required by law, all fencing for this Project is of non-combustible materials. The use of solid non-combustible fencing not only does not add combustible material to the landscape, it also acts as a deflector and is used strategically to prevent the spread of fire.

The following landscape principles are utilized in the landscape design:

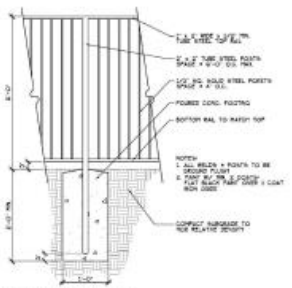
- Use of stone or other non-combustible walls, patios, decks, and roadways that will act as barriers, defensible space, flame deflectors and not contribute to fire spread
- Selection of high-moisture plants that grow close to the ground and have a low sap or resin content
- Use of irrigation to maintain plant health
- Selection of fire-resistant plant species that resist ignition
- Use of noncombustible rock, gravel, concrete and pavers in areas less than five feet away from structures
- Plants should be non-invasive
- Trees and large shrubs will be maintained so ladder fuels are removed to prevent the spread of a ground fire transmitting into the crown of trees.

[17] https://defensiblespace.org/plants/
[18] Standard-6-Defensible-Space.pdf
[19] Microsoft Word - UNDESIRABLE PLANT LIST.doc

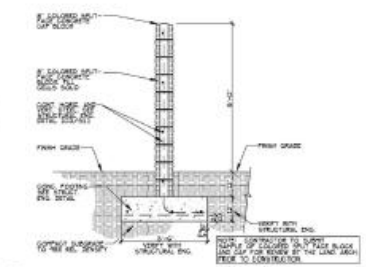
Typical Fence & Wall Details



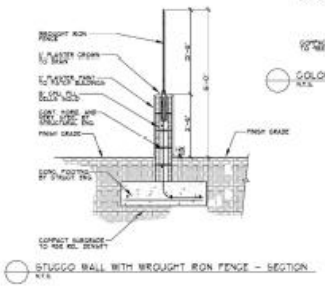
STUCCO WALL SECTION



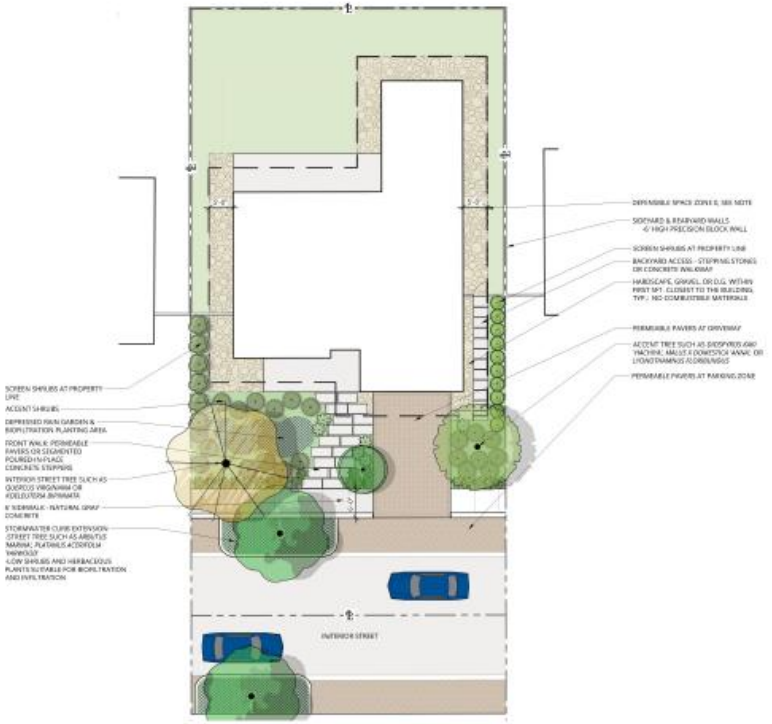
TUBE STEEL FENCE



COLORED SPLIT FACE WALL - SECTION



STUCCO WALL WITH WROUGHT IRON FENCE - SECTION



TYPICAL FRONT YARD LANDSCAPE PLAN

SCALE: 1" = 10'-0"

DEFENSIBLE SPACE ZONE MAINTENANCE NOTES

ZONE 0: EMBER RESISTANT WITHIN 5 FT.
MAINTAIN THE FIRST FIVE FEET CLOSEST TO BUILDINGS, STRUCTURES, AND DECKS CLEAR OF POTENTIAL IGNITION SOURCES.

1. USE HARDSCAPE LIKE GRAVEL, PAVERS, OR CONCRETE. NO COMBUSTIBLE BARK OR MULCH.
2. REMOVE ALL DEAD AND DYING PLANTS, WEEDS, AND DEBRIS (LEAVES, NEEDLES, ETC.) FROM THE ROOF, GUTTER, DECK, PORCH, STAIRWAYS, OR ANY AREAS UNDER THE HOME.
3. REMOVE ALL BRANCHES WITHIN 10 FEET OF ANY CHIMNEY OR STOVEPIPE OUTLET.
4. LIMIT COMBUSTIBLE ITEMS (LIKE OUTDOOR FURNITURE AND PLANTERS) ON TOP OF DECKS.
5. DO NOT LOCATE FIREWOOD AND LUMBER ANY CLOSER THAN ZONE 2 (OR WITHIN 100').
6. USE ONLY NONCOMBUSTIBLE MATERIALS FOR RAILINGS, GATES, AND ARBORS ATTACHED TO THE HOME.
7. LUMBER, LOG PILES, LANDSCAPE MATERIALS, CONTAINERS, OUTSIDE THE ZONE.
8. CONSIDER LOCATING BOATS, RVS, VEHICLES, AND OTHER COMBUSTIBLE ITEMS OUTSIDE THIS ZONE.

ZONE 1: LEAN, CLEAN AND GREEN WITHIN 30 FT.
REGULARLY CLEAR DEAD OR DRY VEGETATION AND CREATE SPACE BETWEEN TREES. DURING TIMES OF DROUGHT WHEN WATERING IS LIMITED, PAY SPECIAL ATTENTION TO CLEARING DEAD OR DYING MATERIAL.

1. REMOVE ALL DEAD PLANTS, GRASS, AND WEEDS.
2. REMOVE DEAD OR DRY LEAVES AND PINE NEEDLES.
3. TRIM TREES REGULARLY TO KEEP BRANCHES A MINIMUM OF 10 FEET FROM OTHER TREES.
4. CREATE A SEPARATION BETWEEN TREES, SHRUBS, AND ITEMS THAT COULD CATCH FIRE, SUCH AS PATIO FURNITURE, WOOD PILES, SWING SETS, ETC.

ZONE 2: REDUCE POTENTIAL FUEL WITHIN 100 FT.
CONTINUE REDUCING POTENTIAL FUEL WITHIN 100 FEET OR THE PROPERTY LINE.

1. CUT OR MOW ANNUAL GRASS DOWN TO A MAXIMUM HEIGHT OF FOUR INCHES.
2. CREATE HORIZONTAL SPACE BETWEEN SHRUBS AND TREES. (SEE NOTES)
3. CREATE VERTICAL SPACE BETWEEN GRASS, SHRUBS AND TREES. (SEE NOTES)
4. REMOVE FALLEN LEAVES, NEEDLES, TWIGS, BARK, CONES, AND SMALL BRANCHES. HOWEVER, THEY MAY BE PERMITTED TO A DEPTH OF THREE INCHES.
5. KEEP 10 FEET OF CLEARANCE AROUND EXPOSED WOOD PILES, DOWN TO BARE MINERAL SOIL, IN ALL DIRECTIONS.
6. CLEAR AREAS AROUND OUTBUILDINGS AND PROPANE TANKS. KEEP 10 FEET OF CLEARANCE TO BARE MINERAL SOIL, AND NO FLAMMABLE VEGETATION FOR AN ADDITIONAL 10 FEET AROUND THEIR EXTERIOR.

VERTICAL SPACING: TREES & SHRUBS
MAXIMUM SPACE BETWEEN THE LOWEST TREE BRANCHES AND THE GROUND OR SHRUBS.

1. REMOVE ALL TREE BRANCHES AT LEAST SIX FEET FROM THE GROUND.
2. ALLOW EXTRA VERTICAL SPACE BETWEEN SHRUBS AND TREES. LACK OF VERTICAL SPACE CAN ALLOW A FIRE TO MOVE FROM THE GROUND TO THE BRUSH TO THE TREETOPS LIKE A LADDER.
3. KEEP AT LEAST THREE TIMES THE HEIGHT OF ANY SHRUBS BETWEEN THE SHRUBS AND THE LOWEST BRANCHES OF TREES.

EXAMPLE: A SHORT SHRUB IS GROWING NEAR A TREE. 15 FEET OF CLEARANCE IS NEEDED BETWEEN THE TOP OF THE SHRUB AND THE LOWEST TREE BRANCH.

HORIZONTAL SPACING: TREES & SHRUBS
HORIZONTAL SPACE DEPENDS ON THE SLOPE OF THE LAND AND THE HEIGHT OF THE SHRUBS OR TREES. LEAVE MORE SPACE BETWEEN VEGETATION ON INSIDER SLOPES.

SPACE BETWEEN SHRUBS:

1. FLAT OR MILD SLOPE (LESS THAN 20%): TWO TIMES THE HEIGHT OF THE SHRUB.
2. MILD TO MODERATE SLOPE (20-40%): FOUR TIMES THE HEIGHT OF THE SHRUB.
3. MODERATE TO STEEP SLOPE (GREATER THAN 40%): SIX TIMES THE HEIGHT OF THE SHRUB.

SPACE BETWEEN TREES:

1. FLAT OR MILD SLOPE (LESS THAN 20%): 10 FEET.
2. MILD TO MODERATE SLOPE (20-40%): 20 FEET.
3. MODERATE TO STEEP SLOPE (GREATER THAN 40%): 30 FEET.

REFERENCE IMAGERY

DIOSPYROS 'KAKI'

ERIOBOTRYA X 'COPPERTONE'

ANIGOZANTHUS

CEANOTHUS 'YANKEE POINT'

POURED-IN-PLACE CONCRETE AT FRONT WALKWAYS

PERMEABLE PAVERS AT DRIVEWAY

ARBUTUS 'MARINA'

CJM::LA

NOT FOR CONSTRUCTION

PRELIMINARY
LANDSCAPE FEATURES

7400 CATHEDRAL OAKS
7400 Cathedral Oaks Road.
Goleta, CA 93117

REVISIONS
7/31/2025 PLANNING
10/09/2025 PLANNING

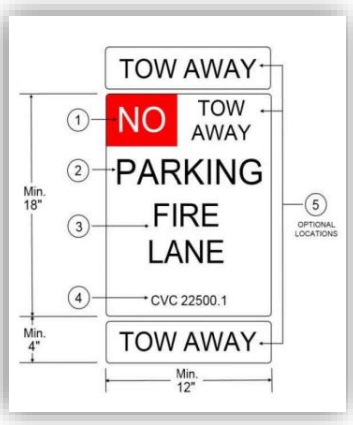
PROJECT NUMBER
2315
DRAWN BY
JC
DATE DRAWN
10/01/25
SCALE
1"=10'-0"
PRINT DATE
10/9/25

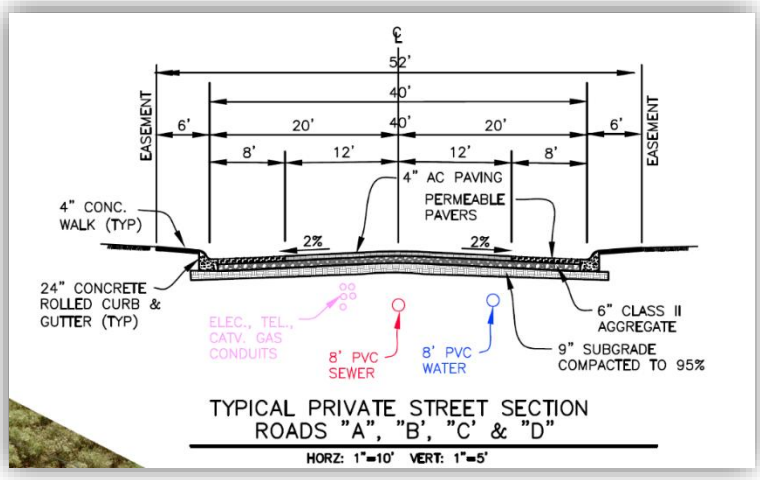
SHEET NUMBER
L-1.3

Access Roads

The Shelby Project roads exceed the requirements of the Santa Barbara County Fire Prevention Division Development Standard 1[20], which complies with the California Fire Code, Section 503 Fire Apparatus Access Roads and Title 14 of the California Code of Regulations (14 CCR), Division 1.5, Chapter 7, Subchapter 2, Articles 1-5- State Minimum Fire Safe Regulations.

- Road travel lanes are 12 feet wide. There is an additional 8 feet on each side with permeable pavers that will allow for parking on both sides of the road. There are no areas that require fire lane signage.
- Curb faces shall be painted red to seven and a half (7.5) feet on either side of the hydrant.
- Dead-end road does not exceed the secondary access requirements of 800 feet.
- All access roads are less than 10% grade
- A cul-de-sac type fire apparatus turnaround is provided that meets the SBC Development Standard of 40ft. radius. No parking fire lane signs and red curb will be placed in the cul-de-sac as required.
- All exterior walls of each home are within 150 feet of the access road as required.
- There are no gates included in the Project.
- All access roads radius meets the requirements of a curvature of less than 50 feet.
- All access roads are designed to support a 75,000 lbs. fire apparatus.
- There are no overhead obstructions, thus providing the requirement of a vertical clearance of 13.5 feet.





[20] https://sbcfire.com/wp-content/uploads/2023/07/Fire-Apparatus-Access.pdf

Open Space Areas

The Project is bounded by a golf course and urban development except along the southern portion of the western perimeter where a riparian area exists along the El Encanto Creek. The golf course provides a green belt around most of the Project which will not readily contribute to the spread of a wildfire. In the future the golf course may potentially be converted into a future residential development.

The natural riparian area has vegetation that is combustible and under the right conditions would be vulnerable to an ember producing fire burning in the area or from an ignition in the riparian area itself. Therefore, the focus of wildland fire risk assessment will be the existing riparian zone and how those fuels interact with the surrounding new development and associated landscaping. To prevent the spread of a fire in the riparian area to the nearby built environment a 100-foot buffer zone is established along with a Project perimeter road that separates the homes from the riparian area. The buffer area will be landscaped and maintained in a way that will not support the spread of fire. It will include a walking path, a turf area, trees, and landscaping that will be irrigated, plants will have separation between them, and the entire landscape will be maintained free of dead material and debris.

100-foot buffer and a roadway are provided between the riparian area and the homes.

A fire resistive landscaped within the buffer between the riparian area and the homes.

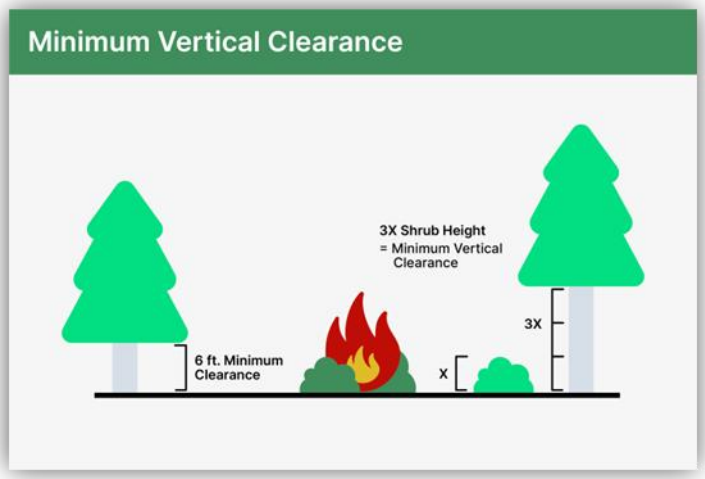
Adjoining Properties

The properties adjoining the Project are mostly outside the City limits. Santa Barbara County Fire does require property owners to clear 100 feet of brush and flammable vegetation from all structures on their property. This regulation also requires property owners to clear vegetation to protect adjoining properties' structures.[21] Because the adjoining property is a developed golf course it mostly provides the fuel modification that creates defensible space for this Project. Maintaining the trees and shrubs along the property lines will be essential.

Most of the Project is surround by an existing golf course which is maintained in a way that it offers a greenbelt providing defensible space around much of the Project. Along the east side of the Project is a row of trees located on the adjoining golf course property. These trees must be maintained in a way that ensures they are free of dead material both on the ground and in the canopy. The trees should be pruned in a manner that provides for a 6-foot space between the ground and the canopy. The area is zoned for future development of homes. Those homes that would be constructed would also need to be

[21] https://sbcfire.com/wp-content/uploads/2024/06/Standard-6-Defensible-Space.pdf

constructed in a manner that will require compliance with all the Wildland Urban Interface requirements and therefore will provide a fire resistive buffer to this Project.



Developed Area

The proposed development itself can become fuel if a wildfire ignites these structures and the fire morphs into a high intensity structure-to-structure fire. This scenario can occur even after the wildfire flame front has passed and embers that have landed on flammable surfaces causes combustible materials to smolder and eventually ignite a structure. This risk is greatly mitigated by requiring home hardening and designing a fire-resistant landscape, as outlined in other sections of this report. It is important that homeowners are trained during Red Flag conditions or when there is an approaching fire to close all windows, doors, garage doors, and any opening that could allow an ember to penetrate the interior of the home.

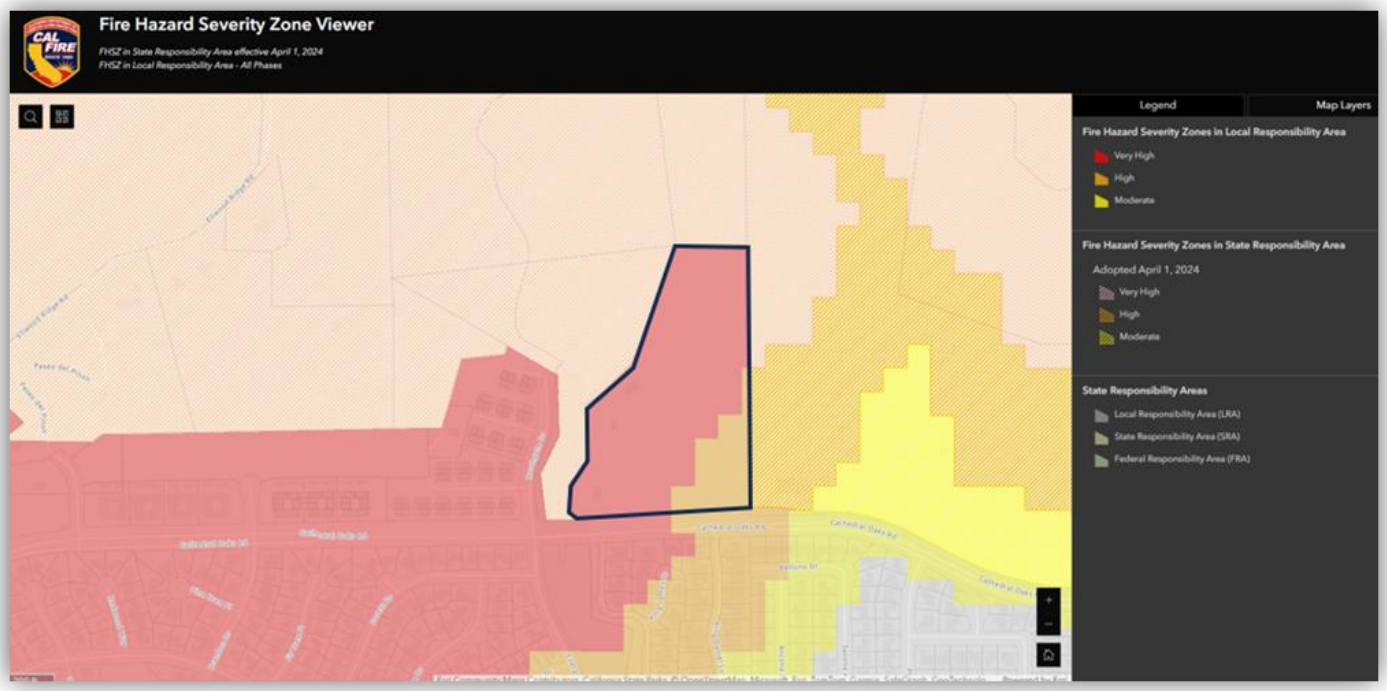
Wildfire Environment

Fire Hazard Severity Zone

As described in Government Code 51178, the State Fire Marshal shall identify areas in the state as moderate, high, and very high fire hazard severity zones based on consistent statewide criteria and based on the severity of fire hazard that is expected to prevail in those areas. Moderate, high, and very high fire hazard severity zones shall be based on fuel loading, slope, fire weather, and other relevant factors including areas where winds have been identified by the Office of the State Fire Marshal as a major cause of wildfire spread.

On March 10, 2025, the California State Fire Marshal released an updated Fire Hazard Severity Zone (FHSZ) map for Local Responsibility Areas, including the City of Goleta. The City of Goleta approved the adoption of this map in May 2025. The Shelby Project is located primarily in areas described as Very High Fire Hazard Severity Zones but also includes a small section of High FHSZ in the Project southeast corner. Because the Project is in these designations it requires that the Project comply with specific Wildland Urban Interface regulations as outlined within this report.

The topography and weather, particularly during sundowner and Santa Ana wind conditions are conducive to the spread of wildfire in the general area. However, because the greenbelt provided by the golf course surrounds most of the development, the risk from a wildland fire is significantly reduced. A wildfire casting ember, even from a distance, is still capable of igniting improvements such as homes. Therefore, even with the reduced risk, efforts must be made to eliminate or mitigate the impacts of wildfire, specifically from ember production or if a wildfire were to establish itself within the developed neighborhood where house to house ignitions could occur.



Fire History

The City of Goleta and the mountainous areas around the City have historically had many large damaging wildfires. Although there is no recorded fires that have burned within the Shelby project area, there have been many recorded fires that burned within close proximately and into the City of Goleta. Below is a table listing all fires greater than 500 acres and are within 5 miles of the Project area.

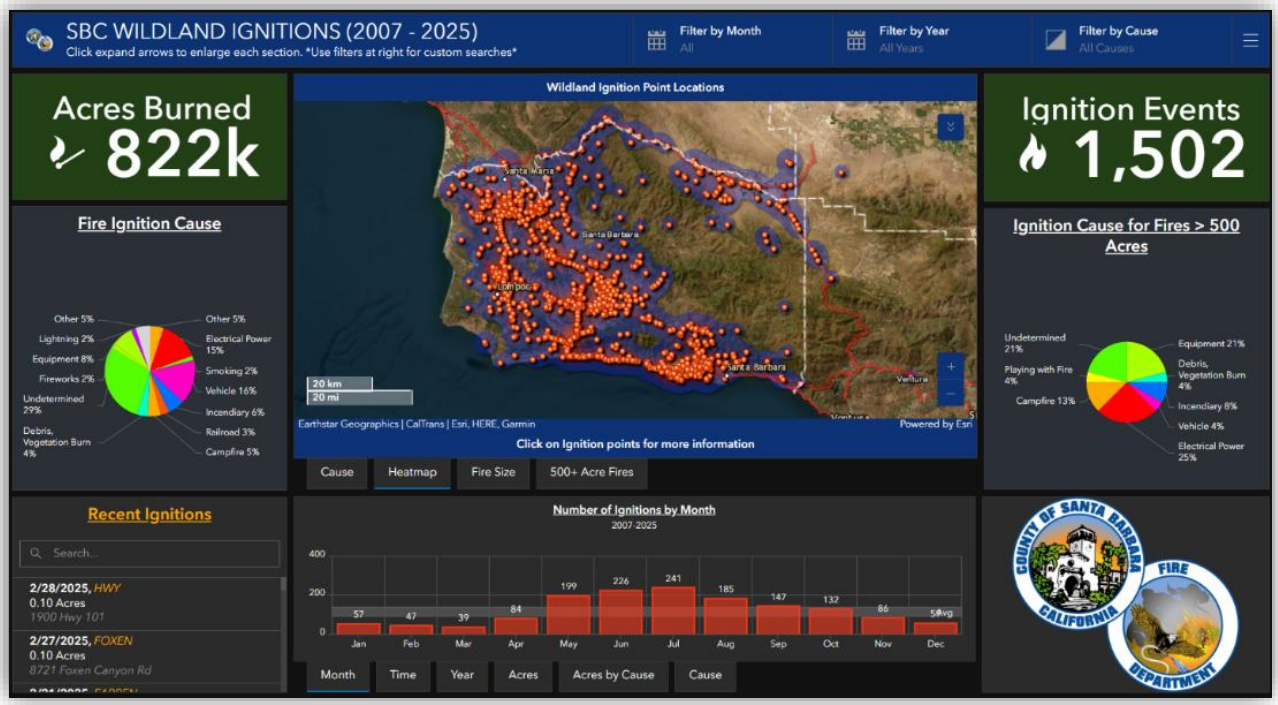
Year	Fire Name	Acres	Distance (miles)
1921	No Name	5,553	3.8
1940	No Name	4,996	4.5
1955	REFUGIO	79,429	1.2
1979	EAGLE CANYON	3,765	.75
1990	PAINT	4,425	4.8
2008	GAP	9,545	1.2
2017	WHITTIER	18,412	4.0

Even smaller fires that ignite under extreme conditions can also cause destruction. For example, the Holiday Fire in Goleta on July 6, 2018, at approximately 8:30 PM burned only 113 acres but destroyed 10 homes and 14 other structures, and damaged three other homes. The fire ignited from a down powerline and burned under a strong sundowner wind condition. It was located just above the City of Goleta on Holiday Hill.

Ignitions

Most determined ignitions of fires over 500 acres is equipment and electrical power.[22]

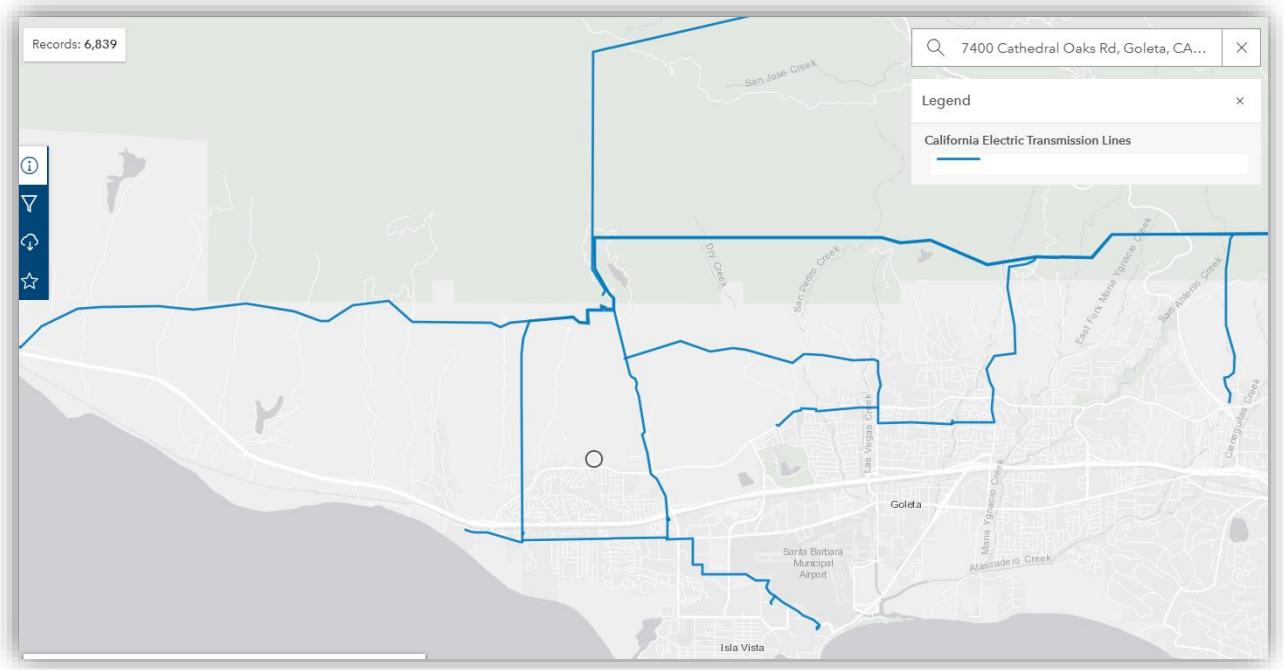
The ignition risk to this property is relatively high. There is road network, powerlines, and agriculture in the area all provide sources for ignition. The potential ignitions include the SCE 66 KV transmission powerlines[23] that are located on the general area near the property. A fire start in the natural riparian area either from playing with fires or a campfire, a structure fire that spreads into the wildland and lastly a vehicle fire that spreads into the vegetation. All of these ignition sources can be mitigated by the use of maintaining vegetation under the powerlines, along the perimeter of the Project and using fire resistive landscaping to create defensible space. Santa Barbara County Fire has a strong fire prevention



[22] Fire Ignitions by Cause - Santa Barbara County Fire Department

[23] California Electric Transmission Lines | California Energy Commission GIS Open Data

program. Ordinances exist to prevent ignitions; there is a comprehensive public outreach program by the County Fire Department.



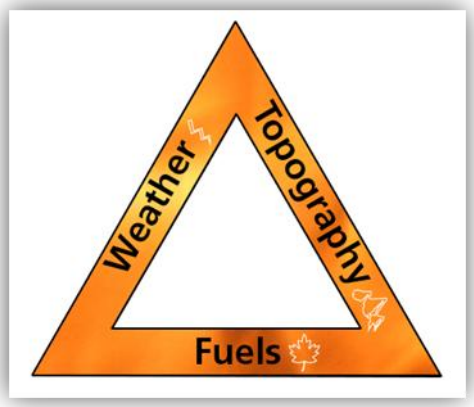
66 KV SCE Electrical Transmission Lines

Project Area Fire Behavior Analysis

A fire behavior analysis was conducted on the Project area.

Fuel Weather & Topography

There are three factors that influence wildfire behavior: fuel, weather, and topography.



Fuel

A fuel's composition, including moisture level, chemical makeup, and density, determines its degree of flammability. Moisture level is the variable factor and changes daily, even hourly. Live trees usually contain a great deal of moisture and dead material contain very little. The moisture content and distribution of these fuels define how quickly a fire can spread and how intense or hot a fire may become. High moisture content will slow the burning process because heat from the fire must first eliminate moisture.

In addition to moisture, a fuel's chemical makeup determines how readily it will burn. Some plants, shrubs, and trees contain oils or resins that promote combustion, causing them to burn more easily,

quickly, or intensely than those without such oils. Finally, the density of a fuel influences its flammability. If fuel particles are close together, they will ignite each other, causing the fuel to burn readily. But if fuel particles are so close that air cannot circulate easily, the fuel will not burn freely.

Soil types also must be considered because fire affects the environment above and below the surface. Soil moisture content, the amount of organic matter present, and the duration of the fire determine to what extent fire will affect soil.

The types of fuels in the area of the proposed subdivision, outside of the riparian area, are mostly grass (fuel model 1) and some areas of chaparral (fuel model 4) on the slopes nearby. Grass has the potential to burn fast, however with lower intensity and less ember production.

Weather

In Santa Barbara County, fire season typically begins in early to late spring and extends through the end of the year. The peak fire risk occurs in late summer and fall when vegetation is driest and offshore winds, either local sundowners or an area-wide Santa Ana, can rapidly spread wildfires. Even in November and December, wildfire potential remains high due to continued dry fuels and strong seasonal winds.

For the months of May through August the average minimum temperatures range from the high 50's to low 60's, the average temperature is typically in the low 70's and the average maximum temperatures are in the low to mid 80's. The minimum low relative humidities are in the mid 30's to low 40's the average relative humidity is in the high 40's to low 50's and maximum relative humidities are in the high 70's to low 80's.

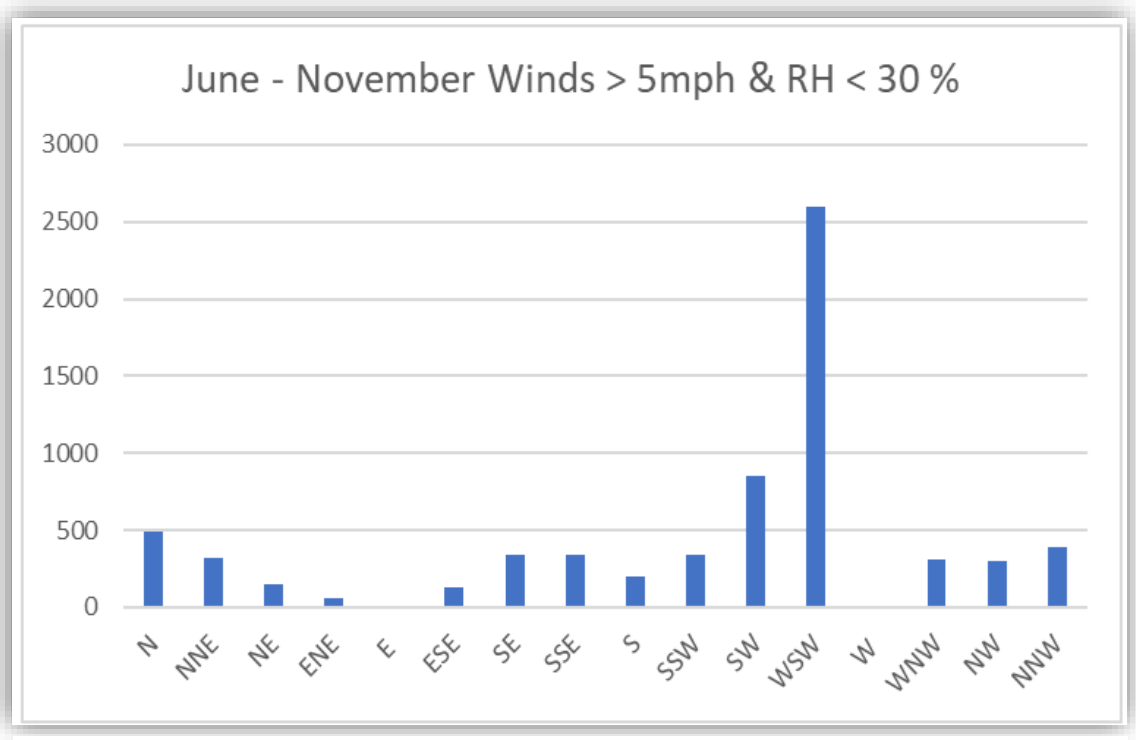
For the months of September through December the average minimum temperature is in the low to mid 60's, the average temperature is in the low 70's to mid 70's and the maximum temperatures are in the low to mid 80's.The average low relative humidities are in the high teens to low 20's, the average relative humidity is in the high 30's to low 40's and average maximum relative humidities are in the low 50's to low 60's.

There are local and regional wind influences that influence fire behavior within the Project area. Diurnal winds are local wind patterns that occur daily due to differences in heating and cooling between the land and atmosphere, especially in mountainous or coastal areas. The term diurnal just means "daily" (i.e., occurring within a 24-hour cycle). A sea breeze is a local, daytime coastal wind that blows from the ocean (cooler surface) toward the land (warmer surface). It is caused by differential heating between land and water during the day. Sundowners are localized, downslope, offshore winds that occur when high pressure inland (usually over the Great Basin or interior California) pushes air down the Santa Ynez Mountains toward the ocean, through narrow canyons and passes. The air compresses and warms as it descends. Santa Ana winds are regional, strong, dry winds that flow from northeast to southwest across Southern California, driven by high pressure over the Great Basin and low pressure off the coast. Air is funneled through mountain passes.

For the months of May through August, early morning winds can be variable but typically are out of the North-Northwest to the North. Wind speeds typically are between 1-4 miles per hour 50 percent of the time, 4-8 miles per hour 8 percent of the time. Wind speeds during this time can reach up to 40 + miles per hour. Late morning to early afternoon winds typically out of the South-Southeast to South-

Southwest with wind speeds of 1-4 miles per hour 20-50 percent of the time, 4-8 miles per hour 20-60 percent of the time. Wind speeds during this time can reach up to 40 + miles per hour. Late afternoon into evening winds can be variable but typically start off from the South-Southeast to South-Southwest and transition to the North-Northwest to North. Winds are typically 1-4 miles per hour between 40-50 percent of the time and 4-8 miles per hour 8-20 percent of the time. Wind speeds during this time can reach up to 40 + miles per hour.

For the months of September through December, the early morning winds are typically out of the North to Northeast. Wind speeds typically are between 1-4 miles per hour 40 –50 percent of the time and 4-8 miles per hour 16 percent of the time. Wind speeds can reach up to 40 miles per hour during this period. Late morning to early afternoon winds are typically out of the South-southeast to Southwest. Wind speeds typically are between 1-4 miles per hour 30-40 percent of the time, and 4-8 miles per hour 30-50 percent of the time and 8-13 10 percent of the time. Wind speeds can reach up to 40 miles per hour during this period. Late afternoon into evening winds can be variable but tend toward Northwest to Northeast. Wind are typically between 1-4 miles per hour is 40 percent of the time, and 4-8 miles per hour 15 percent of the time, 8-13 miles per hour 10 percent of the time, and 13-19 miles per hour 10 percent of the time. Wind speeds during this time can reach up to the high 40's. Below is a wind frequency and direction graph for the typical fire season (June – November) for the Project area when relative humidity is below 30 percent and winds are above 5 miles per hour. This graph provides an estimation of common wind directions for weather conditions that would be conducive to large fire growth. For specific weather impacts on this Project see Project Area Fire Behavior Analysis section.



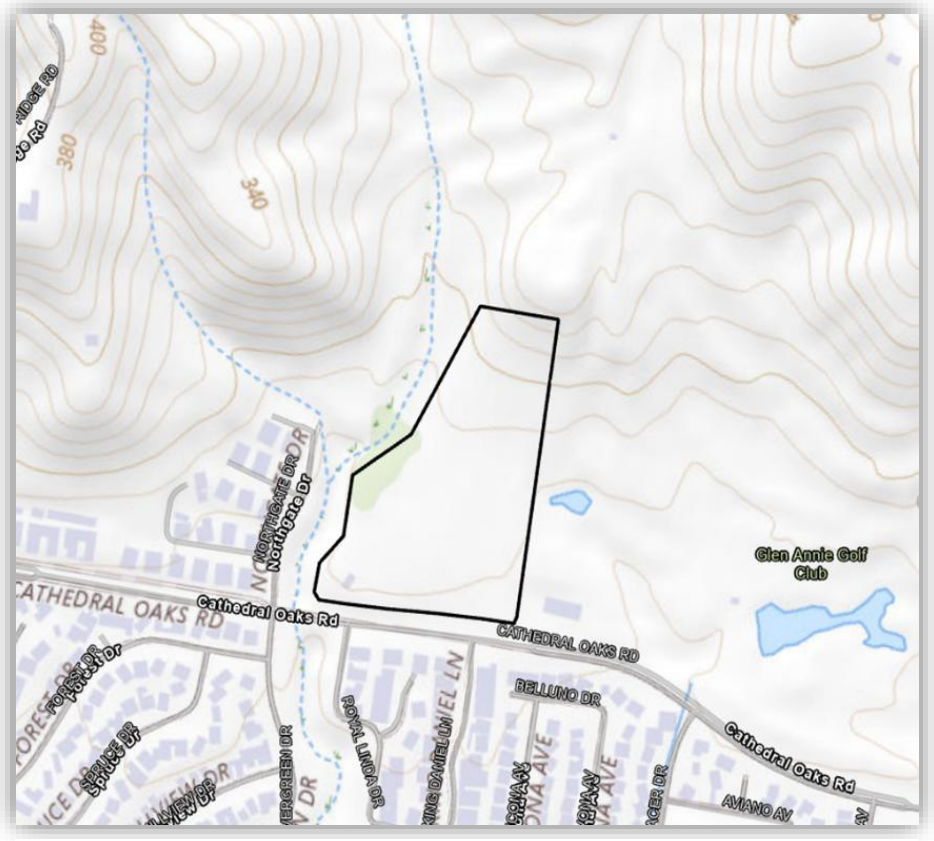
Project Area Wind Direction Frequency Chart, June thru November

Topography

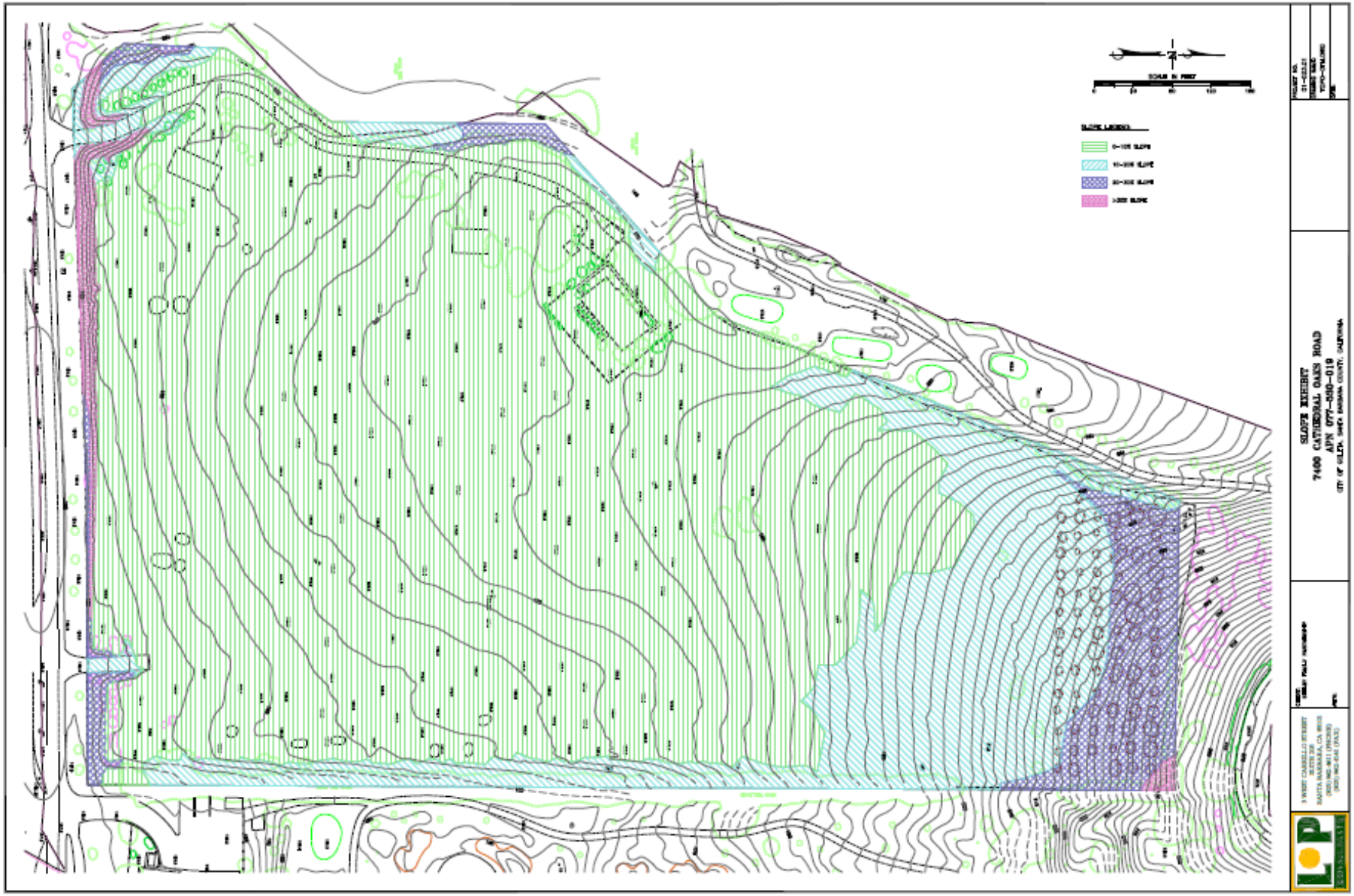
The topography describes land shape. It can include descriptions of elevation with the height above sea level; slope, the steepness of the land; aspect, the direction a slope faces (e.g., the south side of a canyon will have a north-facing slope); features, such as canyons, valleys, rivers, etc.

Slope can determine how quickly a fire will move up or down hills. For example, if a fire ignites at the bottom of a steep slope, it will spread much more quickly upwards because it can pre-heat the upcoming fuels with rising hot air, and upward drafts are more likely to create spot fires.

While the Project will have engineered grading, the current topography of the Shelby project area is mostly below 10% slope throughout the southern three quarters of the Project. The slope increases in the northern portion of the Project with the northern portion between 10 and 30 percent slope (see map on next page). The Project is also located at the convergence of two drainages to the northwest and west.



The topography for the Project area is mostly relatively flat with the top portion increasing slopes to under 30 percent.


SLOPE EXHIBIT
7400 CATHEDRAL OAKS ROAD
APN 077-050-019

Project Site Specific Fire Behavior Conditions

To accurately reflect potential fire conditions, this assessment evaluated average and 97th percentile fire weather conditions for key variables including wind speed and direction, relative humidity, and temperature. The 97th percentile values represent the most extreme fire-conducive weather likely to occur during a typical fire season (June through November).

- High winds accelerate fire spread and promote long-distance ember transport.
- Low humidity and elevated temperatures contribute to fuel desiccation, increasing ignition potential and fire intensity.
- Synoptic and mesoscale patterns such as Sundowner winds, frontal passages, and convective instability can further elevate fire risk and lead to rapid fire growth.

The San Marcos Pass Remote Automated Weather Station (RAWS) and the Santa Barbara Municipal Airport FAA/NWS station were the primary sources of historical weather data. RAWS stations are typically preferred for fire behavior modeling because they comply with National Wildfire Coordinating Group (NWCG) Standards for Fire Weather Stations, which ensure consistent instrumentation, maintenance, and data quality.

Weather data from both stations were analyzed and combined to develop an average baseline weather profile and critical fire weather profile for the Project site (See Fire Behavior Model Inputs Table Below).

Fire Behavior Input	Average Fire Weather	Critical Fire Weather
Temperature	70	95
Relative Humidity	50	10
1 Hour Fuel Moisture	7	3
10 Hour Fuel Moisture	8	4
100 Hour Fuel Moisture	9	5
Live Herbaceous Fuel Moisture	30	30
Live Woody Fuel Moisture	60	60
Wind Speed (20 Foot)	10	20
Wind Direction	N,NNE,NE,SE, SSE,SSW, SW, WSW, WNW, NW,NNW	N,NNE,NE,WSW, WNW, NW,NNW

Fire Behavior Modeling Inputs

Wildland Vegetation and Fuel Models

A wildland fuel model is a standardized classification that describes the type, amount, and arrangement of vegetation (fuels) that can burn during a wildfire. It is used in fire behavior modeling to estimate how fast a fire will spread, how intensely it will burn, and how it will respond to wind and slope. Fuel models represent different vegetation types like grass, brush, timber, or slash and are essential tools in wildfire

risk assessment and planning. The Shelby Project is bordered by a golf course on the Project eastern, northern and northwester edges. The golf course includes irrigated turf, pockets of trees, grass and shrubs, mostly creating a green belt around much of the Project. On the southwestern perimeter there is a mix of trees, shrubs, and grasslands.

Project vegetation types were classified into standardized fuel models. Fuel models are mathematical groupings that represent similar vegetation characteristics to support predictive fire behavior modeling. Around the Shelby project site, the dominant fuel types fall into grass, brush, riparian woodland and agriculture orchards categories. The following fuel models were selected to represent these four major vegetation groups:

Grass Vegetaton

Low Load, Dry Climate Grass (Dynamic) - GR2 (102) or Moderate Load, Dry Climate Grass - GR4 (104)

Shrub Vegetation

High Load, Dry Climate Shrub - SH5 (145)

Riparian Woodland Vegetation

High Load, Dry Climate Shrub - SH5 (145)

Agricultural Orchards

Low Load Dry Climate Timber-Grass-Shrub - TU1 (161)

Fire Behavior Modeling

To evaluate wildfire intensity across the Project area, a fire behavior analysis was conducted using site-specific inputs for fuels, weather, and topography. The analysis utilized multiple established fire modeling tools to generate reliable, spatially explicit estimates of expected fire behavior across the landscape.

Modeling Tools Employed

BehavePlus 6.0.0 – A point-based surface fire behavior modeling tool used to estimate flame length, rate of spread, and fireline intensity based on localized fuel models, fuel moisture, wind speed, and slope.

WindNinja 3.12.1 – A terrain-influenced wind modeling tool used to simulate fine-scale spatial wind fields. WindNinja improves wind input accuracy in areas with complex topography.

FlamMap 6.2 – A geospatial fire modeling tool used to simulate fire behavior characteristics—such as flame length, rate of spread, and crown fire activity—across the entire Project area by integrating fuels, terrain, and weather datasets.

This multi-modeling approach enhances the reliability of the fire behavior assessment, allowing for a more precise evaluation of wildfire intensity, suppression difficulty, and potential ember transport.

Fire Weather Scenarios

Fire behavior was modeled under two representative fire weather scenarios:

> **Baseline Fire Weather Conditions:** Reflect typical mid-to-late fire season weather, based on historical averages.
>
> **Critical Fire Weather Conditions:** Represent the 97th percentile weather extremes—hotter temperatures, lower relative humidity, and higher wind speeds. These conditions reflect the most hazardous fire weather likely to occur in the region and are consistent with extreme events observed in recent years.

Flame length is one of the most used indicators of fire intensity. It is a visual and field-observable metric that correlates directly with fireline intensity and suppression difficulty. The table below shows suppression difficulty based on flame length.

Flame length		Fireline intensity		Interpretation
ft	m	Btu/ft/s	kJ/m/s	
< 4	< 1.2	< 100	<350	• Fires can generally be attacked at the head or flanks by persons using hand tools. • Hand line should hold the fire.
4 – 8	1.2 – 2.4	100 – 500	350 – 1700	• Fires are too intense for direct attack on the head by persons using hand tools. • Hand line cannot be relied on to hold the fire. • Equipment such as dozers, pumpers, and retardant aircraft can be effective.
8 – 11	2.4 – 3.4	500 – 1000	1700 – 3500	• Fires may present serious control problems—torching out, crowning, and spotting. • Control efforts at the fire head will probably be ineffective
> 11	> 3.4	> 1000	> 3500	• Crowning, spotting, and major fire runs are probable. • Control efforts at head of fire are ineffective.

Modeling outputs produced the following flame length estimates:

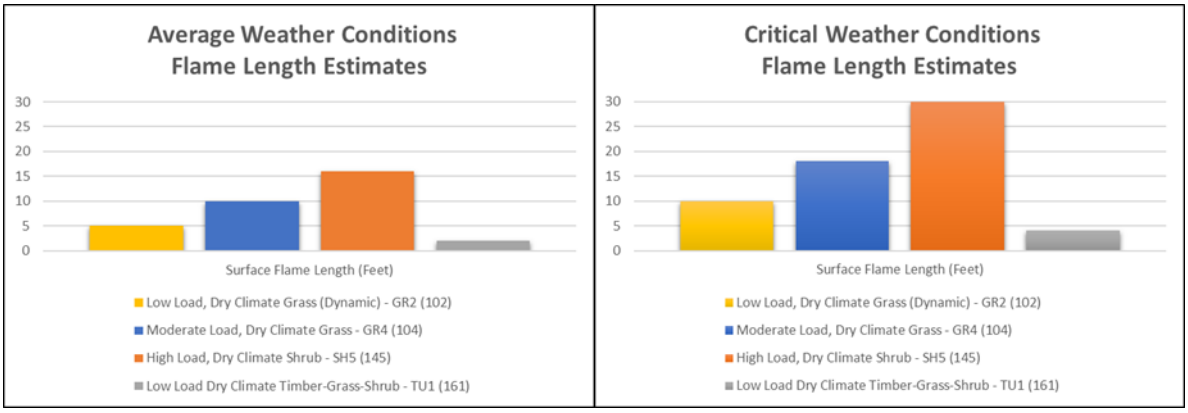
Baseline Weather Conditions Flame Lengths:

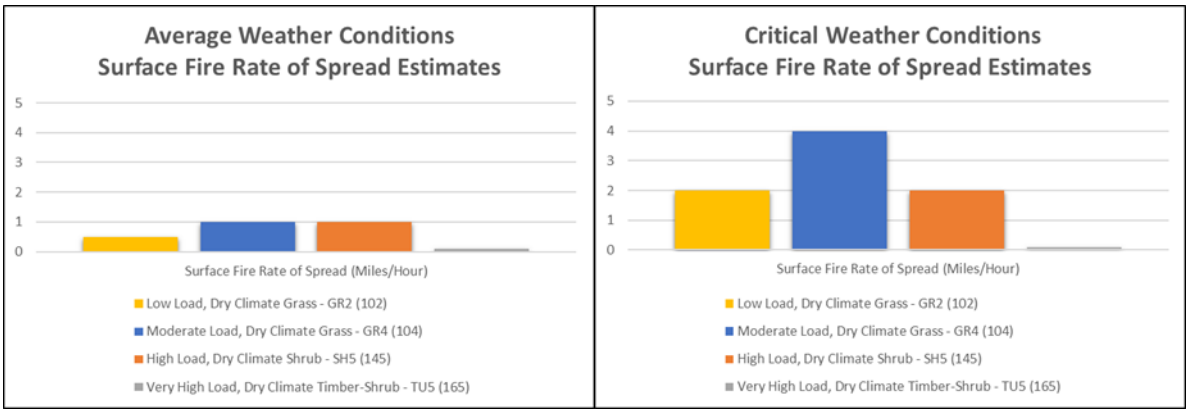
- Agricultural Orchards: 1-2 feet
- Grass: 5-10 feet
- Shrub and Riparian Woodland Fuels: Up to 15 feet

Critical Weather Conditions Flame Lengths:

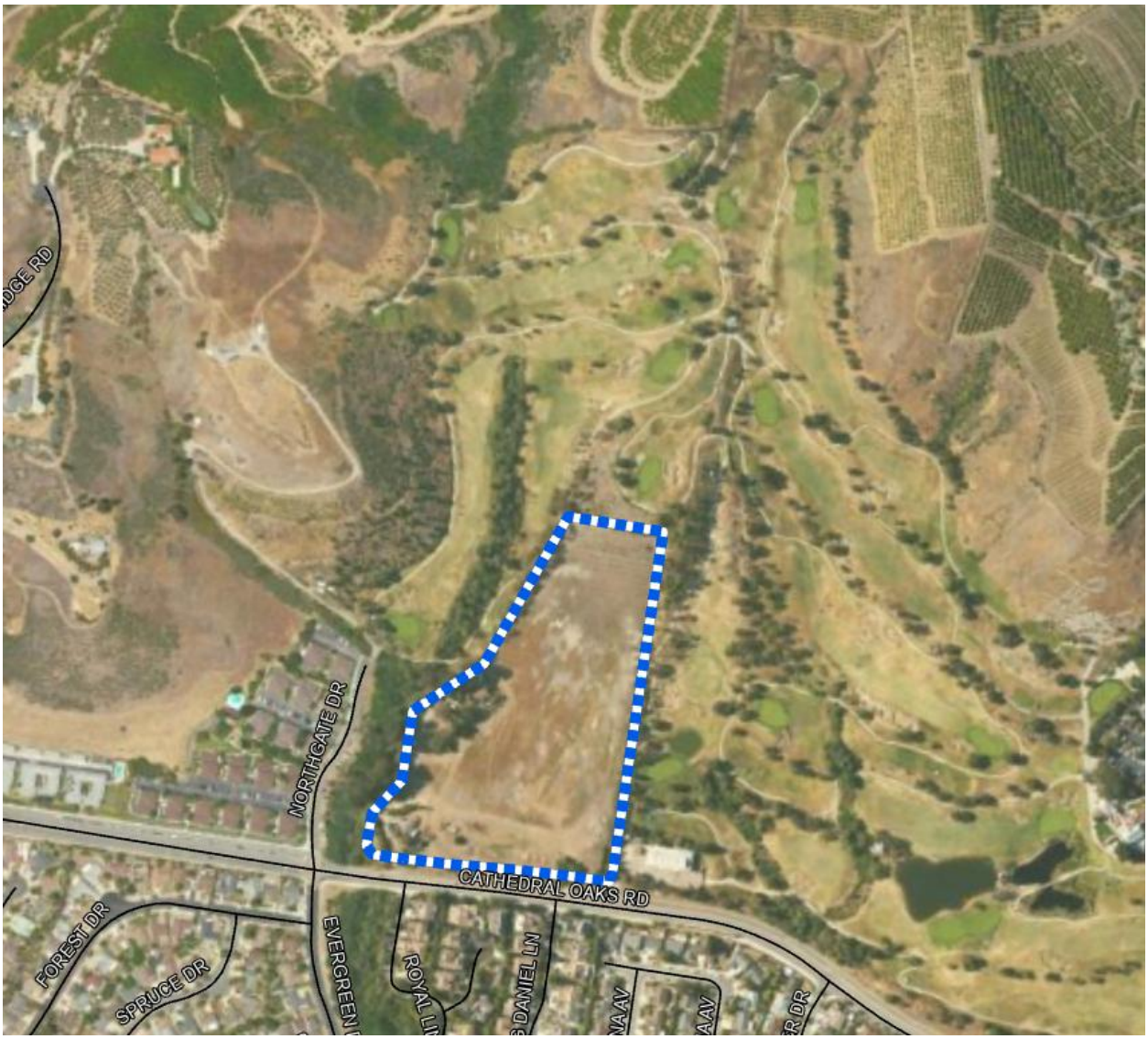
- Agricultural Orchards: 1-4 feet
- Grass: 8–16 feet
- Shrub and Riparian Woodland Fuels: Up to 26 feet

These flame lengths indicate high suppression difficulty, particularly under critical fire weather scenarios, and highlight the importance of proactive mitigation for ember-resistant construction and defensible space.





The Project area is surrounded by a golf course on the East, Northeast, North and Northwest as shown in the picture below. There are some small areas between the Project boundary and the golf course that include grass and trees. These areas under critical fire weather have the potential for producing flame lengths in grass from 8–16 feet and up to 26 feet for trees and woodlands. On the Western and Southwestern perimeter of the Project, there are areas of riparian woodlands adjacent to the Project. These areas under drought and critical fire weather conditions could produce flame lengths up to 26 feet.

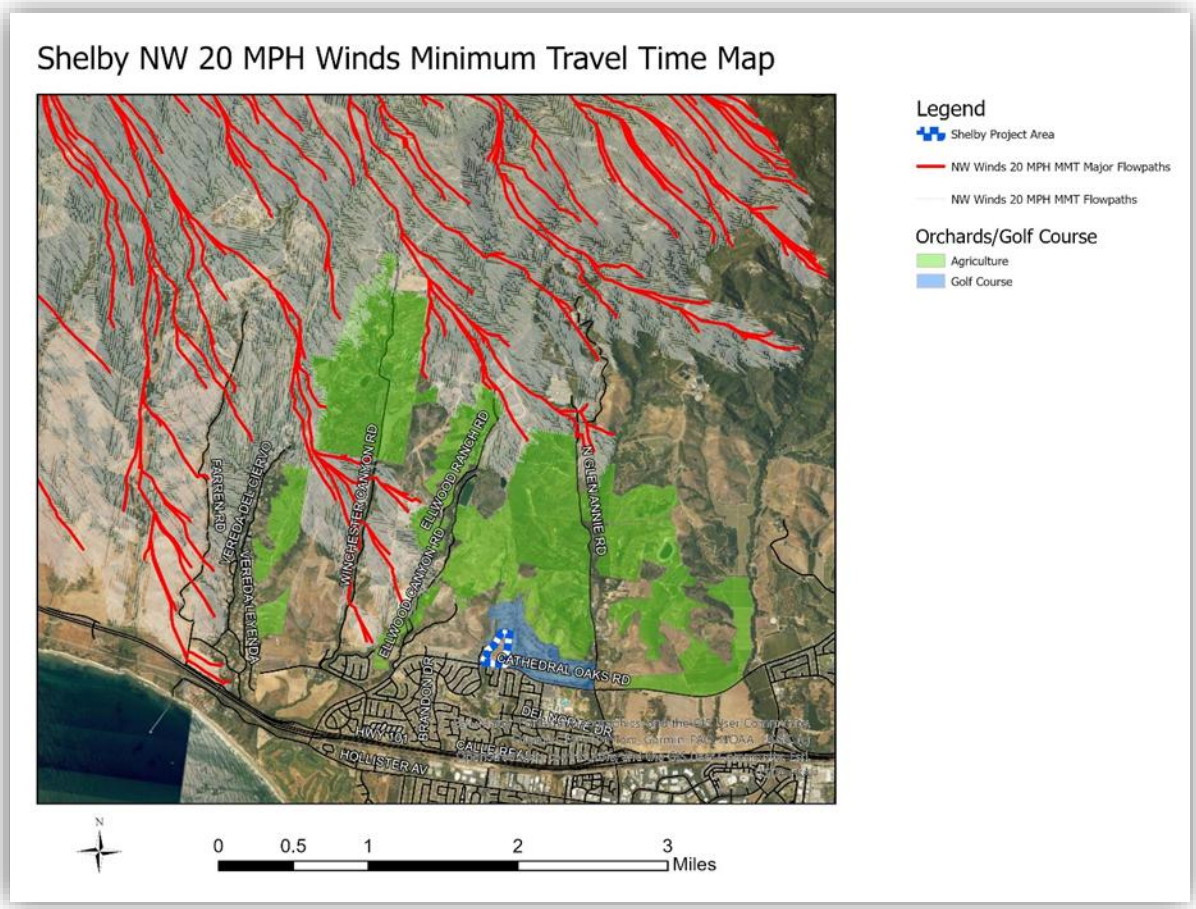


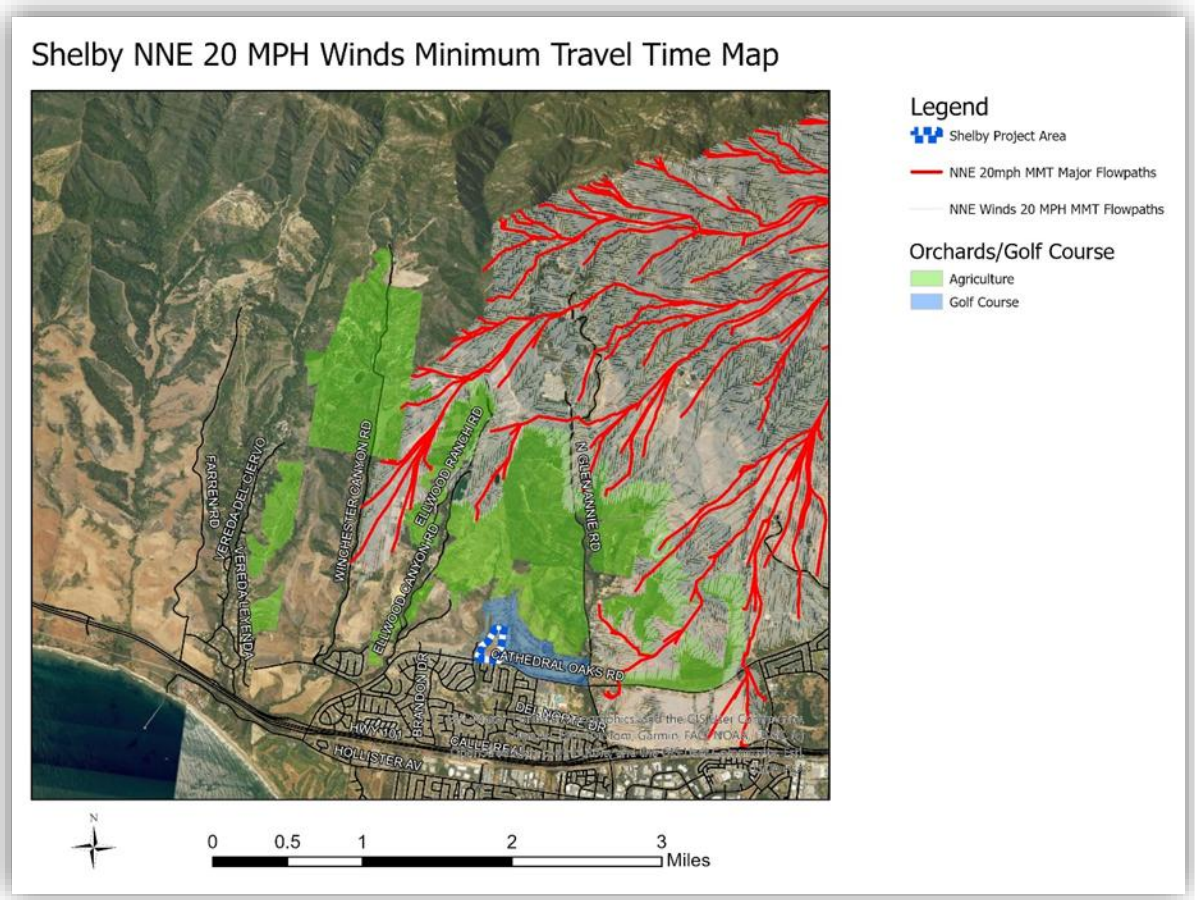
Minimum Travel Time (MTT) Flow Path Analysis

To better understand potential wildfire spread dynamics and directional threats to the Project area, a fire growth simulation was conducted using the Minimum Travel Time (MTT) algorithm in FlamMap 6.2. The MTT module simulates fire spread by computing the paths of least resistance that fire would take across a landscape under the environmental conditions identified for this analysis. MTT modeling assumes uniform weather and fuel moisture conditions throughout the simulation period, which can overpredict spread in highly variable microclimates. Nonetheless, these simulations serve as a conservative, worst-case scenario planning tool to visualize fire exposure potential, optimize suppression strategies, and enhance resilience in high-risk zones of the property. For this analysis, only the critical fire weather modeling inputs were used. The critical wind directions that were used for this analysis included a northwest and north-northeast wind directions. Although there are different represented wind directions for the Project area, these were not used due to the lack of sufficient wildland fuels to support burning that would impact the Project area.

Each MTT simulation was run for a 6-hour burn period, which is commonly used in initial attack and structure defense planning to represent early fire growth during the most volatile period before containment is established.

The resulting MTT outputs (See Below) illustrate potential fire spread pathways. For the northwest wind scenario, fire progression is slowed or stopped by the orchards located west and northwest of the Project. Fire behavior within the orchards was modeled using a low surface fuel loading. This modeling assumes a reduction of wind speeds due to the tree canopy and low flame lengths and rates of spread due to the low fuel loadings, indicative of a well-maintained orchard. The model could underrepresent fire behavior flame lengths and rates of spread if the orchard is not properly maintained. The model also does not show the fire progressing into the wildland areas immediately to the west of the Project. Under high wind events spotting through ember exposure is a possibility and the modeling would underrepresent fire behavior impacts to the west side of the Project. For the north-northeast wind scenario, fire progression is slowed or stopped by the orchards and golf course on the east, northeast and north sides of the Project. The same issues with the modeling of orchards also apply in this area.





Ember Generation and Spotting

The NWCG Glossary defines spotting as the ignition of new fires ahead of the main flame front, caused by windborne embers (firebrands). Spotting can result from all three fuel categories: Cultivated Ornamental Fuels (COF), Structural Accessory Fuels (SAF), and Native Wildland Fuels (NWF). For this assessment, ember generation potential focuses primarily on NWF, the most significant contributor to wildfire spread via embers.

Ember-Producing Fuel Types

Grass Fuels – Produce small, fast-traveling embers with limited energy but long-range spotting under high winds.

Shrub Fuels – Generate large quantities of embers capable of igniting receptive fuels at long distances.

Riparian Woodlands – May produce embers when torching occurs; however, ember generation rates are not currently modeled due to the absence of standard ember output tools for tree canopies.

Using critical fire weather conditions, the following spotting distances were estimated:

- Grass Fuels: Up to 0.5 miles
- Brush Fuels: Up to 1.0 mile

Estimated fire progression pathways were described in the Minimum Travel Time (MTT) Flow Path Analysis section. These pathways along with the ember spotting distances above can be used to estimate the ember exposure to the Project. Since the Project area is down wind of and within spotting distances of an approaching wildland fire, there is a need for defensible space, ember-resistant construction materials, and vegetation management both on-site and within surrounding landscapes.

Wildfire Threat Analysis

As described in previous sections, the Project area has moderate exposure to embers, direct flame contact and or radiant heat exposure from wildland fires. Large portions of the Northwest, North, Northeast, and Eastern perimeter of the Project area bounded by a golf course and orchards. These features, if properly maintained and irrigated, reduce the Project's exposure to direct flame contact and radiant heat exposure. There are some small areas with grass and trees between the golf course and Project. If properly maintained and irrigated the risk of direct flame, contact and radiant heat exposure can be reduced. On the West and Southwest perimeter of the Project area, there is a riparian woodland area. This area is susceptible to embers and if ignited can create a direct flame and radiant heat exposure to the Project area. Proper irrigation and vegetation management practices can reduce the risk of Project exposure. As described in previous sections, the Project developed area can be impacted by ember exposure from wildfires burning under common critical fire weather scenarios. This reinforces the need for the required ignition resistant building construction and defensible space requirements.

A bigger threat to the subdivision is a conflagration where fire spreads from structure to structure. This has occurred in other communities under strong winds where a burning home transmits fire to the adjoining homes through conductive and convective heat, or to nearby homes from ember production. Fire resistive construction, landscaping and non-combustible fencing will also greatly reduce this threat. One of the most critical factors will be the continued maintenance of the fire resistive landscaping and maintaining the fire hardening integrity of the homes during Red Flag conditions, or when a fire is burning in the area, by closing all opening into the home that could allow an ember inside and by removing all combustibles stored around the home that could ignite and spread to the homes.

Vegetation Management

Defensible space standards for the Project area will conform to the standards set by the Santa Barbara County Fire Department Fire Prevention Division Development Standard - #6 Defensible Space, the California Fire Code Chapter 49 Requirements for Wildland-Urban Interface Fire Areas, Section 4907 Defensible Space and Government Code 51182.

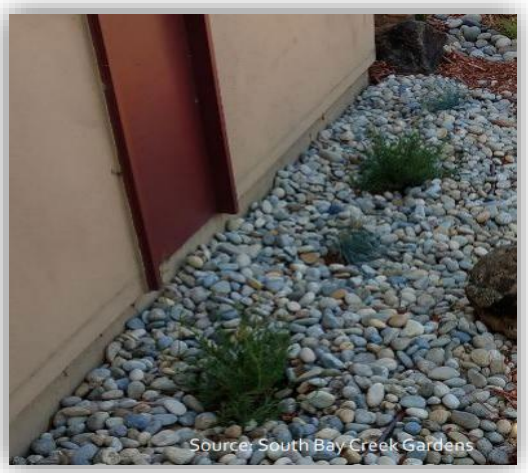
The City of Goleta has a Public Nuisances Abatement Ordinance (§ 12.13.030). that prohibits overgrown, dead, decayed, or hazardous vegetation that constitutes a fire hazard. Because the adjoining properties are not within the City of Goleta, they would not be required to abide by the City Public Nuisances Abatement ordinance. In the future if the golf course property in annexed into the City it would be required to comply.

The overall goal is to maintain a defensible space around the homes and in the open space and common areas. This is best achieved by fire resistive landscaping that is maintained and irrigated. (see Fire Smart Landscaping section).

These are the three Defensible Space Zones

- **Zone 0** extends zero to five feet from structures, including the building itself. Ember resistant.
- **Zone 1** begins five feet from your house and extends 30 feet away. Lean, clean, and green.
- **Zone 2** lies beyond the home defense zone, extending at least 100 feet from the house or to your property line. Reduce and separate potential fuels.

Zone 0 reduces the likelihood of structure ignition by reducing the potential for direct ignition of the structure from flame contact, by embers that accumulate at the base of a wall, and/or indirect ignitions when embers ignite vegetation, vegetative debris or other combustible materials located close to the structure that result in either a radiant heat and/or a direct flame contact exposure to the structure.



Zone 0 - Ember Resistant Zone

Zone 1 reduces the likelihood of fire burning directly to the structure. This is accomplished by modifying fuels and creating a discontinuity between planting groups that limits the pathways for fire to burn to the structure and reduces the potential for near-to-building ember generation and radiant heat exposures.

Zone 2 actions are designed to reduce the potential behavior of an oncoming fire in such a way as to drop an approaching fire from crown to ground. Fuel modification includes removing dead vegetation and reducing living vegetation to eliminate fuel ladders and create vegetation separation between individual or islands of trees or shrubs (see tree maintenance below).

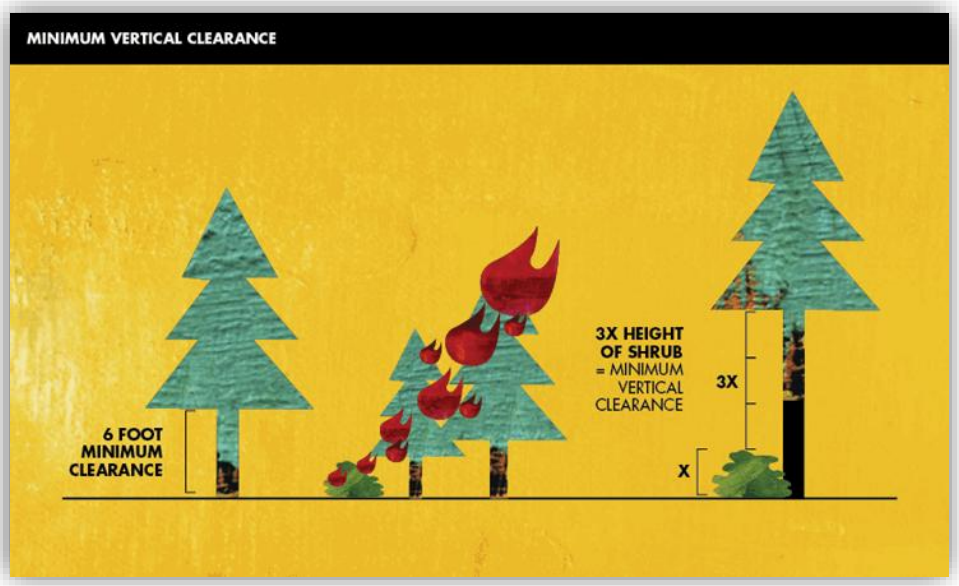
100 ft Defensible Space in a neighborhood.

Beyond individual properties will be areas that are common areas and the open space area. This area must be well maintained. The goal is to have a minimum of 100 feet of overall defensible space around homes.

Maintenance of Trees

Maintain space between the lowest tree branches and the ground or shrubs.

- Remove all tree branches at least six feet from the ground.
- Allow extra vertical space between shrubs and trees. Lack of vertical space can allow a fire to move from the ground to the brush to the treetops like a ladder.
- Keep at least three times the height of any shrubs between the shrubs and the lowest branches of trees.
- Example: A 5-foot shrub is growing near a tree. 15 feet of clearance is needed between the top of the shrub and the lowest tree branch.



Maintenance of Open Spaces

The Project will have either a Declaration of Covenants, Conditions and Restrictions (CC&Rs) for its HOA or a property owners' agreement if no HOA is established that will require the ongoing maintenance of the community spaces including compliance with City fire regulations in the open spaces, retention basins, and common areas that prevent or reduce the ability for a fire to spread. Methods used will provide for the protection of the open space environment. See section on Maintenance Agreements.

Fire Safety During Construction

The Project must comply with California Fire Code section 3312 Fire Safety During Construction.[24] To ensure compliance with the California Fire Code section 3312, a temporary or permanent water supply system for fire protection will be available prior to combustible materials arriving at the site. A limited all-weather access road will be available during construction to allow fire and ambulance access to construction areas. An approved written Site Safety Plan is required.

CFC Section 3303.1.1 Components of site safety plans.

Site safety plans shall include the following as applicable:

1. Name and contact information of site safety director.
2. Documentation of the training of the site safety director and fire watch personnel.
3. Procedures for reporting emergencies.
4. Fire department vehicle access routes.
5. Location of fire protection equipment, including portable fire extinguishers, standpipes, fire department connections and fire hydrants.

[24] https://codes.iccsafe.org/content/IFC2024V1.0/chapter-33-fire-safety-during-construction-and-demolition

6. Smoking and cooking policies, designated areas to be used where approved, and signage locations in accordance with Section 3305.8.
7. Location and safety considerations for temporary heating equipment.
8. Hot work permit plan.
9. Plans for control of combustible waste material.
10. Locations and methods for storage and use of flammable and combustible liquids and other hazardous materials.
11. Provisions for site security.
12. Changes that affect this plan.
13. Other site-specific information required by the fire code official.

During construction, all efforts must be made to prevent the ignition of a fire. These will include safety equipment and procedures such as spark arresters, clearance around welding or other hot work, smoking restrictions, extinguishers, charged water hoses and shovels nearby. Hot work should not be done on days where conditions exist that create a likelihood of an ignition of vegetation. During construction contractors must comply with fire safety regulations to prevent fires. The Office of the State Fire Marshal provides a useful document, Industrial Operations Fire Prevention Field Guide[25], that all contractors should consult prior to operations to ensure they are in compliance with fire regulations and best practices to prevent a fire. The following poster demonstrates some of the requirements.

[25] https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/prevention-field-guides/fppguidepdf102.pdf


EQUIPMENT SAFETY
Practice Using Equipment Safely
LEARN HOW TO USE OUTDOOR EQUIPMENT PROPERLY TO HELP KEEP FROM SPARKING A WILDFIRE:
MOWING
MOW BEFORE 10 A.M., BUT NEVER WHEN IT'S WINDY OR EXCESSIVELY DRY.
LAWN MOWERS ARE DESIGNED TO MOW LAWNS, NOT WEEDS OR DRY GRASS.
METAL BLADES STRIKING ROCKS CAN CREATE SPARKS AND START FIRES.
SPARK ARRESTERS
IN WILDLAND AREAS, SPARK ARRESTERS ARE REQUIRED ON ALL PORTABLE GASOLINE-POWERED EQUIPMENT. THIS INCLUDES TRACTORS, HARVESTERS, CHAINSAWS, WEEDEATERS AND MOWERS.
KEEP THE EXHAUST SYSTEM, SPARK ARRESTERS AND MOWER IN PROPER WORKING ORDER AND FREE OF CARBON BUILDUP.
6 C Carbon 12.011
USE THE RECOMMENDED GRADE OF FUEL AND DON'T TOP IT OFF.
EQUIPMENT USE
KEEP A SHOVEL AND A FIRE EXTINGUISHER READY TO USE.
10FT
IN WILDLAND AREAS, GRINDING AND WELDING OPERATIONS REQUIRE A PERMIT AND 10-FEET OF CLEARANCE.
DON'T DRIVE YOUR VEHICLE ONTO DRY GRASS OR BRUSH. HOT EXHAUST PIPES AND MUFFLERS CAN START FIRES THAT YOU WON'T EVEN SEE—UNTIL IT'S TOO LATE!
911
KEEP A CELL PHONE NEARBY AND CALL 911 IMMEDIATELY IN CASE OF FIRE.
TERRAIN
TO PROTECT WATER QUALITY, DO NOT CLEAR VEGETATION NEAR WATERWAYS TO BARE SOIL.
VEGETATION REMOVAL CAN CAUSE SOIL EROSION, ESPECIALLY ON STEEP SLOPES.
KEEP SOIL DISTURBANCE TO A MINIMUM.
ONE LESS SPARK ONE LESS WILDFIRE
FOR MORE INFORMATION AND A PRINT-READY CAMPFIRE PERMIT VISIT:
PREVENTWILDFIRECA.ORG
#PREVENTWILDFIRE #ONELESSSPARK
BROUGHT TO YOU BY THE CALIFORNIA WILDLAND FIRE COORDINATING GROUP (CWCG)

Maintenance Agreements

The Project will have either a Declaration of Covenants, Conditions and Restrictions (CC&Rs) for its HOA or a property owners' agreement if no HOA is established. The property owners will be responsible for the maintenance and protection of the roads and common landscape areas. This will require that the agreement includes language to ensure that these spaces are maintained in perpetuity. The agreement's most important concern is to include prevention and protection from fires.

The agreement should have language that is similar to:

1. All property owners will maintain their property in compliance with defensible space requirements.
2. A road maintenance plan will ensure in perpetuity the maintenance of all roads to ensure access is maintained and no parking near fire hydrants and in fire lanes is enforced.
3. Smoking, use of spark producing equipment or any other ignition source is prohibited in common areas. Propane, natural gas, and electrical cooking equipment (no wood or charcoal etc.) is permitted in common area except when Red Flag watch or warning have been issued.
4. Safety precautions are required when using equipment capable of creating a spark, this includes spark arrestors.
5. All fireworks or other devices that could cause an ignition of a fire are prohibited.
6. Overnight camping is prohibited.
7. Collecting, removing, destroying, or defacing any natural or human-made objects within the common space is not permitted.
8. Discharging or carrying firearms, crossbows, fireworks, or projectile weapons of any kind is not permitted (except law enforcement officials).
9. Feeding, disturbing, trapping, hunting, or killing wildlife is not permitted (except under the direction of Department of Fish & Wildlife or like agency).
10. All dogs or other domestic animals shall be restrained by a leash, cord, rope, or chain and under physical control of a person when in the common space areas. (except grazing and browsing animals such as, sheep and goats)
11. Activities that unduly interfere with the health, safety, and welfare of the users or the neighbors in the open space and commons area, or that create a nuisance or hazard to the use and safety or persons using or neighboring such areas are prohibited. Disorderly conduct (including amplified sound) shall be prohibited.
12. The agreement holders will provide and maintain fire prevention signage in fire prone areas near or on trails.
13. The agreement holders will conduct vegetation management to comply with City fire regulations in the open spaces, retention basins, and common areas that prevents or reduce the ability for a fire to spread. Methods used will provide for the protection of the open space environment.
14. Fencing or barriers, whether privately owned or in common, will be constructed of a non-combustible material so that it will not convey or contribute to the spread of fire.
15. Vegetation management will be consistent with protection of biologically sensitive areas.
16. The agreement allows for vegetation management in the common areas that includes hand, mechanical, animal, prescribed fire, herbicide, and other methods consistent with accepted vegetation management practices.

17. The agreement allows for vegetation management agreements to be entered into with the adjoining properties to ensure 100 feet of defensible space.
18. The agreement allows for assessment and fines necessary to protect and maintain the common areas. This may include funds for contracts.
19. The agreement allows for entering into agreements with agencies, land conservancies and other organizations who also have a mutual concern for the protection of the riparian area or common areas.

Emergency Planning

As described in the City of Goleta's General Plan Safety Element, *The City, in cooperation with FEMA, the County, and State Offices of Emergency Services, is responsible for emergency preparedness and response. Components of emergency preparedness and response include identification of evacuation routes and secondary emergency accesses, as well as provision of information to the community regarding appropriate individual actions in the event of various types of emergencies.* [26]

There are a variety of threats that could cause a community to evacuate or shelter in place. These could include wildfire, hazardous material spill, gas leak, power outage, hazardous air quality, storms, or an active shooter. The City of Goleta utilizes the County to provide several methods that are used to alert the public to take action. This includes:

- Emergency Alerts System (EAS) – broadcast over radio and television
- Wireless Emergency Alert (WEA)- send a text alert to cell phones
- SBC Alerts - Warnings and Emergencies are sent to phone numbers, text messages, email, and the Everbridge app for individuals who sign-up at https://member.everbridge.net/892807736723794/new
- Social media – X, Facebook, Threads
- Route alerting – Sheriff and fire department driving through neighborhoods announcing action to take over loudspeaker
- Door to door notification – Deputies going to each property to alert people

Each property owner should be responsible for being informed on emergency preparedness including:

- Family emergency planning
- Emergency alerting
- Emergency supply kit
- Care for animals in an emergency

Evacuation

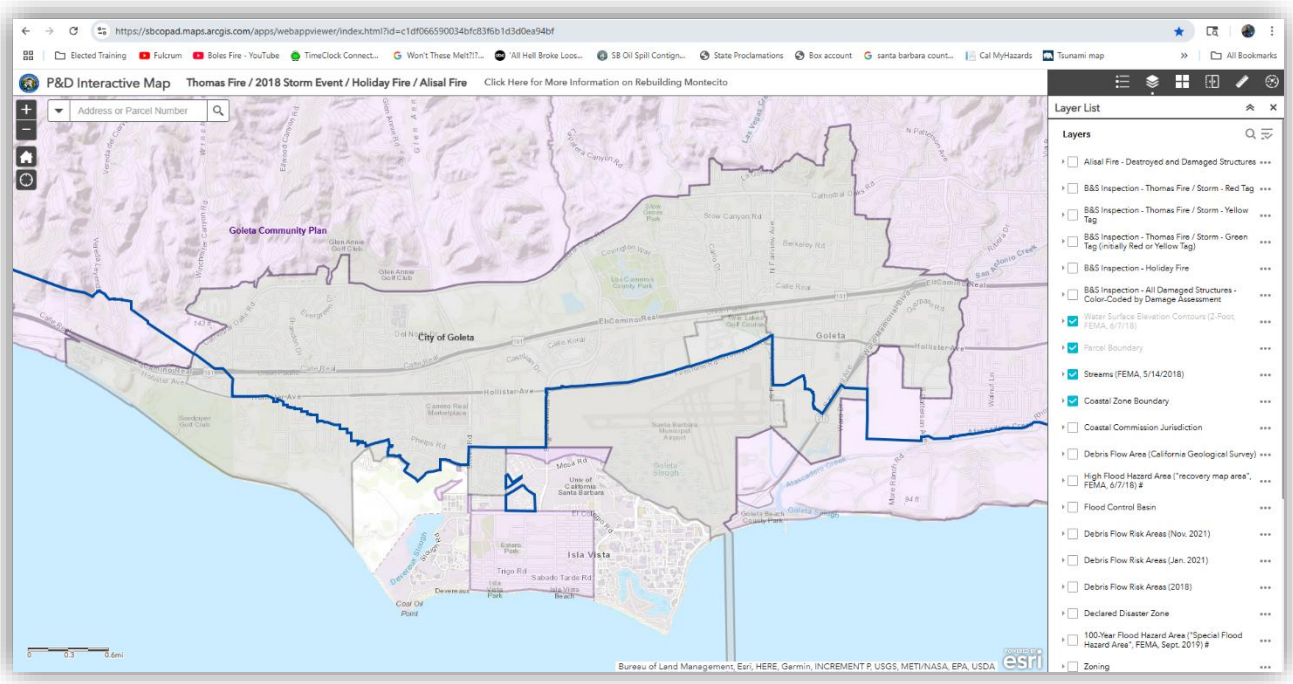
City Emergency responders, the County Sheriff and the County Fire Department, make the determination on how best to protect the residents and guests of a community. Their first strategic choice is to go offensive to prevent the threat from spreading and causing more harm. Sometimes that

[26] City of Goleta General Plan Safety Element, September 2006, page 5-7

effort is not possible, and then first responders will take a defensive strategy and generally utilize the following actions:

- **Evacuation Order**
  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 should be used when there is potential or actual threat to civilian life within one to two hours or when the Incident Commander deems it necessary to protect civilians.
- **Evacuation Warning**
  Alerting 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 two hours away.
- **Shelter in Place**
  Directing community members to stay secure inside their current location. Used if evacuation will cause higher potential of loss of life.
- **Temporary Refuge Area**
  A temporary location to hold evacuees until safe evacuation is possible.
- **Safe Points**
  Temporary areas outside of affected area to stage evacuees until emergency is over or a shelter can be opened.

The County of Santa Barbara has created an interactive map to display evacuation information.[27]



[27] https://sbcopad.maps.arcgis.com/apps/webappviewer/index.html?id=c1df066590034bfc83f6b1d3d0ea94bf

An evacuation takes time. It requires that first responders analyze the situation and determine the need for an evacuation. An evacuation alert is then issued electronically and by neighborhood route alerting. This all takes time. Therefore, anytime a person perceives a threat, they should take actions to protect themselves, their family, and their neighbors without waiting for an evacuation notice.

Project Evacuation Evaluation

In the instance the project site was affected by an evacuation order, the Project provides adequate emergency ingress and egress to Cathedral Oaks Road via two connection points at the project's southwest and southeast edges (see maps on the following pages). Cathedral Oaks Road is included in the City of Goleta's General Plan Safety Element as a potential evacuation route map.[28] It is a two-way road with a center turn lane that will allow evacuation both to the west to Highway 101 and to the east to Glen Annie Road. Cathedral Oaks Road is identified as a Major Arterial. The project traffic and transportation consultant, ATE has evaluated the project's contribution to traffic on Cathedral Oaks Road during an evacuation and determined that the estimated number of cars exiting the site would be 1.5 vehicles per housing unit. With 56 housing units that would equal 84 vehicles that would leave during the evacuation period. The current capacity of Cathedral Oaks Road, even without the Project's frontage improvements which could increase the lane capacity, is 1,600 per hour. The existing traffic volumes are well below the 1,600 per hour capacity.

Our analysis independently supports this conclusion. An emergency evacuation from this 56 home Project is projected to have a less than significant impact on the roads and intersections that will be utilized during an evacuation. Key factors are:

1. Road widths within the project comply with fire department standards for widths and maneuvering for vehicles including fire trucks.
2. The presence of two access routes out of the Project, which helps prevent a single-point bottleneck and distributes the potential surge of vehicles.
3. During an emergency, Cathedral Oaks Road as a two-way Major Arterial has sufficient capacity to absorb a sudden, concentrated outflow of traffic.
4. Cathedral Oaks Road with an existing center painted turn lane further aids this process by allowing evacuating and emergency vehicles to turn without impeding through-traffic on the primary travel lanes, maintaining forward momentum.
5. Should Cathedral Oaks Road become impacted, there are additional opportunities for egress southward on Brandon Drive to Calle Real, or Placer Drive and Ellwood Station to Calle Real
6. The proximity of Dos Pueblos High School, approximately .5 miles away, provides a temporary safe refuge area in the event residents of the Project had to walk to evacuate the area.

- [28] Gneral Plan Figure 5-4 (Adopted 8/25) https://www.cityofgoleta.org/home/showpublisheddocument/32161/638917080817200000

While any evacuation scenario will lead to an increase in traffic and there are always unknown factors created by the emergency, the infrastructure's design and capacity are well-suited to handle the vehicle load from a development of this scale.

Access Road Map

Evacuation Map

Conclusion

The Shelby Property Project is designed with fire risk mitigation in mind. Fire resistant design and construction standards, open space management, community outreach and education, owner agreement management practices, access and egress routes, fire defensible space, fire protection hydrants and automatic sprinkler systems, and ignition prevention will provide a high level of protection for the community.

Continuous and proper vegetation management of the open spaces and common areas will be essential to make sure the community is fire safe long into the future. To ensure this, the owner's agreement should include language that will ensure regular maintenance and Projects that are both fire defensive and environmentally sound.

Design, construction and maintenance of the Project comply with all building and fire codes including those required for development in the Wildland Urban Interface. These requirements combined with best management practices will provide a high level of fire safety for the community.