



Fire & Emergency Services Committee

Tuesday, June 2, 2026
5:30pm

Cameron Park Community Center – Social Room
2502 Country Club Drive
Cameron Park, CA 95682

Agenda

Members: Chair Director Tim Israel (TI) & Vice Chair Director Sidney Bazett (SB)
Alternate: Director J.R. Hichborn (JH)

Staff: Mark Hornstra, General Manager; Chief Kalan Richards;
Wildfire Mitigation Coordinator Alex Bourriague

CALL TO ORDER

ROLL CALL

Public testimony will be received on each agenda item as it is called. Principal party on each side of an issue is allocated 10 minutes to speak; individual comments are limited to 3 minutes except with the consent of the Committee; individuals shall be allowed to speak on an item only once. Members of the audience are asked to volunteer their name before addressing the Committee. The Committee reserves the right to waive said rules by a majority vote.

ADOPTION OF AGENDA

APPROVAL OF MINUTES

OPEN FORUM

Members of the public may speak on any item not on the agenda that falls within the responsibilities of the Committee.

DEPARTMENT MATTERS

- 1. RFP for Inspections and Plan Review Services (M. Hornstra, K. Richards)**
- 2. Silver Springs Unit 2 & Unit 3 Development, Wildfire Prepared Neighborhood Program and District Governance Considerations, IBHS Requirements (M. Hornstra, M. Johnson)**
- 3. New Logo for Cameron Park Fire Apparatus (K. Richards)**

4. Staff Updates

- a. Fire Department Report (K. Richards)
- b. Wildfire Mitigation Coordinator Report (A. Bourriague)
- c. Report Back on Reserve Firefighter Account 5296 – Offset Account (M. Hornstra)

5. Items for Future Committee Agendas

6. Items to Take to the Board of Directors

MATTERS TO AND FROM COMMITTEE MEMBERS

ADJOURNMENT



Fire & Emergency Services Committee

Tuesday, February 3, 2026
5:30pm

Cameron Park Community Center – Social Room
2502 Country Club Drive
Cameron Park, CA 95682

Minutes

Members: Director Sidney Bazett (SB) & Director Tim Israel (TI)
Alternate, Director Monique Scobey (MS)

Staff: Interim General Manager Maurice Johnson, Chief Dusty Martin, Chief Kalan Richards,
Wildfire Mitigation Coordinator Alex Bourriague

CALL TO ORDER - 5:30pm

ROLL CALL – TI/SB

Public testimony will be received on each agenda item as it is called. Principal party on each side of an issue is allocated 10 minutes to speak; individual comments are limited to 3 minutes except with the consent of the Committee; individuals shall be allowed to speak on an item only once. Members of the audience are asked to volunteer their name before addressing the Committee. The Committee reserves the right to waive said rules by a majority vote.

ADOPTION OF AGENDA – Approved, with the addition of “Amendment to Fire Services Contract”

APPROVAL OF MINUTES - Approved

OPEN FORUM

Members of the public may speak on any item not on the agenda that falls within the responsibilities of the Committee.

DEPARTMENT MATTERS

1. Elect Chair & Vice Chair

- Chair Director Israel, Vice Chair Director Bazett
- **Amendment to Fire Services Contract**
 - Discussed Amendment to Fire Services Contract. Move to Board with support.

2. SB1205 Annual Inspection Resolution

- *Discussed SB1205 Annual Inspection Resolution. Move to the Board with support.*

3. Review Capital Replacement Plan

- *Discussed Capital Replacement Plan.*

4. Facilities Maintenance Planner

- *Discussed Facilities Maintenance Planner.*

- *Moved Item# 8b. Wildfire Mitigation Coordinator Report here*

5. Vehicle Management Plan

- *Discussed Vehicle Management Plan.*

6. Fire Service Agreements (Discussion)

- USFS COOPERATIVE FIRE PROTECTION AGREEMENT
- CAL Fire 2025 Operational Plan Cameron Park CSD Fire Department
- Cal OES MMA Resolution
- Cal OES Mutual Aid Plan
- CAM CFAA Approval Letter_1.1.2015
- CAM CFAA Resolution1.1.2015
- CFAA Agreement

7. Water Rescue Equipment (M. Johnson, K. Richards, D. Martin)

- *Discussed Water Rescue Equipment.*

8. Staff Updates

- Fire Department Report (K. Richards)
- ~~Wildfire Mitigation Coordinator Report (A. Bourriague)~~

9. Items for Future Committee Agendas

- *Station 88 Long Term Planning*
- *Sustainability and Revenue Generation*
- *Water Rescue Equipment*

10. Items to Take to the Board of Directors

- *SB1205 Annual Inspection Resolution*
- *Fire Contract Amendment*

MATTERS TO AND FROM COMMITTEE MEMBERS

ADJOURNMENT – 8:18pm

Cameron Park Community Services District



Staff Report

DATE: June 2, 2026

FROM: Mark Hornstra, General Manager
Kalan Richards, Assistant Chief

AGENDA ITEM #1: Fire Inspections and Plan Review Services RFP

RECOMMENDED ACTION: Review and approve the attached Request for Proposals (RFP) for Fire Prevention Inspection and Plan Review Services and recommend that the Board of Directors authorize the release of the RFP.

Background

In August 2024, the District entered into an agreement with Interwest Consulting Group to provide fire prevention inspection and plan review services. The agreement was structured as a project-specific contract intended to address the District's immediate operational needs at that time.

Since execution of the agreement, the District has continued to require these services on an ongoing basis to support fire prevention operations, plan review activities, code compliance, and customer service requirements. As these services represent a recurring operational need rather than a limited-duration project, staff believes it is appropriate to establish a more formal contractual relationship with a defined term, scope of services, performance expectations, and compensation structure.

Discussion

The proposed RFP seeks qualified firms to provide Fire Prevention Inspection and Plan Review Services to support the District's fire prevention program. Services generally include plan review, construction inspections, operational inspections, fire code compliance activities, technical support, and related fire prevention services as directed by the District.

In addition to establishing a long-term contractual framework, issuance of an RFP will allow the District to solicit proposals from multiple qualified firms and evaluate available service providers based on experience, qualifications, responsiveness, service approach,

and cost. Conducting a competitive procurement process helps ensure the District receives high-quality services while demonstrating sound stewardship of public resources.

The District has been satisfied with the services provided by Interwest Consulting Group and encourages their participation in the RFP process. However, given the ongoing nature of these services and the District's responsibility to ensure transparency, competitiveness, and fiscal accountability, staff believes it is prudent to formally solicit proposals from the broader marketplace.

The proposed RFP has been developed to provide flexibility for the District's current and future service needs while maintaining consistency with the District's procurement policies and professional services contracting practices.

FISCAL IMPACT

There is no immediate fiscal impact associated with releasing the RFP. The selected firm's compensation and proposed agreement terms will be presented to the Board of Directors for review and approval following completion of the competitive procurement process.

Attachment:

1A – DRAFT CPCSD Fire Prevention Inspection and Plan Review Services RFP

CAMERON PARK COMMUNITY SERVICES DISTRICT

Cameron Park, California

REQUEST FOR PROPOSALS (RFP)

FIRE PREVENTION INSPECTION AND PLAN REVIEW SERVICES

INTRODUCTION

The community of Cameron Park is located in the foothills of El Dorado County, on the west slope of the Sierra Nevada along U.S. Highway 50, about 30 miles east of Sacramento, California. The overall population of Cameron Park is 19,171 (2020 US Census) and the CPCSD itself encompasses an area of 8.3 square miles. The CPCSD General Fund Budget is approximately \$6.7 million.

The Cameron Park Community Services District is an independent California Special District governed by a five-member elected Board of Directors. The District provides parks, recreation, facilities, CC&R enforcement, and fire protection services to the Cameron Park community.

The CPCSD administers fire and emergency services, recreation programming, parks & facility maintenance and reservations, CC&R (covenants, conditions, and restrictions) enforcement, architecture review, solid waste disposal & recycling, and lighting and landscaping. The CPCSD operates two fire stations, ten parks, 19 lighting & landscape districts and a community center with a regionally recognized pool.

More information about the District can be found on the website at www.cameronpark.org

NOTICE IS HEREBY GIVEN:

That the Cameron Park Community Services District will receive proposals from firms for FIRE PREVENTION INSPECTION AND PLAN REVIEW SERVICES as outlined in this RFP by the date and at the address listed below:

PROPOSALS DUE:

TO BE DETERMINED XX/XX/2026

Attn: Mark Hornstra, General Manager
Cameron Park Community Services District
2502 Country Club Drive
Cameron Park, CA 95682

SECTION 1: INTRODUCTION

1.1 Statement of Purpose

The Cameron Park Community Services District ("District") is requesting proposals from qualified firms to provide Fire Prevention Inspection, Fire Protection Engineering and Plan Review Services in support of the District's fire prevention operations.

The District provides fire protection services through a cooperative partnership with CAL FIRE and seeks qualified firms capable of providing plan review, inspection, technical consultation, development review support, and related fire prevention services.

The District intends to award one or more Professional Services Agreements to qualified firms. Selection under this RFP does not guarantee any minimum amount of work, compensation, or issuance of Task Orders.

1.2 Scope of Services

The selected consultant(s) may be requested to provide services including, but not limited to:

1.2.1 Plan Review Services

- Commercial construction projects
- Tenant improvements
- Residential subdivisions
- Fire sprinkler systems
- Fire alarm systems
- Hazardous materials facilities
- Battery Energy Storage Systems (BESS)
- Solar photovoltaic systems
- High-piled storage occupancies
- Emergency Responder Radio Coverage Systems (ERRCS)
- Distributed Antenna Systems (DAS)
- Fire apparatus access roads
- Fire flow and water supply requirements
- Wildland-Urban Interface (WUI) compliance reviews
- Alternative materials and methods requests

1.2.2 Inspection Services

- Construction inspections
- Fire protection system inspections
- Operational permit inspections
- Annual business inspections
- Special event inspections
- Acceptance testing of fire protection systems
- State regulated occupancy inspections

1.2.3 Technical Support Services

- Fire code interpretation
- Development review support
- Attendance at development review meetings
- Attendance at pre-application meetings
- Technical consultation to District staff
- Fire code adoption assistance
- Supplemental staffing resources during periods of increased workload

1.2.4 Wildfire Prevention Coordination

The District maintains a dedicated Wildfire Mitigation Coordinator responsible for wildfire prevention, vegetation management, defensible space compliance, grant administration, public outreach, and community wildfire preparedness programs.

The selected consultant shall coordinate with the District's Wildfire Mitigation Coordinator, Fire Chief, and District staff as necessary but shall not be responsible for administering the District's wildfire mitigation, defensible space, or vegetation management programs.

1.2.5 Minimum Qualifications

Responding firms shall demonstrate:

- Minimum five (5) years of California fire prevention experience
- Experience providing services to public agencies
- ICC Fire Inspector certification
- ICC Fire Plans Examiner certification
- Electronic plan review capability
- Familiarity with California Fire Code, California Building Code, and NFPA standards

Preferred qualifications include:

- Experience serving California Special Districts
- Experience supporting CAL FIRE cooperative agencies
- Experience in High and Very High Fire Hazard Severity Zones
- Experience reviewing WUI developments
- Experience reviewing ERRCS and DAS systems
- Experience reviewing Battery Energy Storage Systems
- Availability of licensed Fire Protection Engineers

SECTION 2: SUBMITTAL DEADLINE

Proposals shall be submitted no later than the deadline specified on page 1. Firms shall respond to the written RFP and any exhibits, attachments, or amendments. A responding firm's failure to submit a proposal as required before the deadline shall cause the proposal to be disqualified.

Responding firms assume the risk of the method of dispatch chosen. The District assumes no responsibility for delays caused by any delivery service. Postmarking by the due date shall not substitute for actual receipt of the proposal by the District. Late proposals shall not be accepted nor shall additional time be granted to any responding firm.

Proposals may not be delivered orally, by facsimile transmission, or by other telecommunication or electronic means.

SECTION 3: GENERAL REQUIREMENTS AND INFORMATION

The administrative requirements of this RFP shall substantially mirror the District's standard procurement requirements and include:

3.1 District Contact

Mark Hornstra, General Manager
Cameron Park Community Services District
2502 Country Club Drive Cameron Park, CA 95682
generalmanager@cameronpark.org

3.2 Required Review and Waiver of Objections by Responding Firms

Responding firms should carefully review this RFP and all attachments, including, but not limited to, the *Standard Contract*, for comments, questions, defects, objections, or any other matter requiring clarification or correction (collectively called "comments"). **Comments must be made in writing and received by the District no later than Insert Date and Time** (Deadline for Written Comments). Questions can be faxed or emailed to mhornstra@cameronpark.org. This will allow issuance of any necessary amendments and help prevent the opening of defective proposals

upon which contract award could not be made.

Objections shall be considered waived and invalid if not brought to the attention of the District, in writing, by the Deadline for Written Comments.

3.3 Proposal Submission Requirements

Proposals shall be submitted in the format prescribed by this RFP.

3.4 Proposal Preparation, Interview and Negotiation Costs

The District shall not be responsible for and/or shall not pay any costs associated with the preparation, proposal, or presentation of any proposal, or costs incurred by the responding firms during the interview and negotiations phase of the solicitation process.

3.5 Proposal Withdrawal

To withdraw a proposal, the responding firm must submit a written request, signed by an authorized representative, to the RFP Coordinator. After withdrawing a previously submitted proposal, the responding firm may submit another proposal at any time up to the deadline for submitting proposals.

3.6 Proposal Amendments

The District shall not accept any amendments, revisions, or alterations to the proposal after the deadline for the proposal.

3.7 Proposal Errors

Responding firms are liable for all errors or omissions contained in their proposal. Responding firms shall not be allowed to alter proposal documents after the deadline for submitting a proposal.

3.8 Incorrect Information

If the District determines that a responding firm has provided, for consideration in the evaluation process or contract negotiations, incorrect information which the responding firm knew or should have known was materially incorrect, the proposal may be rejected in the District's sole discretion.

3.9 Exceptions to District Requirements

Any exceptions to the District's Professional Services Agreement must be clearly identified.

3.10 Assignment and Subcontracting

3.10.1 The selected firm(s) may not subcontract, transfer, or assign any portion of the contract without prior written approval from the District. Each subcontractor / subconsultant must be approved in writing by the District in its sole discretion. The substitution of one subcontractor / subconsultant for another may be made only at the discretion of the District and with prior written approval from the District.

3.10.2 Notwithstanding the use of approved subcontractor / subconsultant, the selected firm(s), if awarded a contract under this RFP, shall be the prime contractor and shall be responsible for all work performed.

3.11 Alternate Services

Proposals of alternate services (i.e., proposals that offer something different from that requested by the RFP) will be considered non-responsive and rejected.

3.12 Additional Services

If a responding firm indicates the capability and offers services in addition to those required by and described in this RFP, these additional services may be added to the contract before contract signing, at the sole discretion of the District. The cost for any such additional services shall be mutually agreed upon by the selected firm(s) and the District, and incorporated into the contract before contract signing.

3.13 Insurance

Insurance requirements shall be as set forth in the District's Professional Services Agreement.

3.14 Licensure and Certifications

Consultants shall possess all licenses and certifications required to perform the services proposed.

3.15 Conflict of Interest and Levine Act Compliance

By submitting a proposal, the responding firm certifies that no amount shall be paid directly or indirectly to an employee or official of the District as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the responding firm in connection with the procurement under this RFP.

All responding firms must complete a Levine Act Statement as part of their proposal. The Levine Act Statement is included in Attachment 3.1

3.16 RFP Amendment and Cancellation

The District reserves the unilateral right to amend this RFP in writing at any time. The District also reserves the right to cancel or reissue the RFP at its sole discretion. The District shall post copies of the RFP and amendments on the webpage under www.cameronparki.or and it shall be the responsibility of the responding firm to monitor the posting of written responses. Responding firms shall respond to the final written RFP and any exhibits, attachments, and amendments.

3.17 Right of Rejection

3.17.1 The District reserves the right, at its sole discretion, to reject any and all proposals or to cancel this RFP in its entirety.

3.17.2 Any proposal received which does not meet the requirements of this RFP may be considered to be non-responsive, and the proposal may be rejected. Responding firms must comply with all of the terms of this RFP and all applicable state and local laws and regulations. The District may reject any proposal that does not comply with all of the terms, conditions, and performance requirements of this RFP.

Attachment #1A

3.17.3 Responding firms may not restrict the rights of the District or otherwise qualify their proposals. If a responding firm does so, the District may determine the proposal to be a non-responsive counteroffer, and the proposal may be rejected.

3.17.4 The District reserves the right, at its sole discretion, to waive variances in proposals provided such action is in the best interest of the District. Where the District waives variances in proposals, such waiver does not modify the RFP requirements or excuse the responding firm from full compliance with the RFP. Notwithstanding any variance, the District may hold any responding firm to strict compliance with the RFP.

3.18 Disclosure of Proposal Contents

All proposals and other materials submitted in response to this RFP procurement process become the property of the District. Selection or rejection of a proposal does not affect this right. All proposal information, including detailed price and cost information, shall be held in confidence during the evaluation and selection process. Upon the completion of the evaluation and selection process, indicated by approval of a contract for services emanating from this RFP by the District Advisory Board or by rejection of all proposals, the proposals and associated materials shall be open for review by the public to the extent required by the California Public Records Act. By submitting a proposal, the responding firm acknowledges and accepts that the contents of the proposal and associated documents shall become open to public inspection.

3.19 Proprietary Information

The master copy of each proposal shall be retained for official files and will become public record after the award of a contract unless the proposal or specific parts of the proposal can be shown to be exempt by law. Each responding firm may clearly label part of a proposal as "CONFIDENTIAL." In doing so, the responding firm thereby agrees to indemnify and defend the District. The failure to so label any information that is released by the District shall constitute a complete waiver of all claims for damages caused by or related to any release of the information. If a public records request for labeled information is received by the District, the District will endeavor to notify the responding firm of the request and delay access to the material until seven (7) working days after the District's receipt of the public records request. Within that time delay, it will be the duty of the responding firm to act in protection of its labeled information. Failure to so act shall constitute a complete waiver.

3.20 Severability

If any provision of this RFP is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the District and responding firms shall be construed and enforced as if the RFP did not contain the particular provision held to be invalid.

SECTION 4: SPECIAL REQUIREMENTS

4.1 Joint Ventures and Partnering

Proposals from joint ventures or entities partnering for a specific service must be designed to minimize any administrative burden on the District as a result of the participation of multiple entities.

Attachment #1A

4.1.1 The proposal shall clearly set forth the respective responsibilities and functions that each Principal of the joint venture or partnering entities would perform if awarded a contract pursuant to this RFP.

4.1.2 The proposal must include a copy of the joint venture or partnering agreements that identify the Principals involved, as well as their rights and responsibilities regarding a contract pursuant to this RFP.

4.1.3 The proposal transmittal letter must be signed by each Principal of the joint venture and include all required information.

4.2 Multiple Firm Awards

The District reserves the right to award agreements to one or more qualified firms.

4.3 No Guarantee of Work Volume

The District makes no guarantee regarding the quantity of services, compensation, or Task Orders that may result from this RFP.

SECTION 5: PROPOSAL FORMAT AND CONTENT

5.1 General Proposal Requirements

5.1.1 The District discourages lengthy and costly proposals. Proposals should be prepared simply and economically and provide a straightforward, concise description of the responding firm's capabilities to satisfy the requirements of this RFP. Emphasis should be on conformity to the District's instructions, requirements of this RFP, and completeness and clarity of content.

5.1.2 Responding firms must follow all formats and address all portions of the RFP set forth herein providing all information requested. Responding firms may retype or duplicate any portion of this RFP for use in responding to the RFP, provided that the proposal clearly addresses all of the District's information requirements.

5.1.3 Responding firms must respond to every subsection under the proposal and fee schedule sections below. Responding firms must label each response to RFP requirements with the section and subsection numbers associated with the subject requirement in this RFP (e.g., the response to the second requirement of the proposal Transmittal Letter would be labeled 5.2.1.2). **Failure to follow the specified format, to label the responses correctly, or to address all of the subsections may, at the District's sole discretion, result in the rejection of the proposal.** Proposals must not contain extraneous information. All information presented in a proposal must be relevant in response to a requirement of this RFP, must be clearly labeled and, if not incorporated into the body of the proposal itself, must be referenced to and from the appropriate place within the body of the proposal. Any information not meeting these criteria shall be deemed extraneous and shall in no way contribute to the evaluation process.

5.1.4 Proposals shall be prepared on standard 8 1/2" x 11" paper. Foldouts containing charts, spread sheets, and oversize exhibits are permissible. All responses, as well as any

reference material presented, must be written in English. All monetary amounts must be detailed in United States currency. All proposal pages must be numbered. Proposals shall not include unnecessary company advertisement material.

5.2 Proposal Contents

5.21 Proposal Transmittal Letter

The proposal must provide a written transmittal and offer of the responding firm in the form of a standard business letter. The Proposal Transmittal Letter shall reference and respond to the following subsections in sequence and attach corresponding documentation as required. Each proposal must meet the Proposal Transmittal Letter requirements and provide all required documentation. A Proposal Transmittal Letter is mandatory and failure to provide the information as required may result in the proposal being considered nonresponsive and rejected.

5.2.1.1 The letter shall state that the proposal remains valid for at least sixty (60) working days subsequent to the proposal due date and thereafter in accordance with any resulting contract between the responding firm and the District.

5.2.1.2 The letter shall provide the complete name of the individual or the firm making the proposal.

5.2.1.3 The letter shall provide the name, mailing address, and telephone number of the person the District should contact regarding the proposal.

5.2.1.4 The letter shall state whether the responding firm intends to use subcontractors. If so, clearly identify the names of the subcontractors/sub-consultants along with complete mailing addresses and the scope and portions of the work the subcontractors / sub-consultants shall perform. (NOTE: The selected firm(s) must obtain written approval from the District prior to the use of any subcontractors).

5.2.1.5 The letter shall state whether the responding firm or any individual who shall perform work under the contract has a possible conflict of interest and, if so, the nature of that conflict. The District reserves the right to cancel an award if any interest disclosed from any source could either give the appearance of a conflict of interest or cause speculation as to the objectivity of the offertory. Such determination regarding any questions of conflict of interest shall be solely within the discretion of the District.

5.2.1.6 The letter shall also include a statement of acknowledgement that the District's *Standard Contract* (Section 10) has been reviewed and accepted with or without qualification. If qualifications are involved, those items requiring adjustment or modification must be identified and listed along with suggested modifications to the contract. If no modifications to the Contract are noted, then the District will assume that the responding firm is capable of performing all normal managerial tasks and services without reservation or qualification to the contract.

5.2.1.7 The letter shall be signed by a company officer empowered to bind the responding firm to the provisions of this RFP and any contract awarded pursuant

to it. If said individual is not the company president, the letter shall attach evidence showing authority to bind the company.

5.22 Firm Qualifications and Experience

Proposals shall provide the following information (referencing the subsections in sequence) to evidence the responding firm's experience in delivering services similar to those required by this RFP:

5.2.3.1 A brief description of the responding firm's background and organizational history.

5.2.3.2 Years in business.

5.2.3.3 A brief statement of how long the responding firm has been performing the services required by this RFP.

5.2.3.4 Location of office(s) with clear identification of the office(s) from which services will be performed.

5.2.3.5 A description of the responding firm's number of employees, longevity, client base.

5.2.3.7 Form of business (i.e., individual, sole proprietor, corporation, non-profit corporation, partnership, joint venture, Limited Liability Company, etc.).

5.2.3.8 A statement as to whether there is any pending litigation against the responding firm, and if such litigation exists, attach an opinion of counsel as to whether the pending litigation will impair the responding firm's performance in a contract under this RFP.

5.2.3.9 A statement as to whether, in the last ten (10) years, the responding firm has filed (or had filed against it) any bankruptcy or insolvency proceeding, whether voluntary or involuntary, or undergone the appointment of a receiver, trustee, or assignee for the benefit of creditors, and, if so, an explanation providing relevant details.

5.2.3.10 A list, if any, of all current contractual relationships with the District and all those completed within the previous five-(5) year period.

5.2.3.11 A brief descriptive statement indicating the responding firm's credentials to deliver the services sought under this RFP.

5.2.3.12 Describe in detail a maximum of ten (10) public sector or similar projects maintained in the last five (5) years that demonstrates the following:

- Experience performing tasks listed in Section 1.2 of the RFP.

Limit: One project per page.

5.2.3.13 Describe in detail, work that the responding firm has directly performed on a maximum of four (4) projects that shows:

- A demonstrated ability to perform the services listed in Section 1.2 for a municipality or special district.
- A demonstrated ability to meet project deadlines, major milestone, and overall project schedule

Limit: One page per project.

5.23 Proposed Project Team

5.24 Service Delivery Approach

5.25 Staffing Availability and Response Capabilities

5.26 Technology and Electronic Plan Review Capabilities

5.27 References and Past Performance

5.28 Litigation and Claims Disclosure

5.29 Exceptions to District Agreement

SECTION 6: COST PROPOSAL

Provide fully burdened hourly rates for:

- Fire Marshal
- Fire Protection Engineer
- Senior Fire Inspector
- Fire Inspector
- Fire Plans Examiner
- Administrative Support

Identify:

- Annual escalation requests
- Overtime rates
- Holiday rates
- Any proposed reimbursable expenses

The District reserves the right to negotiate final compensation.

SECTION 7: EVALUATION, CONSULTANT SELECTION, AND CONTRACT AWARD

Qualifications and Experience 30 Points

Proposed Project Team	25 Points
Service Delivery Approach	15 Points
Technology and Responsiveness	10 Points
WUI / Special District Experience	10 Points
Cost Proposal	10 Points
TOTAL	100 Points

The District reserves the right to conduct interviews and negotiate with one or more responding firms.

SECTION 8: STANDARD CONTRACT INFORMATION

The District’s Professional Services Agreement shall govern all resulting contracts.

The selected consultant(s) shall be required to execute the District’s Professional Services Agreement.

The RFP, consultant proposal, fee schedule, and any resulting Task Orders may be incorporated into the final agreement.

SECTION 9: FIRE PREVENTION INSPECTION AND PLAN REVIEW SERVICES

Refer to Section 1.2 Scope of Services.

SECTION 10: PROPOSAL FORMS

Proposal Form

Cost Proposal Form

Reference Form

Key Personnel Form

Response Capability Form

Levine Act Disclosure

SECTION 11: PROFESSIONAL SERVICES AGREEMENT

Attachment 11.1 Cameron Park Community Services District Professional Services Agreement

DRAFT

Attachment 3.1 LEVINE ACT STATEMENT

California Government Code § 84308, commonly referred to as the “Levine Act,” precludes an officer of a local government agency from participating in the award of a contract if he or she receives any political contributions totaling more than \$500 in the 12 months preceding the pendency of the contract award, and for three months following the final decision, from the person or company awarded the contract. This prohibition applies to contributions to the officer, or received by the officer on behalf of any other officer, or on behalf of any candidate for office or on behalf of any committee.

This statement must be provided for the Organization and for each Contractor, SubContractor, or Consultant who will work with the Cameron Park Community Services District.

Cameron Park Community Service District Board Members as of the date of this RFP/Contract are as follows:

Dawn Wolfson, Katie Gilchrest, Tim Israel, Monique Scobey, Sidney Bazett

1. Have you or your organization, or any agent on behalf of you or your company, made any political contributions of more than \$500 to any El Dorado Hills Community Service District Board Director(s) in the 12 months preceding the date of the issuance of this RFP or Contract? YES _____ NO _____

a. If yes, please identify the Board Member(s): _____,

2. Do you or your company, or any agency on behalf of you or your company, anticipate or plan to make any political contributions of more than \$500 to any Cameronn Park Community Service District Board Director(s) in the three months following the response to this RFP, or award of the contract?

YES _____ NO _____

If yes, please identify the Board Director(s)
_____, _____, _____

Answering yes to either of the two questions above does not Cameron Park Community Service District to award a contract to your firm. It does, however, preclude the identified Board Director from participating in the contract award process for this contract.

Authorized Representative Declaration

DATE: _____

SIGNATURE: _____

NAME: _____

TITLE: _____

ORGANIZATION: _____

DRAFT

Cameron Park Community Services District



Staff Report

DATE: June 2, 2026

FROM: Maurice Johnson, Strategic Public Safety Solutions

AGENDA ITEM #2: Silver Springs Unit 2 & Unit 3 Development, Wildfire Prepared Neighborhood Program and District Governance Considerations

RECOMMENDATION: Receive and Provide Comment

BACKGROUND

The proposed Silver Springs Unit 2 and Unit 3 Developments are located within portions of the Cameron Park Community Services District (CPCSD) and Rescue Fire Protection District service areas. As part of the development proposal, the developer has proposed implementation of a Wildfire Prepared Neighborhood (WFPN) program utilizing standards established by the Insurance Institute for Business & Home Safety (IBHS).

The proposed program is intended to establish a community-wide wildfire resilience framework that includes wildfire preparedness standards, vegetation management requirements, homeowner obligations, and long-term maintenance and compliance measures intended to preserve the wildfire-resistant characteristics of the development.

Staff has reviewed the proposed governance structure, associated CC&Rs, and supporting documentation to better understand the potential role of CPCSD in administering and supporting the program following project buildout.

DISCUSSION

Fire Protection Jurisdiction

A primary consideration is that CPCSD is not the Authority Having Jurisdiction (AHJ) for fire protection services within the proposed development area.

Rescue Fire Protection District serves as the fire agency responsible for fire prevention, defensible space enforcement, California Fire Code compliance, emergency access requirements, and wildfire hazard mitigation activities.

While CPCSD has established a Wildfire Risk Mitigation Program and employs a Wildfire Risk Mitigation Coordinator, the District's role is primarily focused on education, outreach,

mitigation coordination, grant administration, and community preparedness initiatives rather than fire code enforcement.

The proposed program contemplates responsibilities that may include annual inspections, compliance monitoring, homeowner notifications, follow-up inspections, architectural review functions, and recertification activities. The extent to which CPCSD possesses authority to undertake these activities remains a significant question requiring further evaluation.

CC&R FRAMEWORK

The recorded Covenants, Conditions, and Restrictions (CC&Rs) associated with the development establish an unusual governance structure whereby CPCSD may ultimately assume certain architectural review and covenant administration responsibilities following turnover from the developer.

The CC&Rs contemplate District involvement in architectural review, design standards administration, and enforcement of certain community standards. However, the CC&Rs do not establish a traditional homeowners association structure and do not appear to create a dedicated funding mechanism for long-term wildfire preparedness administration.

OPEN SPACE AND LONG-TERM MAINTENANCE

The development contains substantial open space, conservation areas, and wildland-urban interface lands that are intended to contribute to the overall wildfire resilience strategy.

Staff believes one of the most significant long-term considerations is not annual inspections, but rather the ownership, maintenance, and funding of these open space and fuel management areas.

Questions that remain unresolved include:

- ✓ Who will own the open space and fuel modification areas?
- ✓ Who will be responsible for long-term vegetation management?
- ✓ Who will fund ongoing maintenance activities over the life of the development?
- ✓ What entity will be responsible for ensuring continued compliance with wildfire preparedness standards?
- ✓ What mechanisms will exist to address deferred maintenance or changing conditions over time?

These questions become increasingly important given the perpetual nature of wildfire resilience and vegetation management obligations.

Funding Considerations

The proposed governance structure appears to create ongoing administrative responsibilities that could include:

- ✓ Annual inspections
- ✓ Re-inspections
- ✓ Compliance monitoring
- ✓ Homeowner communications
- ✓ Record retention
- ✓ Program administration
- ✓ Recertification activities
- ✓ Potential enforcement actions

At this time, staff has not identified a dedicated funding source to support these activities over the long term.

The District may wish to consider whether the proposed governance structure includes an appropriate and sustainable funding mechanism and whether alternative structures such as a homeowners association, maintenance corporation, assessment district, or community facilities district may be better suited to support these obligations.

LIABILITY AND RISK CONSIDERATIONS

Staff has identified potential liability concerns associated with District participation in wildfire preparedness compliance programs.

Potential risks may include allegations related to:

- ✓ Inspection activities.
- ✓ Compliance determinations.
- ✓ Failure to identify hazards.
- ✓ Inconsistent enforcement.
- ✓ Reliance upon District approvals or certifications.
- ✓ Post-incident litigation following wildfire events.

While no conclusions have been reached regarding the extent of potential exposure, staff believes these issues warrant careful legal review prior to acceptance of any long-term administrative responsibilities.

PRECEDENT CONSIDERATIONS

The Committee may also wish to consider the broader policy implications associated with the proposal.

Acceptance of a long-term administrative role for Silver Springs could establish expectations for future developments seeking similar wildfire resilience programs or community management structures.

As wildfire resilience continues to emerge as a regional planning priority, future development proposals may seek similar arrangements involving open space management, fuel reduction programs, compliance monitoring, or certification administration.

Staff believes it is important to establish clear policy direction regarding the appropriate role of CPCSD before commitments are made that could influence future development expectations.

POTENTIAL PATH FORWARD

Staff recommends continued evaluation of the proposal with particular emphasis on:

- ✓ Clarification of jurisdictional responsibilities between CPCSD and Rescue Fire Protection District.
- ✓ Identification of long-term ownership and maintenance responsibilities for open space and fuel management areas.
- ✓ Evaluation of long-term funding mechanisms.
- ✓ Legal review of District authority, obligations, and liability exposure.
- ✓ Assessment of alternative governance structures that may better align responsibility, authority, and funding.

CONCLUSION

The Silver Springs Wildfire Prepared Neighborhood proposal presents an opportunity to advance wildfire resilience and preparedness within a new development. However, the proposal also raises significant questions regarding governance, authority, liability, funding, and long-term maintenance obligations.

Staff believes additional analysis and coordination with Rescue Fire Protection District, legal counsel, the developer, and other stakeholders is warranted before any long-term role is considered by the District.

FISCAL IMPACT

None at this time. Future fiscal impacts are unknown and dependent upon the governance structure ultimately adopted for the project.

Attachments:

- 2A – Silver Springs Unit 2 & Unit 3 Wildfire Prepared Neighborhood Proposal Summary
- 2B – Silver Springs CC&Rs (2006)
- 2C – Silver Springs Unit 2 & 3 Wildland Urban Interface Fire Protection Plan
- 2D – Wildfire Prepared Neighborhood Technical Standard (2025)

8.2 Responsibilities of the CSD Regarding WFPN Designation

The CSD shall be responsible for the following:

A. Annual Landscape and Defensible Space Inspection

To preserve wildfire mitigation standards and maintain WFPN designation, the CSD shall conduct an annual inspection of each residential property and all common areas to verify compliance with applicable wildfire mitigation standards, including but not limited to:

- Maintenance of the 0–5-foot non-combustible zone
 - Compliance with defensible space and vegetation management standards
 - Removal of combustible materials adjacent to structures
 - Maintenance of fuel modification zones and common area vegetation.
- B. Individual land owners (Owner) shall provide reasonable access to their property for the purpose of conducting such inspections.**
- C. If deficiencies are identified, the CSD shall provide written notice and require corrective action within a specified timeframe.**
- D. The CSD shall have the authority to enforce compliance with wildfire mitigation requirements necessary to maintain WFPN designation, including:**
- Issuing violation notices
 - Requiring corrective actions
 - Conducting follow-up inspections
 - Performing necessary mitigation work and assessing the cost to the Owner if violations are not corrected within the required timeframe.

8.3 Wildfire Prepared Neighborhood Fees and Assessments

To preserve the community's designation under the IBHS WFPN program, the CSD shall be responsible for coordinating required inspections and redesignation processes and paying all associated program fees to IBHS or its authorized representatives.

Such fees may include, but are not limited to:

- Fees associated with annual vegetation and wildfire mitigation inspections required to verify ongoing compliance with WFPN standards.
- Fees associated with periodic neighborhood redesignation, which may occur approximately every three (3) years or at intervals required by IBHS.
- Administrative, inspection, documentation, and program management costs necessary to maintain the WFPN designation.

Such costs shall be treated as common expenses of the CSD and may be assessed to individual land owners in accordance with the CSD assessment authority.

8.3 Owner Responsibilities

Each Owner of a residential lot shall meet the following measures:

A. Maintenance of the Non-combustible Zone

Each Owner shall maintain a minimum five-foot (0–5 ft) noncombustible zone around all structures on the Lot in accordance with the Wildfire Prepared Neighborhood standards.

Within this zone, owners shall:

- Remove combustible vegetation and materials.
- Prohibit the storage of combustible items including firewood, lumber, propane cylinders, combustible furniture, or debris.
- Maintain only non-combustible ground covers such as gravel, stone, pavers, or other materials approved by RFD.
- Ensure tree limbs and vegetation do not overhang into the zone.

B. Vegetation and Landscape Maintenance

Owner shall maintain landscaping in a manner consistent with wildfire mitigation standards required for the community's Wildfire Prepared Neighborhood designation. Owners shall:

- Maintain vegetation spacing and plant health.
- Remove dead, dying, or combustible vegetation.
- Maintain separation between shrubs, trees, and structures as required by Association guidelines.
- Avoid planting vegetation that may increase wildfire risk near structures.

C. Maintenance of Wildfire-Resilient Home Features

Owner shall maintain all wildfire-resistant construction features installed on their home including but not limited to:

- Ember-resistant vents
- Roof assemblies, enclosed eaves, and gutters/covers
- Exterior siding and wall assemblies
- Windows and doors
- Decking and attachments.

Owner shall not alter or remove wildfire-resistant materials in a way that reduces the home's wildfire performance.

D. Restrictions on Modifications

No Owner shall construct, install, or modify improvements that could compromise wildfire resilience standards required for the community. Examples include but are not limited to:

- Installing combustible fences attached to structures
- Adding combustible landscaping within the 5-foot zone
- Modifying exterior materials to combustible alternatives
- Installing structures or attachments that reduce required spacing

All exterior improvements must be reviewed and approved by the CSD Architectural Review Committee.

E. Inspection Cooperation

Owner shall allow reasonable access to their property for purposes of:

- Annual wildfire mitigation inspections conducted by the CSD
- Inspections required to maintain Wildfire Prepared Neighborhood designation
- Periodic redesignation inspections conducted by IBHS or its authorized representatives

Owner shall correct any identified deficiencies within the timeframe established by the Association.

F. Compliance with Wildfire Mitigation Rules

Owner shall comply with all wildfire mitigation rules, policies, and guidelines adopted by the CSD to maintain the Wildfire Prepared Neighborhood designation. Failure to comply may result in enforcement actions including notices of violation, fines, or corrective action as authorized under the governing documents.

8.3 Accessory Dwelling Unit (ADU) Wildfire Resilience Provision

The construction or installation of an Accessory Dwelling Unit (“ADU”) on a Lot may alter wildfire exposure conditions by introducing additional structures that may function as connective fuels, increasing the potential for structure-to-structure ignition during a wildfire. Because the presence, placement, and construction of additional structures may affect compliance with the standards of the Wildfire Prepared Home (WFPH) and Wildfire Prepared Neighborhood (WFPN) programs, the addition of an ADU may result in the loss or ineligibility of an individual home designation and may affect the eligibility of the neighborhood designation if required wildfire mitigation standards cannot be maintained. Owner shall maintain the following measures related to an ADU

A. ADU Construction Standards

Any ADU constructed within the community should be designed and constructed in a manner that maintains or improves wildfire resilience and minimizes the risk of connective fuel pathways between structures. To reduce the probability that an ADU negatively affects parcel-level or neighborhood-level wildfire performance the following shall be required:

- ADUs shall comply with all applicable state and local wildfire construction standards.
- ADUs are strongly encouraged, and may be required by the Association, where permitted by law, to meet the construction and material requirements consistent with Wildfire Prepared Home Plus (WFPH+) standards, including wildfire-resistant materials, ember-resistant construction features, and ignition-resistant attachments.
- ADUs shall be designed and located, where feasible, to minimize the potential for structure-to-structure ignition between buildings. ADUs located 30' from structures will not be considered as an increase in risk.

B. Impact on Designations

Owner acknowledges that:

- The addition of an ADU may require reassessment of the property and the neighborhood under IBHS wildfire resilience standards.
- If the addition of an ADU results in conditions that no longer meet applicable wildfire resilience criteria, the parcel designation and/or the Wildfire Prepared Neighborhood designation may be suspended or revoked.
- The CSD shall not be responsible for any loss of designation resulting from the construction or placement of an ADU.

C. Architectural Review of ADU Prior to Placement on Property

Prior to construction of an ADU, Owner must obtain approval from the CSD Architectural Review Committee. The Committee may require submission of plans demonstrating:

- wildfire-resistant construction materials
- separation or mitigation measures to reduce connective fuel pathways
- compliance with applicable wildfire resilience guidelines adopted by the Association.

The Committee may condition approval on design modifications intended to preserve wildfire resilience within the community.

DISHS Community

Master CCR

Supplemental CCR

ENSURE Compliance

30' Fuel Break

181

FIRST AMERICAN TITLE COMPANY
ESCROW NO 2033776



El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2006-0031162-00

Acct 3-FIRST AMERICAN TITLE CO
Monday, MAY 08, 2006 14:30:00
Ttl Pd \$130.00 Nbr-0000860179
KMV/C1/1-42

Recording Requested By and When Return to:

The Cambay Group, Inc.
2999 Oak Road, Suite 40
Walnut Creek, CA 94597
Attn: Bill Scott

**DECLARATION
OF
COVENANTS, CONDITIONS AND RESTRICTIONS
FOR
SILVER SPRINGS SUBDIVISION**

**DECLARATION
OF
COVENANTS, CONDITIONS AND RESTRICTIONS
FOR
SILVER SPRINGS SUBDIVISION**

Table of Contents

		<u>Page #</u>
ARTICLE I	Definitions	1
Section 1.1	Architectural Control Committee	2
Section 1.2	Board	2
Section 1.3	Declaration	2
Section 1.4	Design Guidelines	2
Section 1.5	District	2
Section 1.6	County	2
Section 1.7	Cameron Park	2
Section 1.8	Family	2
Section 1.9	Improvement	2
Section 1.10	Lot	3
Section 1.11	Mortgage	3
Section 1.12	Owner	3
Section 1.13	Record, Recordation and Recorded	3
Section 1.14	Residence	3
Section 1.15	Streets	3
Section 1.16	Subdivision or Project	3
Section 1.17	Subdivision Map	3
ARTICLE II	Architectural Review and Approval of Improvements	4
Section 2.1	Architectural Control Committee Approval of Improvements	4
	(a)	4
	(b) Modifications to Approved Plans Must Also Be Approved	4
	(c) Exemption of Ordinary Repair, Maintenance or Replacement Projects, Unless Nonconforming Use Is Established	4
	(d) Effect of Noncompliance with Approval Requirements	4

Section 2.2	Membership of the Architectural Control Committee	5
Section 2.3	Duties of Committee	5
Section 2.4	Non-Liability of Committee	5
Section 2.5	Design Guidelines	5
Section 2.6	Basis for Approval of Improvements	6
Section 2.7	Procedures for Obtaining Committee Approval of Plans and Specifications	6
	(a) Preliminary Submission	6
	(b) Application for Final Approval	7
	(c) Content of Plans and Specifications	7
	(d) Inspection Fee	7
Section 2.8	Time Limits for Approval or Rejection	8
Section 2.9	Proceeding with Work	8
Section 2.10	Requirements for Completion of Improvement Projects	8
Section 2.11	Inspection of Work by Committee	9
Section 2.12	Landscaping	9
Section 2.13	Enforcement of Design Compliance Matters	10
	(a) Enforcement by Committee	10
	(b) Architectural Control Committee's Authority to Order Cessation of Work	10
	(c) Enforcement/Attorneys Fees	10
	(d) No Waiver	10
Section 2.14	Estoppel Certificate	10
ARTICLE III	Minimum Construction Standards	11
Section 3.1	Approval by Architectural Control Committee	11
Section 3.2	Single Family Residence	11
Section 3.3	Minimum Square Footage Requirements	11
Section 3.4	Garage Requirements	11
Section 3.5	No Temporary Buildings	11
Section 3.6	Enclosure of Service Areas	12
Section 3.7	Driveways	12
Section 3.8	Solar Heating and Air Conditioning Systems	12
Section 3.9	Siding Materials	12
Section 3.10	Height Limitations	12
Section 3.11	Removal and Planting of Trees	12
	(a) Removal of Oak Trees	13
	(b) Care and Maintenance of Native Oaks	13
Section 3.12	Fences	13

Section 3.13	Setback Lines	14
	(a) Lots Other Than Corner Lots	14
	(b) Corner Lot Setback Requirements	14
	(c) Compliance with County Setback Requirements	14
	(d) Setbacks for Other Improvements	14
Section 3.14	Subdivision of Existing Lots	14
Section 3.15	Cross Visibility of Vehicular Traffic	15
Section 3.16	Slope Control	15
Section 3.17	Telephone and Electrical Service Lines	15
Section 3.18	Licensed Contractor	16
Section 3.19	Utility Lines	16
Section 3.20	Solar Heating Systems	16
Section 3.21	Colors and Exterior Finishes	16
Section 3.22	Prohibition on A-Frame and Geodesic Dome Structures	16
Section 3.23	Roofing Materials	16
Section 3.24	Antennae and Other Exterior Fixtures	16
Section 3.25	Exterior Fluorescent and Security Lights	17
Section 3.26	Water Systems and Septic Systems	17
Section 3.27	Landscaping	17
ARTICLE IV	Easements and Encroachments	17
Section 4.1	Maintenance of Drainageways and Easements	17
Section 4.2	Drainageways and Easements Not Within Lots	18
ARTICLE V	Property Use Restrictions	18
Section 5.1	Use of Lots and Residences	18
	(a) Single Family Residential Use Restriction	18
	(b) Compliance with Minimum Construction Standards	18
	(c) Conveyance of Lots	18
	(d) Lot Maintenance	18
	(e) No Camping or Temporary Structures	19
	(f) Architectural Control Approvals	19
	(g) Prohibition of Mining and Drilling Activities	19
	(h) Prohibition of Entry or Improvements Within Conservation Easements	19
Section 5.2	Rental or Lease of Residences	19
	(a) Compliance with Declaration	19

	(b) Lease Must Pertain to Entire Residence; Exceptions	19
	(c) Written Lease Required	19
	(d) Remedies for Violations of Declaration by Tenants/Lessees	20
Section 5.3	Window Coverings	20
Section 5.4	Signs	20
Section 5.5	Nuisances	20
Section 5.6	Responsibility for Children and Family Members	21
Section 5.7	Animal Restrictions	21
Section 5.8	Vehicles	21
Section 5.9	Business or Commercial Activities	22
Section 5.10	Trash	23
Section 5.11	Burning	23
Section 5.12	Clotheslines	23
Section 5.13	No Hazardous Activities	23
Section 5.14	No Mining and Drilling	23
Section 5.15	Water and Sewer Systems	23
Section 5.16	Drainage	24
Section 5.17	Variances	24
Section 5.18	Enforcement of Property Use Restrictions	24
ARTICLE VI	Enforcement of Declaration	24
Section 6.1	Remedy at Law Inadequate	24
Section 6.2	Nuisance	25
Section 6.3	Costs and Attorneys' Fees	25
Section 6.4	Cumulative Remedies	25
Section 6.5	Failure Not a Waiver	25
Section 6.6	Rights and Remedies in Response to Violations	25
	(a) Rights Generally	25
	(b) Definition of "Violation"	26
	(c) Limitations of Enforcement Rights	26
	(i) Hearings	26
	(ii) Summary Enforcement Action	26
	(d) Notices	26
ARTICLE VII	Development Rights	26
Section 7.1	Limitations of Restrictions	26
Section 7.2	Rights of Access and Completion of Construction	27
Section 7.3	Size and Appearance of Subdivision	27
Section 7.4	Marketing	27

ARTICLE VIII	Term, Amendment and Severability	27
Section 8.1	Term of Declaration	27
Section 8.2	Amendment of Declaration	27
	(a) Amendments to Declaration	27
	(b) Effectiveness of Amendments	28
Section 8.3	Severability	28
ARTICLE IX	Miscellaneous	28
Section 9.1	Constructive Notice and Acceptance	28
Section 9.2	Interpretation	28
Section 9.3	Construction	28
	(a) Restrictions/Construction Together	28
	(b) Restrictions Severable	29
	(c) Singular Includes Plural	29
	(d) Captions	29
	(e) Exhibits	29
Section 9.4	Aircraft Operations	28
	Signature(s)	29
	Notary Acknowledgement	30

**DECLARATION OF
COVENANTS, CONDITIONS, RESTRICTIONS
FOR
SILVER SPRINGS SUBDIVISION**

This Declaration of Covenants, Conditions and Restrictions for the Silver Springs Subdivision is made this 25 day of APRIL, 2006, by Silver Springs, LLC, a California Limited Liability Company (the "Declarant").

RECITALS

A. Declarant is the owner of that certain real property located in the County of El Dorado, State of California, more particularly described in Exhibit "A", (the "Property").

B. The Silver Springs Subdivision is within the County of El Dorado, California and will be developed and subdivided as separate subdivision lots ("Lots"). This Declaration is recorded against the Property in order to create mutually beneficial equitable servitudes under a general plan of development and improvement for the benefit of all Lots and parcels within the Property and the owners of said Lots and parcels, and to maintain and protect the Property's natural beauty and environmental quality. It is the intention of the Declarant that the easements, protective covenants, conditions, restrictions, reservations, and equitable servitudes imposed by this Declaration run with the Property and be binding on all parties having or acquiring any right, title or interest in any portion of the Property, their heirs, successors and assigns, and that the same inure to the benefit of each Owner of any Lot or parcel within the Property, in existence at such time or to be created in the future.

C. The Declarant further intends that all above-ground structures and architecture be designed to be consistent with the architectural design, including form, colors, and materials of the adjoining residences.

D. The Declaration anticipates, and the terms hereof should be construed to provide, that the initial development of the Property will be undertaken by Declarant who shall have the authority to appoint the Committee and take other actions as a declarant in accordance with the Declaration, and at such time as the development of the Property is substantially complete the authority of the Declarant shall be transferred to the Cameron Park Community Services District, which is empowered by legislative act to enforce the terms of the Declaration.

ARTICLE I
Definitions

The following defined terms are used in this Declaration.

Section 1.1. **Architectural Control Committee** means the Committee formed pursuant to Article II of this Declaration, but at such time as the District assumes responsibility for the enforcement of this Declaration, it shall mean Architectural Control Committee formed by the District and is sometimes referred to simply as the Committee.

Section 1.2. **Board** means the Board of Directors of the Cameron Park Community Services District.

Section 1.3. **Declaration** means this instrument as it may be amended from time to time in accordance with the amendment provisions of section 7.2, below.

Section 1.4. **Design Guidelines** means the rules and regulations of the Architectural Control Committee or the Design Guidelines adopted in accordance with this Declaration.

Section 1.5. **District** means the Cameron Park Community Services District, a political subdivision of El Dorado County, California. The term "District" shall also include any local agency that succeeds to the powers, duties and responsibilities of the District under this Declaration.

Section 1.6. **County** means the County of El Dorado, State of California, and its various departments, divisions, employees and representatives.

Section 1.7. **Cameron Park** means all of the real property included within the District.

Section 1.8. **Family** means: (a) a group of natural persons related to each other by blood or legally related to each other by marriage or adoption; or (b) a group of natural persons not all so related, but who maintain a common household in a Residence.

Section 1.9. **Improvement** means all structures and appurtenances thereto of every type and kind, including, but not limited to, Residences, garages, other buildings and additions thereto, patio covers, awnings, outbuildings, walkways, utility lines, sprinkler pipes, roads, driveways, parking areas, recreational facilities, television or radio antennas, television satellite dishes and similar receiving and broadcasting devices, solar heating equipment constructed or proposed for construction by or on behalf of any Owner, fences, screening, walls, retaining walls, stairs, decks, landscaping, hedges, windbreaks, plantings, trees and shrubs planted by Owners or residents, poles,

signs, and exterior air conditioning equipment. The term "Improvement" shall also include any grading, excavation, fill or tree removal undertaken on a Lot in connection with an Improvement project, but shall not include any projects restricted to the interior of any Residence or other existing structure, unless the interior improvement will materially change the use of a previously approved structure (such as conversion of a garage interior into a living space or a workshop which will preclude use of the garage for the parking of three vehicles).

Section 1.10. **Lot** means any improved or unimproved residential Lot shown upon any Recorded Subdivision Map recorded with respect to the Property. Attached hereto is a copy of the Final Subdivision Map approved by the County showing the Lots is attached hereto as Exhibit "B". Minor changes may be made to the Map depicted in Exhibit "B" as may be approved by the County during the course of developing the Project.

Section 1.11. **Mortgage** means any security device encumbering any portion of a Lot including any deed of trust. Mortgagee means a person to whom a Mortgage is made and shall include the beneficiary of a deed of trust. Mortgagor means a person who mortgages his or its property to another (i.e., the maker of a Mortgage), and shall include the trustor of a deed of trust.

Section 1.12. **Owner** means the person or persons holding the fee simple interest of Record to any Lot. The term "Owner" shall include sellers under executory contracts of sale.

Section 1.13. **Record, Recordation and Recorded** mean with respect to any document, the recordation or filing of such document in the Office of the El Dorado County Recorder.

Section 1.14. **Residence** means a detached building and accessory structures located on a Lot and designed and intended for use and occupancy as a residence by a single family.

Section 1.15. **Streets** means the streets within and adjoining the Lots and shown on any recorded final Subdivision Map for the Property.

Section 1.16. **Subdivision or Project** means the land known as Silver Springs, Tentative Subdivision Map.

Section 1.17. **Subdivision Map** means any final subdivision map Recorded with respect to any portion of the Property.

ARTICLE II
Architectural Review and Approval of Improvements

Section 2.1. Architectural Control Committee Approval of Improvements.

(a) Before commencing construction or installation of any Improvement, as defined in section 1.10, the Owner planning such Improvement must submit a written request for approval to the Architectural Control Committee (the "Committee") and receive the Committee's approval of the Improvement project. The Owner's request shall include structural plans, specifications and plot plans satisfying the minimum requirements of section 2.7. Unless the Committee's approval of the proposal is first obtained, no work on the Improvement shall be undertaken. The Committee shall use the criteria described in section 2.6 in reaching a decision to approve or disapprove the proposed Improvement or to approve the project subject to specified conditions.

(b) Modifications to Approved Plans Must Also Be Approved. Once a work of Improvement has been duly approved by the Committee, no material modifications shall be made in the approved plans and specifications therefore and no subsequent alteration, relocation, addition or modification (either during the course of construction or following completion of construction) shall be made to the work of Improvement, as approved, without a separate submittal to, and review and approval by, the Committee. If the proposed modification will have, or is likely to have, a material affect on other aspects or components of the project, the Committee, in its discretion, may order the Owner, his or her contractors and agents to cease working not only on the modified component of the Improvement (pending the Committee's review and approval), but also on any other affected component.

(c) Exemption of Ordinary Repair, Maintenance or Replacement Projects, Unless Nonconforming Use Is Established. Nothing contained in subparagraph (b) shall be construed to require an Owner to obtain Committee approval for ordinary repair and maintenance projects or projects which are limited to replacing components of a previously approved Improvement with like-kind materials unless the like-kind materials are specifically disallowed by the then current Declaration or by the Design Guidelines. Repainting projects, even with the same color, shall require approval hereunder in order to confirm that approved colors are, in fact, being used.

(d) Effect of Noncompliance with Approval Requirements. In the event that it comes to the knowledge and attention of the Committee that a work of Improvement, or any modification thereof, is proceeding without proper approval, the Committee shall be entitled to exercise the enforcement remedies specified in section 2.13, below, including, without limitation, ordering an immediate cessation and abatement of all aspects of the work of Improvement (i.e., an on-site red tag of the project) until such time as proper Committee review and approval are obtained. Owners or residents who proceed with Improvement projects without receipt of proper Committee approvals do so at their peril and risk enforcement action hereunder.

Section 2.2. Membership of the Architectural Control Committee. The Architectural Control Committee (the "Committee") shall be initially appointed by Declarant and shall be composed of:

Steve Johnson
Richard Pope
Roger Lees

Until such time as Declarant has sold ninety percent (90%) of the Lots to individual Owners, Declarant shall have the authority to appoint the Committee, after which time the District shall undertake the responsibilities of the Committee and the Architectural Control Committee of the District shall be the Committee for all purposes as provided in this Declaration.

A majority of the Committee may designate a representative to act for it. In the event of death or resignation of any member of the Committee, the remaining member or members shall have full authority to designate a successor or successors. Neither the member of the Committee nor its designated representative shall be entitled to any compensation for services performed pursuant hereto. In the event of the failure of the remaining member or members of the Committee to appoint a successor or successors within ninety (90) days after the death or resignation of a member or members, the then record owners of a majority of the acreage benefited by this Declaration shall have the power, through a duly recorded written instrument, to appoint such successor or successors.

Section 2.3. Duties of Committee. It shall be the duty of the Committee to consider and act upon the proposal and plans for Improvements submitted to it pursuant to this Declaration, to adopt Design Guidelines and to carry out all other duties imposed upon it by this Declaration.

Section 2.4. Non-liability of Committee. Neither Declarant, nor the Committee, nor any members thereof, nor any successors or assigns thereto or thereof, shall be liable in damages to anyone submitting any plans or request to them for approval, or to any owner of land affected by this Declaration by reason of mistake in judgment, negligence or nonfeasance arising out of or in connection with the approval or disapproval or failure to approve any such plans or request. Every person who submits any plans or request to the Committee for approval agrees, by submission thereof, and every Owner of any said property agrees by acquiring title thereto, that he will not bring any such action or suit to recover any such damages.

Section 2.5. Design Guidelines. The Committee may, from time to time adopt, amend and repeal rules and regulations to be known as "Design Guidelines." The Design Guidelines shall interpret and implement the provisions hereof by setting forth: (a) any standards and procedures for the processing of submittals to the Committee; (b) guidelines for architectural design, the placement of any work of Improvement on a Lot, or color schemes, exterior finishes and materials and similar features which are

recommended or required for use in connection with particular Improvement projects within the Property; and (c) the minimum requirements regarding the content of plans and specifications which must be submitted with respect to any request for design review and approval. Notwithstanding the foregoing, no Design Guideline shall be in derogation of the minimum standards required by this Declaration. In the event of any conflict between the Design Guidelines and this Declaration, the provisions of the Declaration shall prevail.

Section 2.6. Basis for Approval of Improvements. When a proposed Improvement is submitted to the Committee for review, the Committee shall grant the requested approval only if the Committee, in its sole discretion, finds that all of the following provisions have been satisfied:

(a) The Owner's plans and specifications: (i) substantially conform to this Declaration and to the Design Guidelines in effect at the time such plans are submitted to the Committee (ii) will result in the construction of an Improvement that is in harmony with the external design and/or appearance of other structures and/or landscaping within the Property; and (iii) will not interfere with the reasonable enjoyment of any other Owner of his or her property.

(b) The proposed Improvement(s), if approved, will otherwise be consistent with the architectural and aesthetic standards prevailing within the Subdivision and the purposes of this Declaration.

The Committee shall be entitled to determine that a proposed Improvement or component thereof is unacceptable when proposed on a particular Lot, even if the same or a similar Improvement/component has previously been approved for use at another location within the Subdivision if factors such as drainage, topography or visibility from roads, common areas or other Lots, prior adverse experience with the product or components used in construction of the Improvement, design of the Improvement or its use at other locations within Cameron Park may justify a decision to deny approval to erect the Improvement, or use a particular component thereof on the Lot involved in the Owner's submittal. It is expressly agreed that the Committee shall be entitled to make subjective judgments and to consider the aesthetics of a proposed Improvement project, so long as the Committee acts reasonably and in good faith. The Committee need not consider view obstructions in reviewing and approving plans.

Section 2.7. Procedures for Obtaining Committee Approval of Plans and Specifications.

(a) Preliminary Submission. Owners and prospective owners may submit partial plans to the Committee for guidance and/or to learn if a complete application is likely to be approved. Preliminary submissions are not action items, and advice and comment from the Committee cannot be construed as an approval or the assurance that an application for final approval will, in fact, receive an approval.

(b) Application for Final Approval. All Owners who desire to undertake any work of Improvement must apply to the Committee and receive its prior approval. The application shall be in writing and shall contain all information that is necessary to reasonably evaluate the nature, design, location and extent of the proposed Improvement, including, at a minimum, three complete sets of plans and specifications for the Improvement project satisfying the requirements set forth in subparagraph (c) below and such additional information as the Committee may reasonably request, either by Design Guideline or while the project is under review.

(c) Content of Plans and Specifications. In order to be deemed complete, the plans and specifications for the proposed Improvement shall include the following, unless modified or waived as to specific categories of Improvements or Improvement projects by the Design Guidelines:

(i) At least three (3) copies of a professionally prepared plot plan, which indicates: (A) the dimensions of the Lot; (B) Lot topographic contour lines; (C) the location of all existing and proposed Improvements; (D) setbacks from Lot lines of all existing and proposed Improvements; (E) the existing drainage of the Lot and the proposed drainage plan for the Lot, as improved; (F) the location, diameter and driplines of all trees, indicating those which are proposed to be removed for such construction; and (G) the location of all proposed utility installations.

(ii) A professionally prepared (prepared by an architect or licensed building designer) set of plans showing all: (A) elevations (including foundation); (B) floor plans; (C) location of all heating and/or cooling equipment; (D) decking; (E) screening devices; (F) retaining walls; and (G) all proposed landscaping, including size and type of materials to be used.

(iii) Description of exterior materials (if not included with above plans), and samples of roofing materials and exterior colors, as requested by the Committee or required of similar projects by the Design Guidelines.

(iv) The Owner's proposed construction schedule.

If the contemplated Improvement project is of a nature that does not merit extensive plans and specifications, the Committee may (but shall not be obligated to) waive or modify any of the above plan and specification requirements upon receipt of a written request from the Owner-Applicant to do so.

(d) Inspection Fee. The Design Guidelines may require that the submission of plans and specifications be accompanied by a reasonable fee in order to defray the costs involved in performing the Committee's duties hereunder. A deposit may be required to ensure that adequate funds are available to the Committee to defray its costs.

Section 2.8. Time Limits for Approval or Rejection. Within 30 days after submission of plans and specifications satisfying the requirements of section 2.7, above, the Committee shall return two sets of such plans to the Owner-Applicant, with either written notice of approval or disapproval. If the Committee recommends that the plans and specifications be modified, the Applicant may implement such changes to the plans and resubmit plans incorporating such changes for approval to the Committee, which shall not unreasonably withhold its approval. Upon a complete resubmission, the Committee shall have an additional period of 30 days in which to act upon the modified proposal. If no written notice of approval or disapproval is received by the Owner-applicant within the time periods provided above for Committee action, the plans shall be deemed to have been approved as submitted.

In approving a request for construction or installation of an Improvement, the Committee may condition approval upon the adoption of modifications in the plans and specifications or observance of restrictions as to location, noise abatement, color or materials modifications, or similar mitigating conditions.

Section 2.9. Proceeding with Work. Upon receipt of approval of an Improvement project from the Committee, the Owner shall, as soon as practicable, satisfy all conditions thereof and diligently proceed with the commencement of construction and excavation, if required, pursuant to the approval. In all cases, work on an Improvement project shall commence within one (1) year from the date of such approval. If the Owner fails to comply with this paragraph, any approval given pursuant to this article, shall be deemed revoked unless the Committee, upon written request of the Owner prior to the expiration of the initial one year period, extends the time for commencement or completion of the Project. No such extension shall be granted except upon a finding by the Committee that there has been no change in the circumstances upon which the original approval was granted and that the Owner has a bona fide intention and ability to complete the Improvement project within the time specified in the extension request.

Section 2.10. Requirements for Completion of Improvement Projects. Unless the Owner has been granted an extension of time to complete the project by the Architectural Control Committee, construction, reconstruction, refinishing or alteration of any such Improvement must be complete within one year after construction has commenced, except and for so long as such completion is rendered impossible or would result in great hardship to the Owner because of strikes, fires, national emergencies, natural calamities or other supervening forces beyond the control of the Owner or his or her agents. In the case of Residence Improvements, the requirements of this section shall be deemed to have been met if, within the one-year construction period, the Owner has completed construction of the building's foundation and all exterior surfaces (including the roof, exterior walls (including painting), windows and doors).

Section 2.11. Inspection of Work by Committee. Inspection of the work relating to any approved Improvement, and correction of defects therein, shall proceed as follows:

(a) During the course of construction, representatives of the Committee shall have the right to inspect the job site to confirm that the Improvement project is proceeding in accordance with approved plans and specifications.

(b) Upon the completion of any work of Improvement for which Committee approval is required under this article, the Owner shall give the Committee a written notice of completion.

(c) Within 30 days following receipt of the Owner's notice of completion, the Committee, or its duly authorized representative, may inspect the Improvement to determine whether it was constructed, reconstructed, altered or refinished in substantial compliance with the approved plans. If the Committee finds that the Improvement was not erected, constructed or installed in substantial compliance with the Owner's approved plans, then within the 30-day inspection period the Committee shall give the Owner a written notice of noncompliance detailing those aspects of the Improvement project that must be modified, completed or corrected. Upon completion of remedial work identified in the Committee's notice, the Owner shall again give notice of completion to the Committee and the inspection cycle specified in this subparagraph (c) shall be repeated. If the violation or nonconforming work is not corrected, the Committee shall have the enforcement rights and remedies set forth in section 2.13, below.

(d) If for any reason the Committee fails to notify the Owner of any noncompliance within thirty (30) days after receipt of the Owner's notice of completion, the Improvement shall be deemed to have been constructed in accordance with the approved plans and specifications for the project, unless it can be demonstrated that the Owner knew of the noncompliance and intentionally misled the Committee with respect thereto.

Section 2.12. Landscaping. As specified in section 1.10 of this Declaration, landscaping is a work of Improvement requiring Committee approval hereunder. Landscaping shall include lawns, shrubs, trees, flowers and any landscape structures. The use of artificial materials such as plastic plants, or flowers, astro turf, or gravel gardens will be disapproved by the Committee. All approved landscaping must be completed within six (6) months after a certificate of occupancy has been filed with the County for the Owner's Residence and, in the event that the landscaping has not been completed by the occupancy date, the Committee may, in its discretion, require the Owner to post a bond in an amount not to exceed the estimated cost of the landscaping work, or a cash deposit in lieu thereof, to ensure the Applicant's timely completion of the landscaping work.

Section 2.13. Enforcement of Design Compliance Matters.

(a) Enforcement by Committee. In addition to other enforcement remedies set forth in this Declaration, the Committee, or the Owner of any Lot within the Property, may enforce such architectural and design matters by initiating an appropriate enforcement action in accordance with Article VI, section 6.6, below.

(b) Architectural Control Committee's Authority to Order Cessation of Work. The Architectural Control Committee shall have the authority to order an immediate cessation and abatement of any construction, alteration or other matter for which approval is required, to the extent that it has not been approved by the Committee or if work in progress does not conform to the plans and specifications submitted to and approved by the Committee. To order an abatement or cessation of work, the Committee or its duly authorized representative shall be entitled to enter upon the property where the Improvement project is located and post a stop work order, "red tag" or similar prominent notice of abatement at the job site. Upon such posting the Owner and his or her contractor shall immediately cease all work at the job site until receipt of written notice from the Committee that the abatement order has been terminated.

(c) Enforcement/Attorneys Fees. The failure of any Owner to comply with any provision of this Declaration, or failure to comply with any stop work order given pursuant thereto, shall give rise to a cause of action in the Committee and any aggrieved Owner within the Property for the recovery of damages or for injunctive relief, or both. If any legal proceeding is initiated to enforce the provisions of this declaration, the prevailing party shall be entitled to collect costs and reasonable attorneys' fees.

(d) No Waiver. No work for which approval is required shall be deemed to be approved simply because it has been completed without a complaint, notice of violation, or commencement of a suit to enjoin such work. If any legal proceeding is initiated to enforce any of the provisions hereof, the prevailing party shall be entitled to recover reasonable attorneys' fees in addition to the costs of such proceeding.

Section 2.14. Estoppel Certificate. Within 30 days after written demand is delivered to the Committee by any Owner, and upon payment to the Committee of a reasonable fee (as established from time to time by the Committee), the Committee shall furnish the requesting Owner-Applicant with an estoppel certificate, executed by any two of the Committee's members, certifying (with respect to any Lot owned by the Applicant) that as of the date thereof, either: (a) all Improvements made and other work completed by the Owner comply with this Declaration and the Design Guidelines;

or (b) such Improvements or work do not so comply, in which event the certificate shall also identify the noncomplying Improvements or work and set forth with particularity the basis of such noncompliance. Any purchaser from the Owner, or from anyone deriving any interest in the Lot through the Owner, shall be entitled to rely on the Committee's estoppel certificate with respect to the matters therein set forth, such matters being conclusive as between the Committee, all Owners and any persons deriving any interest through them.

ARTICLE III Minimum Construction Standards

The following minimum construction standards must be observed with respect to any Improvement project undertaken within the Subdivision:

Section 3.1. Approval by Architectural Control Committee. No building, fence, wall landscaping or other Improvement shall be erected, altered or placed on any Lot until building plans, specifications and a plot plan showing the location of structures on the Lots have been submitted to the Architectural Control Committee for review and approval as described in Article II hereof.

Section 3.2. Single Family Residence. Each Lot shall be improved by construction of only one Residence designed for use by a single Family, provided however a second unit or "granny flat" may be allowed, and related garages and outbuildings as may be approved by the Architectural Control Committee. Residences shall be sited on the Lot in a manner most responsive to the existing physical features of the terrain of the Lot and to have the minimal impact on natural hydrologic patterns, rock outcroppings, vegetation and the like.

Section 3.3. Minimum Square Footage Requirements. The ground floor area of the main Residence structure, exclusive of open or roofed porches, decks, terraces, carports, garages and other outbuildings, shall be not less than twenty-two hundred (2200) square feet, in the case of a one-story structure, nor less than twenty-eight hundred (2800) square feet in the case of one and one-half or two-story structures.

Section 3.4. Garage Requirements. Each Residence shall have a private garage, either as part of the Residence building or as a separate structure, for not less than three (3) standard vehicles.

Section 3.5. No Temporary Buildings. No trailers, tents, mobile homes or temporary buildings of any kind shall be erected or maintained on any Lot. All Residences must be constructed on site, permanently affixed to the land and must have, in the estimation of the Architectural Control Committee, a useful life of not less than thirty (30) years.

Section 3.6. Enclosure of Service Areas. No storage or service area shall be visible from any Street on which the Lot fronts, and no clothing or household fabrics shall be hung outdoors on any Lots unless the same are enclosed by a fence or other enclosure which is at least six (6) inches higher than the hanging articles.

Section 3.7. Driveways. All driveways shall be surfaced with concrete, stamped concrete, exposed aggregate, brick or cement brick with no coloring except the natural color of said materials, unless approved by Committee. Driveways shall be designed in such a way as to be minimally visible and compatible with the existing contours of the hillside. After original construction, the widening of driveways or the addition of secondary driveways shall be discouraged.

Section 3.8. Solar Heating and Air Conditioning Systems. The installation of solar heating and air conditioning systems shall be subject to prior approval of the Architectural Control Committee. To the extent permitted by Civil Code §714, the Committee shall be entitled to adopt policies which restrict the placement of solar panels and require painting or other treatment of pipes and fixtures for aesthetic purposes.

Section 3.9. Siding Materials. There shall be no prescribed siding material except that no vertical side of any structure shall have a finished surface consisting of composition board (e.g., T-111) or other siding that is unsuitable or inferior in the opinion of the Committee. On hillside Lots, the need for skirting shall be kept to a minimum by stepping the foundation and using appropriate hillside designs.

Section 3.10. Height Limitations. With respect to all Lots, the following restrictions shall apply:

(a) Structures shall be constructed as close to existing grades as possible, including excavation for the high portions of the house. On those Lots which have not been graded with house pads, structures shall, whenever possible, be constructed to the natural grade utilizing foundation designs which conform to topography.

(b) No structure exceeding a height of 36 feet shall be approved, unless: (i) in the opinion of the Committee the slope of the Lot, rock outcroppings, existing trees or other natural factors make adherence with this height restriction unreasonably burdensome to the Lot Owner, and (ii) other required governmental variances and/or approvals are obtained.

(c) The Design Guidelines may specify the manner in which the height limitations imposed by this section are to be measured.

Section 3.11. Removal and Planting of Trees. The following provisions are intended to minimize tree loss and provide for the planting of new trees as compensation for oak tree nine inches (9") dbh or larger which are impacted by

development of the Property. The following provisions shall not be applicable to Declarant as these provisions are intended to be applicable to subsequent development of the Property and Lots, after the initial construction of the Lots by Declarant. Declarant shall be subject to the regulation of the County, irrespective of this Declaration during the course of constructing the Project.

(a) Removal of Oak Trees. No oak tree having a diameter greater than nine (9) inches (measured four and one half feet above grade) outside of the approved building footprint within a Lot shall be removed without the Committee's prior written consent. The Committee shall provide its consent for the removal of a tree if either one of the following conditions exist: (i) the failure to remove the particular tree would prevent the construction of a fence which would otherwise be permitted in accordance with this Declaration; or (ii) the particular tree has deteriorated to the point where it cannot survive or where its continued existence poses a substantial danger to humans, fences or structures. The danger or deteriorated state of a tree must be certified in writing by a licensed arborist prior to removal. For each tree removed from a Lot, which did not fit within criteria set forth above, the Owner shall be responsible for the planting, or payment for the planting, of a new tree, in accordance with a tree planting plan, within an open space or conservation area within the Property to be designated. For the purposes of this Section, a tree will be deemed to be "removed" if (1) it has had live branches or roots cut or otherwise removed; or (2) has had solid soils within the dripline disturbed by grading, trenching, or tunneling. All oak trees on a Lot which are to remain shall be fenced (utilizing ski fencing, chain link or other suitable fencing) to provide a physical barrier to alert construction workers and property owners of the protection. Such fencing shall be constructed one foot (1') outside the dripline of any single tree or grove which is in close proximity to, and potentially affected by construction activity. A sign shall be posted describing the tree as protected.

(b) Care and Maintenance of Native Oaks. The following guidance is provided to aid Owners in their efforts to preserve the inherent natural beauty of the area. Young native oak trees are tolerant of environmental changes and will usually adopt to landscaping practices. But as oaks mature, environmental changes can weaken or kill them. For example, summer watering, for gardens or lawns, under a mature oak that grew in dry summer conditions typical of this area, can kill the tree. Ideally there should be no disturbance in the root zone of a mature oak. This means no grading, trenching, covering the ground with concrete or asphalt, or landscaping with plants that require summer watering should be done beneath the canopy of the tree. If these modifications are unavoidable, experts recommend keeping the root zone area in a natural condition as possible and keeping ground disturbance as far as possible from the tree trunk (minimum of 6 feet).

Section 3.12. Fences. No fence behind the front setback line of the Lot shall exceed six (6) feet in height (including the height of any retaining wall below the fence) and no fence in front of the setback lines shall exceed three (3) feet in height. Chain link or other metal wire fencing is prohibited on all Lots. No fences shall be constructed

within an area designated as an open space or conservation easement area. Any Lot backing up to a conservation or open space area shall only utilize an open wrought iron fence design and no other fence shall be constructed in front of such wrought iron fence, which shall have the effect of obstructing the view into the open space/conservation easement area.

All screening and fencing must be approved by the Architectural Control Committee, must be designed to conform to the design of the proposed or existing Residence and shall be constructed of wood, rock, masonry, wrought iron or a combination thereof. Wrought iron and wood fences shall conform to the minimum standards as depicted in Exhibits C-1 and C-2. attached hereto and incorporated by this reference. All screening and fencing must be maintained in a good sound structural manner, and painted or stained periodically so as not to have a shabby or unkempt appearance. Screening and fencing must be so designed as to face its most attractive side toward the street or toward any neighboring vacant Lots, and shall be screened with trees and shrubs where possible.

Section 3.13. Setback Lines.

(a) Lots Other Than Corner Lots. No portion of any structure on any Lot other than a corner Lot, shall be: (i) nearer to the front Lot line than twenty (20) feet or five (5) feet beyond the top of the Lot's cut bank or toe of fill slope, whichever is greater; or (ii) nearer than five (5) feet to the side Lot lines, or fifteen (15) feet to the rear Lot line. Notwithstanding the foregoing, a detached garage may be placed closer to the front Lot line on exceedingly steep Lots if approved by both the Committee and the County of El Dorado.

(b) Corner Lot Setback Requirements. No portion of any structure on any corner Lot shall be nearer to either Street Lot line than twenty (20) feet or five (5) feet beyond the top of the Lot's cut bank or toe of fill slope, whichever is greater. No portion of the rear of the structure on any corner Lot shall be nearer than fifteen (15) feet to the rear Lot line (being the back Lot line which more nearly parallels the rear of the structure) or nearer than five (5) feet to the non-Street side Lot line.

(c) Compliance with County Setback Requirements. Nothing herein shall be construed to permit noncompliance with any more restrictive setback requirements imposed by any Subdivision Map, the County of El Dorado or other applicable law.

(d) Setbacks for Other Improvements. For the purpose of the foregoing setback restrictions, swimming pools, balconies, open porches, and fences shall not be placed within the front property setbacks of any Lots.

Section 3.14. Subdivision of Existing Lots. No Lot shown on the Subdivision Map shall be further subdivided.

Section 3.15. Cross Visibility of Vehicular Traffic. No trees, shrubbery or fences shall be planted or permitted to remain on any Lot between the street and the setback line if the foliage or fence line impairs the line of vision of vehicular traffic approaching and/or using said street.

Section 3.16. Slope Control. The existing slope or configuration of any Lot shall not be altered, by any means, including, but not limited to, structures or retaining walls or plantings, without the prior approval of the Committee. In no event shall a slope on a Lot be altered so that the natural flow of surface waters is retarded or changed or otherwise fully or partially obstructed. No person shall alter drainage waters from a Lot so as to actually or potentially injure any other Lot, including, without limitation, erosion or sliding problems. Plans and specifications submitted by an Owner to the Committee in connection with the construction of a Residence or other major structural Improvement shall include a drainage plan in sufficient detail to permit the Committee to assess the impacts, if any, of the Improvement on natural drainage courses.

The following guidelines shall apply in the review of Improvement Plans submitted to the Committee for improvement of a Lot:

(a) On Lots with 10% to 15% slopes grading cuts or fills may occur to the Lot boundary in order to provide a relatively level site or pad for construction of a Residence and creation of usable yard areas. A landscaping plan shall be required for cut and fill slopes.

(b) On Lots with 15% to 30% slopes dwellings constructed to natural grade utilizing foundation designs that conform to topography is encouraged. All grading activities will incorporate the erosion control measures as provided in the El Dorado County Grading Ordinance and areas subjected to grading shall not slope in excess of 2:1 unless otherwise approved by the County.

(c) Where grading is required, contouring techniques shall be employed to avoid angular flat slopes and distinct edges. The top toe of slopes and the slope itself shall be rounded and feathered in a natural-appearing manner.

(d) Use of retaining structures (retaining walls, crib walls, etc) are encouraged in instances where such design will reduce grading quantities and visual impact. All such structures shall be landscaped.

Section 3.17. Telephone and Electrical Service Lines. No overhead or electrical service lines shall be constructed on or across any Lot. All portions of telephone and electrical service lines shall be located entirely within the enclosed portion of a Residence, and with the exception of service pedestals, all service lines shall be buried beneath the surface of the ground.

Section 3.18. Licensed Contractor. Residential structures shall be constructed by a contractor licensed under the laws of the State of California.

Section 3.19. Utility Lines. All utility lines running from overhead utility poles to Improvements constructed on any Lot shall be placed underground.

Section 3.20. Solar Heating Systems. Subject to limitations imposed by California law, the Committee shall be entitled to adopt rules and reasonable regulations regarding the installation of solar heating systems. These rules may include limitations on placement and design of such systems to the extent necessary to avoid an unsightly appearance from neighboring Lots.

Section 3.21. Colors and Exterior Finishes. No reflective finishes (other than glass) shall be used on exterior surfaces (other than surfaces of hardware fixtures), including but without limitation, the exterior surfaces of any of the following: roofs, all projections above roofs, retaining walls, doors, trim, fences, pipes, equipment, mailboxes and newspaper tubes. No exterior finishes shall be used, or modified, without approval of the Committee. Color samples shall be submitted to the Committee as part of the Owner-Applicant's plans and specifications. Generally, colors shall be restricted to natural earth tone and muted colors, unless otherwise approved by the Committee.

Section 3.22. Prohibition on A-Frame and Geodesic Dome Structures. No Residence shall be constructed which utilized an "A-Frame" or "geodesic dome" design.

Section 3.23. Roofing Materials. No flat roofs or rock roofs shall be permitted. Roof forms should be stepped or pitched to complement the contoured form of the hills, with the most dominate roof form over the most significant part of the building. The roofing materials shall consist of one of the following: clay fired flat tile, concrete flat tile products or slate. Other types of roofing materials such as textured or articulate asphalt shingles may be submitted for review and approval by the Committee, provided however flat asphalt shingles and rolled roofing are prohibited. Any approval by the Committee hereunder shall in no way imply any roof guarantee by the Committee. Every Residence constructed on any of the Lots shall have a minimum roof overhang acceptable to the Committee. All visible roofing on any Residence shall be uniform in design and material. All sheds or outbuildings shall be roofed and painted to match the Residence.

Section 3.24. Antennae and Other Exterior Fixtures. No exterior flag pole, radio antenna, C.B. antenna, television antenna, cables, poles, or other antenna of any type shall be erected or maintained on any Lot without the prior written approval of the Committee. No satellite dishes or similar receiving or broadcasting devices with a diameter in excess of twenty-four (24) inches shall be maintained on any Lot unless the same is placed on the Lot at a location which is not visible from ground level of any other Lot or any Street. If the topography of the Lot does not permit a satellite dish to

be completely obscured from view, the Owner shall make a reasonable effort to screen the dish and the screening plan shall be submitted to the Committee for approval. Furthermore, no activity shall be conducted on any Lot or from any Residence which causes an unreasonable broadcast interference with television or radio reception from any neighboring Lot or Residence.

Section 3.25. Exterior Fluorescent and Security Lights. Fluorescent, mercury vapor, sodium or amber vapor lights, or standard outdoor lights of the type used for security shall be prohibited. Wherever possible downward oriented cut-off type outdoor fixtures and shielding shall be used in order to prevent light spillage and glare impacts beyond the target of illumination. Further, energy efficient light fixtures using photocell operation shall be utilized.

Section 3.26. Water Systems and Septic Systems. No individual water supply system or on-site septic waste disposal system shall be permitted on any Lot.

Section 3.27. Landscaping. As noted in Article II, section 2.12, front and rear landscaping and other improvements are a matter which is subject to review and regulation by the Committee. A landscape plan is required in conjunction with the construction of any Residence. Such landscape plans shall provide for the use of low water-using plants and irrigation systems that utilize the best available technology for water conservation. Further, such landscape plans shall incorporate to the greatest extent practical existing indigenous plants, trees, and shrubs on the Lots and to provide for the planting of such plant materials. With respect to those Residences constructed on hillside Lots, landscaping shall be clustered around the immediate vicinity of the buildings, not in rows along property lines or driveway, in order to soften the appearance of the Residence on the hillside. Front landscaping shall be installed within ninety (90) days of occupancy.

ARTICLE IV Easements and Encroachments

4.1 Maintenance of Drainageways and Easements. Within those Lots which contain drainage ways or "v-ditches" constructed for the purpose of providing surface drainage, the Owner of such lots shall not restrict or take any action which would prevent the free passage of drainage flows through such drainageway or ditch. Further, the Lot Owner shall be responsible for the general maintenance of such drainageway, such as removing debris which may accumulate with the drainageway or v-ditch. Any Owner who either causes or allows the restriction of such drainageways shall be responsible for any damage or costs incurred as a result. No Owner shall significantly alter the drainage ways or v-ditches in a manner which diverts water flowing onto the Owner's Lot or off of such Lot, such that the amount or direction of water flows will burden neighboring Lots.

4.2. Drainageways and Easements Not within Lots. Lots J, K, L, M, N, O, P and Q as shown on the recorded Subdivision Map (the "Preserved Lots"), have been or will be dedicated to the District for maintenance. No Owner shall construct any improvement, nor deposit any materials, fill or debris of any nature on the Preserved Lots. Entrance upon or access through the Preserved Lots shall not occur without the express written authority of the District and upon such rules, regulations and conditions as the District may impose in its sole and absolute discretion.

ARTICLE V Property Use Restrictions

All Lots shall be held, used, and enjoyed subject to the following limitations and restrictions, subject only to any modifications of this article contained in any Supplemental Declaration:

Section 5.1. Use of Lots and Residences.

(a) Single Family Residential Use Restriction. All Lots within the Subdivision shall be used solely for the construction of Residences the occupancy of which shall be restricted to a single Family as defined in article I, section 1.8 hereof. In no event shall a Residence be occupied by more individuals than permitted by applicable law, zoning or other local governmental regulation. This single Family residential use restriction is not intended to preclude construction of a "guest house" or "granny flat" if such quarters are permitted by the Subdivision Map and/or local ordinances.

(b) Compliance with Minimum Construction Standards. All Residence and related structures erected on any Lot shall conform to the minimum construction standards set forth in article III hereof.

(c) Conveyance of Lots. Each Lot within the Subdivision shall be conveyed as a separately designated and legally described fee simple estate, subject to this Declaration.

(d) Lot Maintenance. All Lots and the Residences and other Improvements erected or placed on a Lot (including, without limitation, landscaping) shall at times be maintained in such manner as to prevent their becoming unsightly. The vegetation and landscaping on any Lot shall be planted or maintained by the Owner or resident in such a manner as to reduce the risk of fire and prevent or retard shifting or erosion of soils. Each Owner shall also be responsible for the maintenance and repair of any Residence, garage or other structure which may be constructed or installed upon his or her Lot. Such maintenance and repair shall be of high quality. Without limiting the generality of the forgoing, each Owner's repair and maintenance obligations shall extend to and include painting, repairing, replacing and caring for roofs, fences, exterior building surfaces, exterior glass surfaces and exterior doors. No weeds, rubbish, debris, objects

or materials of any kind shall be placed or permitted to accumulate on any Lot so as to be or become unsightly, offensive or detrimental to any neighboring properties or residents.

(e) No Camping or Temporary Structures. No camping, whether temporary or permanent, and no temporary structures of any kind shall be permitted on any Lot, including, without limitation, trailers, mobile homes, tents, motor home, truck campers or shacks, provided however, that this restriction shall not preclude the construction of a storage shed or similar outbuilding approved by the Committee.

(f) Architectural Control Approvals. No Improvement, as defined in section 1.10, above, shall be constructed, erected or placed on any Lot without the prior approval of the Committee in accordance with Article II, hereof.

(g) Prohibition of Mining and Drilling Activities. No drilling, refining, quarrying or mining operations of any kind shall be permitted on any Lot.

(h) Prohibition of Entry or Improvements Within Conservation Easements. Lot Numbers Unit 1-Lots 7 and 8, Unit 2-Lots 6, 9, 11, 12, 19-26, 28, 29, 31, 32, 59-61 and Unit 3-Lot 11, contain restrictions (a "Conservation Easement") due to the presence of special natural features including the presence of Elderberry bushes, or protected wetland, the removal or disturbance of which is prohibited by federal or State law. No Owner shall enter into nor shall cause to be constructed any Improvement, of any nature, within those areas restricted by a Conservation Easement or within any area described in Section 4.2, above, and maintained by a public entity.

Section 5.2. Rental or Lease of Residences. Lots within the Subdivision were designed, marketed and intended to be an owner-occupied, single family residential Lots. In order to preserve that single Family residential atmosphere, no Owner shall rent, lease or otherwise delegate the use and occupation of the Owner's Residence, except in compliance with all of the following terms and conditions:

(a) Compliance with Declaration. Any rental or lease of a Residence shall be subject to this Declaration and each tenant/lessee must comply with the Declaration to the same extent as the Owner-lessor.

(b) Lease Must Pertain to Entire Residence; Exceptions. Owners may not rent or lease rooms (less than all of a Residence) unless the lessee is a household servant, a domestic employee of the Owner-lessor, or an adult member of the Owner's immediate Family.

(c) Written Lease Required. Any rental or lease shall be by a written agreement which shall provide that the tenancy is subject to the terms of this Declaration and that any failure of the tenant to comply with the terms of this Declaration shall constitute a default under the lease or rental agreement.

(d) Remedies for Violations of Declaration by Tenants/Lessees. If a tenant or lessee violates any provision of this Declaration, the Committee or any owner of a lot may initiate enforcement action against the tenant/lessee or the Owner-lessor; provided, however, that except as provided in the last sentence of this subparagraph (d), the Committee shall have no right to initiate disciplinary action against an Owner-lessor (or the Owner's lessee or tenant) on account of the misconduct of the Owner's lessee or tenant unless and until the following conditions have been satisfied: (i) the Owner has received written notice from the Committee detailing the nature of the lessee's/tenant's alleged infraction or misconduct and advising the Owner of his or her right to a hearing on the matter in the event the Owner believes that remedial or disciplinary action is unwarranted or unnecessary; (ii) the Owner has been given a reasonable opportunity to take corrective action on a voluntary basis or to appear at a hearing, if one is requested by the Owner; and (iii) the Owner has failed to prevent or correct the tenant's objectionable actions or misconduct. Any hearing requested hereunder shall be conducted in accordance with Article VI, hereof. The conditions enumerated in this subparagraph (d) shall not apply to any infractions justifying summary enforcement action pursuant to section 6.6(c)(ii), below.

Section 5.3. Window Coverings. No window in any Residence or garage shall be covered with newspaper, aluminum foil, cardboard, paint, or any similar material or substance whether temporarily or permanently, provided, however, that for a period not to exceed sixty (60) days following the close of escrow, the Owner shall be entitled to cover windows with pressed clean white sheets pending installation of permanent draperies, shutters or similar decorator items.

Section 5.4. Signs. No sign, poster, billboard, advertising device, or other display of any kind shall be displayed to the public view on any portion of the Subdivision or on any street included within the Subdivision without the prior written consent of the Committee, except: (a) one (1) sign for each Residence of reasonable dimensions advertising a Lot or Residence for sale or rent; and (b) political signs (so long as the same are of a reasonable dimension and are promptly removed after the election to which the sign pertains). All signs, and the conditions promulgated for the regulation thereof, shall conform to the requirements of all applicable governmental ordinances.

Section 5.5. Nuisances. No noxious or offensive activities shall be carried on within the Subdivision. No horns, whistles, bells or other sound devices, except standard automobile horns and security devices used exclusively to protect the security of a Residence and its contents, shall be placed or used within the Subdivision. Noisy or smoky vehicles, large power equipment and tools, off-road motor vehicles, antennas or other broadcast equipment which may unreasonably interfere with television or radio reception of any Owner within the Subdivision, and other things which create or

emit loud noises or noxious odors, shall not be used or placed on any portion of the Subdivision, or exposed to the view of other Owners. Each Owner shall comply with all of the requirements of the local and state health authorities and with all other governmental authorities with respect to the occupancy and use of a Residence.

Section 5.6. Responsibility for Children and Family Members. Each Owner shall be accountable to the other Owners for the conduct and behavior of children and other family members or persons residing in or visiting his or her Lot. Any damage to the property of another Owner caused by such children or other Family members shall be repaired at the sole expense of the Owner of the Lot where such children or other Family members or persons are residing or visiting.

Section 5.7. Animal Restrictions. The following restrictions shall apply to the maintenance of pets and other animals within the Subdivision:

(a) Only a reasonable number of common household pets may be kept on each Lot so long as the same are not kept, bred or maintained for commercial purposes. No other animals, livestock or poultry of any kind shall be kept, bred or raised on any Lot.

(b) Dogs belonging to Owners, occupants, or their licensees, tenants, or invitees must be either kept within an enclosure or on a leash being held by a person who is capable of controlling the animal.

(c) Each Owner shall clean up or remove any excrement or other unsanitary conditions caused by such Owner's animals on any neighboring private property or park area.

Section 5.8. Vehicles. The following restrictions shall apply to the parking and/or use of vehicles within the Subdivision:

(a) Except for parking completely within a closed garage, no Owner shall park, store, or keep anywhere within the Subdivision, including, without limitation, upon any Street, any commercial vehicle as defined by Department of Motor Vehicle license requirements, or any vehicle with commercial signage on three or more sides, dump truck, cement mixer truck, oil or gas truck, delivery truck, or any truck with a load capacity which exceeds three-quarter (3/4) tons.

(b) No recreational vehicle (camper unit, house-car, motor home), bus, trailer, trailer coach, camper-trailer, boat, aircraft, mobile home, or inoperable vehicle shall be parked within the Subdivision, unless such vehicle is parked completely within a garage or is completely obscured from view of any Lot and Streets (when viewed from the grade of the Lot) by a fence or other appropriate screening device approved by the Committee which does not in and of itself constitute a nuisance. Notwithstanding the

foregoing, the vehicles and trailers enumerated in this subparagraph (b) may be parked in front of or in the driveway of, a Residence for purposes of loading and unloading for periods not to exceed twenty-four (24) hours in duration.

(c) With the exception of normal washing and polishing, no Owner shall conduct repairs or restorations of any motor vehicle, boat, trailer, or other vehicle upon any portion of his or her Lot, unless such activities are conducted within a closed garage or other portion of the Owner's Lot which is screened from view from other Lots or streets in the Subdivision.

(d) Garage doors shall remain closed, except when the door must be opened to permit the entry or exit of vehicles or to provide ventilation for persons physically present in the garage. Garages shall not be converted to other uses which will interfere with the garage's use for the parking of three vehicles.

(e) Vehicles owned, operated, or within the control of any Owner shall be parked in the garage of such Owner to the extent of the space available therein, and each Owner shall maintain his or her garage in a manner which permits the parking of at least two (2) full-sized automobiles. In no event shall any vehicle be parked on any portion of a Lot except a garage, a driveway or a concrete pad approved by the Architectural Control Committee in accordance with Article II, above. No more than two vehicles may be parked in a driveway or on a public street overnight.

(f) No trail bike, motorcycle, dirt bike or any other type or kind of off-road vehicles may be used for practice, recreation, or riding of any kind, on any portion of the developed or undeveloped portions of the Subdivision, except when lawfully permitted upon public Streets. Creating excessive noise, dust or disturbance with such vehicles is expressly forbidden.

(g) Notwithstanding the foregoing, these restrictions shall not be interpreted in such a manner as to permit any activity which would be contrary to any governmental ordinance or regulation.

Section 5.9. Business or Commercial Activities. No business or commercial activities of any kind shall be conducted in any Residence, garage or out building or in any portion of any Lot without the prior written approval of the Committee. However, the restrictions contained in this section shall not be construed in such a manner so as to prohibit any Owner from: (a) maintaining his or her personal library in his or her Residence; (b) keeping his or her personal business records or accounts therein; (c) handling his or her personal or professional telephone calls or correspondence therefrom; (d) leasing or renting his or her Residence in accordance with section 5.2 hereof; or (e) conducting any other activities on the Owner's Lot otherwise compatible with residential use and the provisions of this Declaration which are permitted under applicable zoning laws or regulations without the necessity of first obtaining a special use permit or specific governmental authorization, so long as such use does not: (1)

generate customer traffic which is incompatible with the residential atmosphere of the neighborhood; and (2) involve signage of any kind. The uses described in (a) through (e) above are expressly declared to be incidental to the principal residential use and not in violation of this section.

Section 5.10. Trash. No rubbish, trash, garbage, debris or other waste material shall be kept or permitted upon any Lot, except in sanitary containers located in appropriate areas screened and concealed from view, and no odor shall be permitted to arise therefrom so as to render any portion of the Subdivision unsanitary, unsightly, offensive, or detrimental to any other property in the vicinity thereof or to its occupants. Trash containers shall be exposed to the view of neighboring Lots or Streets only when set out on the curb of the street for a reasonable period of time (not to exceed twelve (12) hours before and twelve (12) hours after scheduled trash collection hours). Except during periods of construction activity, no lumber, metals or bulk materials, shall be kept, stored, or allowed to accumulate on any Lot, except within an enclosed structure or an area of the Lot which is appropriately screened from view.

Section 5.11. Burning. Exterior fires shall only be permitted on Lots in strict compliance with all applicable ordinances and governmental regulations. No Owner or resident shall permit any condition to exist on his or her Lot, including, without limitation, trash piles, or weeds, which create a fire hazard or is in violation of local fire regulations.

Section 5.12 Clotheslines. No clothing or household fabrics shall be hung, dried, or aired in such a way as to be visible from adjacent Streets or Lots, when viewed from the grade of the Lot where the clothesline or clothing is located.

Section 5.13. No Hazardous Activities. No activities shall be conducted on any Lot, and no Improvements shall be constructed on any Lot which are or might be unsafe or hazardous to any person or property. Without limiting the foregoing, Owners of vacant Lots shall be obligated to disc or otherwise maintain the Lot so as not to be unsightly or to create a fire hazard as to adjoining Lots.

Section 5.14. No Mining and Drilling. No oil drilling, oil, gas or mineral development operations, oil refining, geothermal exploration or development, quarrying or mining operations of any kind shall be permitted upon or in any Lot, nor shall oil wells, tanks, tunnels or mineral excavations or shafts be permitted upon the surface of any Lot or within five hundred (500) feet below the surface of any portion of the Subdivision. No derrick or other structure designed for use in boring for water, oil, geothermal heat or natural gas shall be erected, maintained or permitted on any Lot.

Section 5.15. Water and Sewer Systems. No individual water supply system or water softener system shall be permitted on any Lot unless such system is designed, located, constructed, and equipped in accordance with the requirements, standards, and

recommendations of any applicable water district and any applicable governmental health authority having jurisdiction, and any exterior components must be approved by the Committee.

Section 5.16. Drainage. There shall be no interference with or obstruction of the established surface drainage pattern(s) over any Lot within the Subdivision, unless an adequate alternative provision is made for proper drainage. It is the intent of this Section and this Declaration that no drainage shall be directed across adjacent Lots except as constructed in accordance with approved plans from the County. Any alteration of the established drainage pattern must at all times comply with all applicable local governmental ordinances. For the purpose hereof, "established" drainage is defined as the drainage which exists on a Lot prior to grading in connection with an Improvement project. Each Owner shall maintain, repair, and replace and keep free from debris or obstructions the drainage channels, systems, and devices, if any, located on his or her Lot, except those for which a public authority or utility is responsible.

Section 5.17. Variances. Upon application by any Owner, the Committee shall be authorized and empowered to grant reasonable variances from the property use restrictions set forth in this Declaration, if application of the restrictions will, in the sole discretion of the Committee, either cause an undue hardship to the Owner-applicant or fail to further or preserve the common plan and scheme of development contemplated by this Declaration.

Section 5.18. Enforcement of Property Use Restrictions. The objective of this Declaration is to promote and seek voluntary compliance by Owners and tenants with the environmental standards and property use restrictions contained herein. Accordingly, in the event that the Committee becomes aware of an architectural or property use infraction that does not necessitate immediate corrective action under section 6.6(c)(ii), below, the Owner or tenant responsible for the violation shall receive written notice thereof and shall be given a reasonable opportunity to comply voluntarily with the pertinent provision(s). Such notice shall describe the noncomplying condition, request that the Owner or tenant correct the condition within a reasonable time specified in the notice, and advise the Owner or tenant of his or her rights to a hearing on the matter.

ARTICLE VI Enforcement of Declaration

Section 6.1. Remedy at Law Inadequate. It is hereby expressly declared and agreed that the remedy at law to recover damages for the breach, default or violation of any of the covenants, conditions, restrictions, limitations, reservations, grants of easements, rights, rights-of-way, liens, charges or equitable servitudes contained in this

Declaration are inadequate and that the failure of any Owner, tenant, occupant or user of any Lot to comply with any provision may be enjoined by appropriate legal proceedings instituted by any Owner or the District.

Section 6.2. Nuisance. Without limiting the generality of the foregoing section 6.1, the result of every act or omission whereby any covenant contained in this Declaration is violated in whole or in part is hereby declared to be a nuisance, and every remedy against nuisances, either public or private, shall be applicable against every such act or omission.

Section 6.3. Costs and Attorneys' Fees. In any action brought because of any alleged breach or default of any Owner or other party hereto under this Declaration, the court may award to the prevailing party in such action such attorneys' fees and other costs as it may deem just and reasonable.

Section 6.4. Cumulative Remedies. The respective rights and remedies provided by this Declaration or by law shall be cumulative, and the exercise of any one or more of such rights or remedies shall not preclude or affect the exercise, at the same or at different times, of any other such rights or remedies for the same or any different default or breach or for the same or any different failure of any Owner or others to perform or observe any provision of this Declaration.

Section 6.5. Failure Not a Waiver. The failure of any Owner, the Committee, or its agents to enforce any of the covenants, conditions, restrictions, limitations, reservations, grants or easements, rights, rights-of-way, liens, charges or equitable servitudes contained in this Declaration shall not constitute a waiver of the right to enforce the same thereafter, nor shall such failure result in or impose any liability upon the Committee, or any of its agents.

Section 6.6. Rights and Remedies in Response to Violations.

(a) Rights Generally. In the event of a breach or violation of any of the equitable servitudes contained in this Declaration by an Owner, his or her family, or the Owner's guests, employees, invitees, licensees, or tenants, the Committee, for and on behalf of all other Owners, may enforce the obligations of each Owner to obey such covenants and/or restrictions through the use of such remedies as are deemed appropriate by the Board and available in law or in equity, including but not limited to the hiring of legal counsel, the imposition of monetary penalties, and the pursuit of legal action; provided, however, the Committee's right to undertake disciplinary action against an Owner or resident shall be subject to the conditions set forth in this section.

The decision of whether it is appropriate or necessary for the Committee to take enforcement or disciplinary action in any particular instance shall be within the sole discretion of the Committee. In addition to enforcement of this Declaration by the District, any Owner of a Lot shall have such rights of enforcement as exist by law.

(b) Definition of "Violation". A violation of any provision of this Declaration shall be defined as a single act or omission occurring on a single day.

(c) Limitations of Enforcement Rights.

(i) Hearings. Except as provided in subparagraph (ii), below, no penalty or formal legal action shall be initiated or imposed pursuant to this article unless the Owner or resident alleged to be in violation is given at least fifteen (15) days prior notice of the violation and is given an opportunity to be heard before the Committee with respect to the alleged violation(s) at a hearing conducted at least five (5) days before the effective date of the proposed enforcement action.

(ii) Summary Enforcement Action. Notwithstanding the foregoing, under circumstances involving conduct that constitutes: (A) an immediate and unreasonable infringement of, or threat to, the safety or quiet enjoyment of neighboring residents; (B) a traffic or fire hazard; (C) the cutting or removal of any live trees on any Lot; or (D) a violation of this Declaration that is of such a nature that there is no material question regarding the identity of the violator or whether a violation has occurred (such as parking violations), the Committee, or its duly authorized agents, may undertake immediate corrective or enforcement action, including, as appropriate, the issuance of construction stop orders ("red tags") or the pursuit of injunctive relief or temporary restraining orders. Notice of a subsequent hearing shall be provided as soon as reasonably practical.

(d) Notices. Any notice required by this article shall, at a minimum, set forth the date and time for the hearing, a brief description of the action or inaction constituting the alleged violation of this Declaration and a reference to the specific provision of the Declaration alleged to have been violated. The notice shall be in writing and may be given by any method reasonably calculated to give actual notice; provided, however, that if notice is given by mail it shall be sent by first-class or certified mail sent to the last known address of the Owner or resident.

ARTICLE VII Development Rights

Section 7.1. Limitations of Restrictions. Declarant is undertaking the work of developing the Lots and construction of the improvements within the Subdivision. The completion of the development work and the marketing and sale, rental and other disposition of the Lots is essential to the establishment and welfare of the Subdivision as a residential community. In order that the work may be completed and the Subdivision be established as a fully-occupied residential community as rapidly as possible, nothing in this Declaration shall be interpreted to deny Declarant the rights set forth in this Article.

Section 7.2. Rights of Access and Completion of Construction. Declarant and its contractors and subcontractors shall have the right to (i) obtain reasonable access over and across the Subdivision and/or do within any Lot owned or controlled by it whatever is reasonably necessary or advisable in connection with the completion of the Subdivision, and (ii) erect, construct and maintain within any Lot owned or controlled by it such structures as may be reasonably necessary for the conduct of its business to complete the work, establish the Subdivision as a residential community and dispose of the Subdivision in parcels by sale, lease or otherwise.

Section 7.3. Size and Appearance of Subdivision. Declarant shall not be prevented from changing the exterior appearance of any improvements, landscaping or any other matter directly or indirectly connected with the Subdivision in any manner deemed desirable, if Declarant obtains any governmental consents required by law.

Section 7.4. Marketing. Declarant shall have the right to: (i) maintain model homes, signs, banners, flags, inflatable balloons, blimps, sales offices, leasing offices, rental offices, storage areas, parking lots and related facilities in any Lots owned or controlled by Declarant as is necessary or reasonable, in the opinion of Declarant, for the sale or disposition of the Lots; (ii) use Lots owned or controlled by Declarant in accordance with any promotional programs established from time to time; and (iii) conduct the business of disposing of Lots by sale, lease or otherwise

ARTICLE VIII

Term, Amendment and Severability

Section 8.1. Term of Declaration. All of the covenants, conditions and restrictions contained in this Declaration shall run with all Lots and parcels comprising the Subdivision and shall be binding on and enforceable by the Owners and the Committee for a period of twenty-five (25) years from the date that this Declaration is Recorded with the County Recorder. Thereafter, the covenants, conditions and restrictions contained in this Declaration shall automatically be extended for successive periods of ten (10) years each with respect to all lots and parcels within the Subdivision which have adopted this Declaration, unless, within 6 months prior to the expiration of the initial 25-year term or any such 10-year extension period, the Owners of at least a majority of the Lots within the Subdivision vote to terminate the effectiveness of this Declaration, by executing and Recording a written notice of termination.

Section 8.2. Amendment of Declaration. This Declaration may only be amended in strict compliance with the requirements of this section:

(a) Amendments to Declaration. The Owners shall be entitled to amend Articles III, IV and V of this Declaration, so long as the amendment: (i) has been circulated, in writing, to all Owners of Lots within the Subdivision at least sixty (60) days prior to the solicitation of any votes from said Owners with respect to the amendment; and (ii) the proposed amendment is approved in writing by at least a

majority of the Owners within the Subdivision. Provided however, no amendment to Sections 3.11, 3.21, 4.1, 5.1(h), 5.16 or 9.4, shall be effective unless approved by the County and the District, as these conditions are specifically designed to comply with conditions imposed on the approval of the Project.

(b) Effectiveness of Amendments. Any amendment of this Declaration shall be effective upon execution and Recordation of the amendment. The recorded document may be executed by the chairman, or after the District assumes the responsibility of the Declarant herein, by the Manager of the District, upon receiving satisfactory proof of its approval by the owners of a majority of the lots. Unless a first Mortgagee of a Lot has given written consent to any amendment of this Declaration no subsequent amendment hereof shall affect any rights of any first Mortgagee whose mortgage was made in good faith and for value if such Mortgage has been recorded prior to Recordation of the amendment.

Section 8.3. Severability. Invalidation of any of the easements, covenants, conditions, or restrictions of this Declaration or invalidation of the Declaration, as applied to any particular Subdivision, by court order shall not affect other provisions of this Declaration, which provisions shall remain in full force and effect.

ARTICLE IX Miscellaneous

Section 9.1 Constructive Notice and Acceptance. Every person who owns, occupies, or acquires any right, title, estate, or interest in or to any Lot or other property within the Subdivision does and shall be conclusively deemed to have consented and agreed to the reasonableness and binding effect of every limitation, restriction, easement, reservation, condition, and covenant contained herein, whether or not any reference to Declaration is contained in the instrument by which such person acquired an interest in the property which is subject to this Declaration.

Section 9.2. Interpretation. The provisions of this Declaration shall be liberally construed to effectuate its purpose of creating a uniform plan for the creation and operation of a residential development, and any violation of this Declaration shall be deemed to be a nuisance. The article and section headings, titles, and captions have been inserted for convenience only, and shall not be considered or referred to in resolving questions of interpretation or construction. As used herein, the singular shall include the plural and the masculine, feminine, and neuter shall each include the other, unless the context dictates otherwise. All references herein to "days" shall, unless indicated to be contrary, refer to consecutive "calendar days."

Section 9.3. Construction.

(a) Restrictions/Construction Together. All of the covenants, conditions and restrictions of this Declaration shall be liberally construed together to promote and

effectuate the fundamental concepts of the development of the Properties as set forth in the Recitals of this Declaration. Failure to enforce any provision hereof shall not constitute a waiver of this right to enforce that provision in a subsequent application or any other provision hereof.

(b) Restrictions Severable. Notwithstanding the provision of subparagraph (a) above, the covenants, conditions and restrictions of this Declaration shall be deemed independent and severable, and the invalidity or partial invalidity of any provision or portion thereof shall not affect the validity or enforceability of any other provision.

(c) Singular Includes Plural. The singular shall include the plural and the plural the singular unless the context requires the contrary, and the masculine, feminine or neuter shall each include the masculine, feminine and neuter, as the context requires.

(d) Captions. All captions or titles used in this Declaration are intended solely for convenience of reference and shall not affect the interpretation or application of that which is set forth in any of the terms or provisions of the Declaration.


(e) Exhibits. All exhibits to which reference is made herein are deemed to be incorporated herein by reference, whether or not actually attached.

9.4 Aircraft Operations. The Subdivision is within five miles of the Cameron Park Airport and aircraft departing and arriving from the Airport may fly over the Subdivision as part of its normal operations. Each Owner acknowledges the existence of the Airport and the noise that may be generated by passing aircraft and will execute, if required by the County, an aviation easement reflecting the right of aircraft to cross over the Lots and Property within the Subdivision.

DECLARANT:

SILVER SPRINGS, LLC
a California limited liability company

Date: 4-25-06

By: 
Its: MEMBER

* * *

State of California

County of Contra Costa

On APRIL 25, 2006 before me, Lilibeth V. Abad, Notary Public

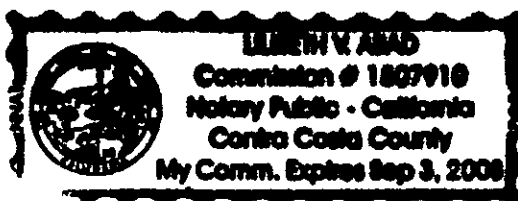
personally appeared William C. Scott, JR.

- personally known to me
- proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Lilibeth V. Abad



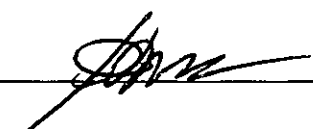
GOVERNMENT CODE 27361.7

I hereby certify under the penalty of perjury that the notary seal on the document to which this statement is attached reads as follows:

Name of Notary	Lilibeth V. Abad
Date Commission Expires:	Sept. 3, 2008
Place of Execution	Walnut Creek
Date of Execution	April 25, 2006
Commission No:	1507910

First American Title Company

D.S. Bannon



031162

Attachment #2B

EXHIBIT A
LEGAL DESCRIPTION

Exhibit "A"

Real property in the unincorporated area of the County of El Dorado, State of California, described as follows:

PARCEL ONE:

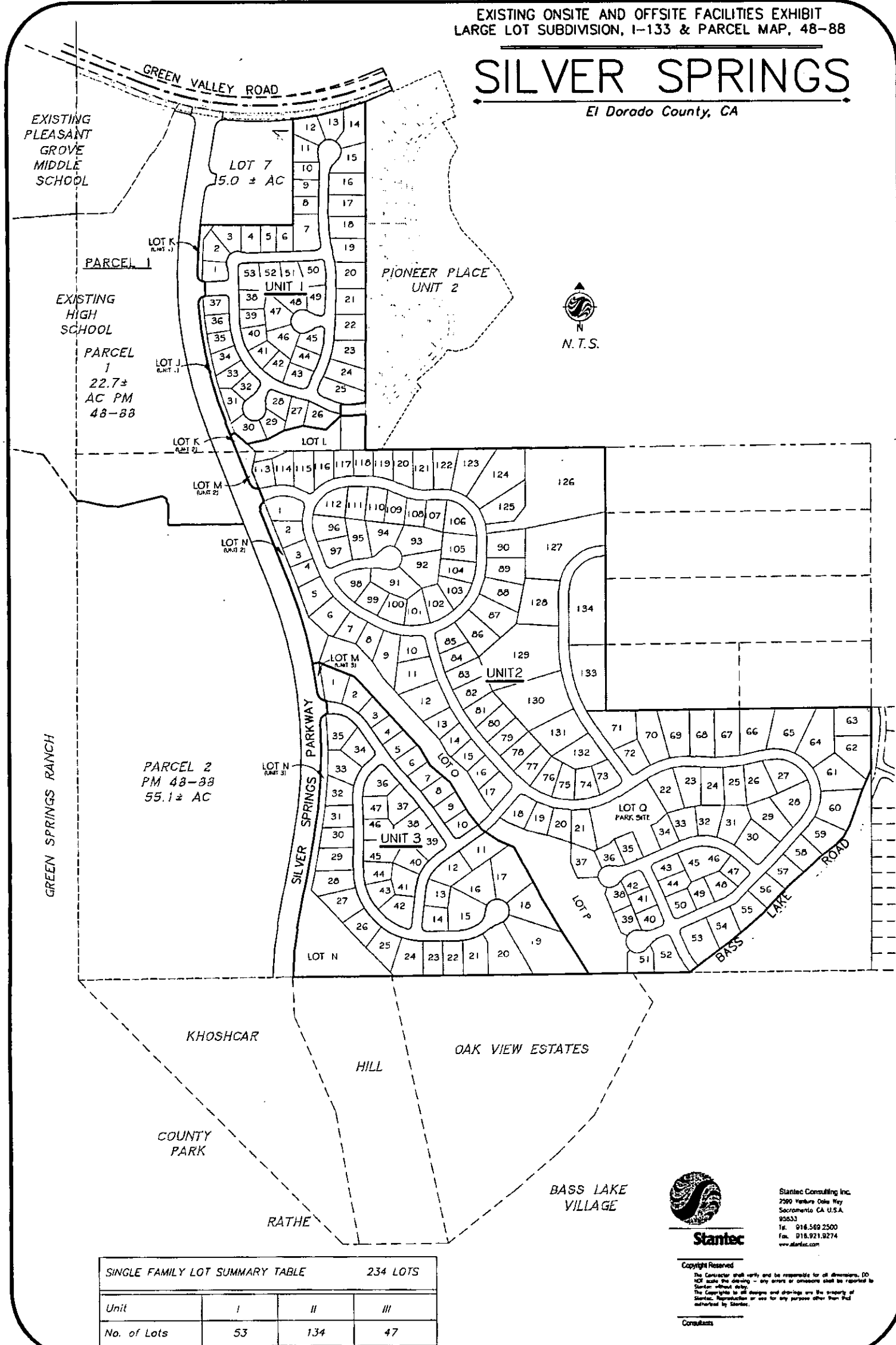
LOTS 1 THROUGH 4 , AS SHOWN ON THE MAP OF "SILVER SPRINGS LARGE LOT SUBDIVISION" FILED IN THE OFFICE OF THE COUNTY RECORDER OF EL DORADO COUNTY, CALIFORNIA ON APRIL 10, 2002 IN BOOK I OF MAPS, AT PAGE 133.

APN: 115-370-01-100, 115-370-02-100, 115-370-03-100 and 115-370-04-100


EXISTING ONSITE AND OFFSITE FACILITIES EXHIBIT
LARGE LOT SUBDIVISION, I-133 & PARCEL MAP, 48-88

SILVER SPRINGS

El Dorado County, CA



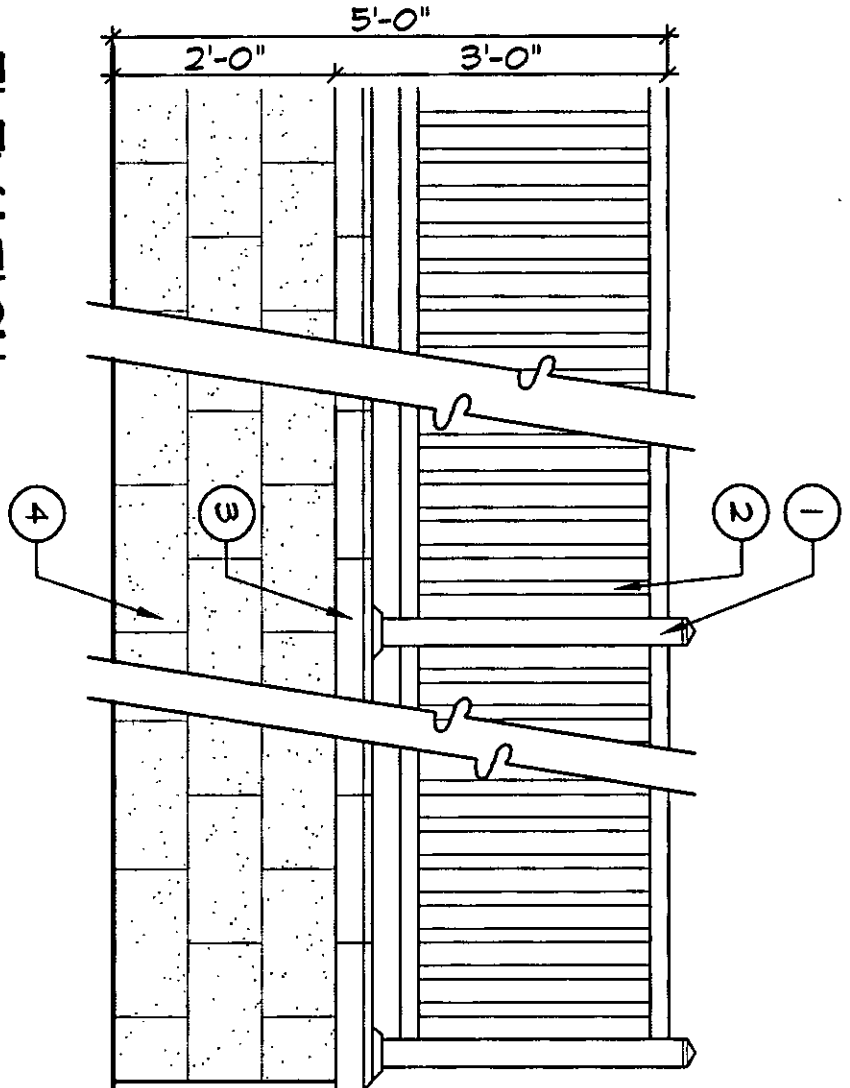
SINGLE FAMILY LOT SUMMARY TABLE				234 LOTS
Unit	I	II	III	
No. of Lots	53	134	47	



Stantec Consulting Inc.
2500 Venture Oaks Way
Sacramento CA U.S.A.
95833
Tel. 916.569.2500
Fax. 916.921.9274
www.stantec.com

Copyright Reserved
The Contractor shall verify and be responsible for all dimensions, DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec.

Consultants



1. 3" x 3" STEEL TUBE POST.

2. 3/8" SQ. STEEL TUBING @ 4" O.C.

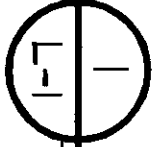
3. BEVELED WALL CAP - SOLID, COLOR TO MATCH CMU BLOCK WALL.

4. SPLITFACE CMU BLOCK. COLOR TO BE SELECTED BY DEVELOPER.

ALL TUBULAR STEEL SHALL BE PAINTED USING DUNN EDWARDS PAINT. COLOR: BRONZE CARGO, OR APPROVED EQUAL.

ELEVATION

**RESIDENTIAL FENCE @
OPEN SPACE**



SCALE: 1/2" = 1' - 0"



Stantec

Client/Project

SILVER SPRINGS L.L.C.
SILVER SPRINGS PARKWAY
PHASE 1

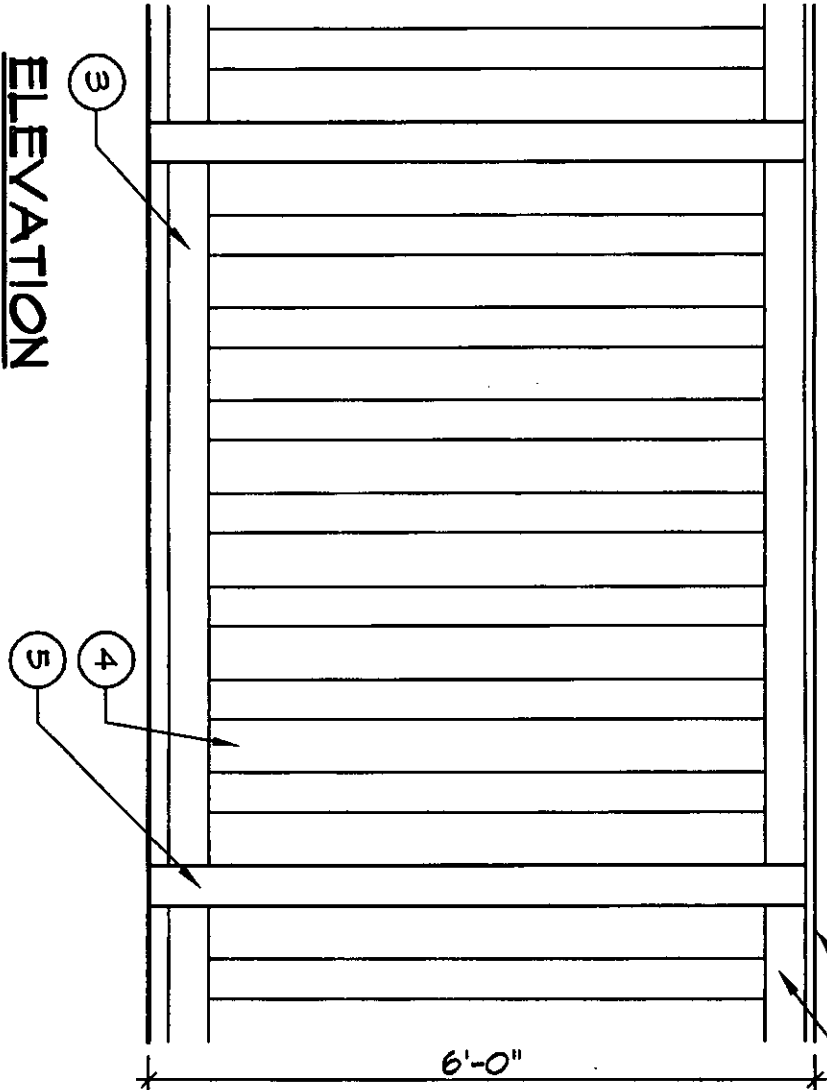
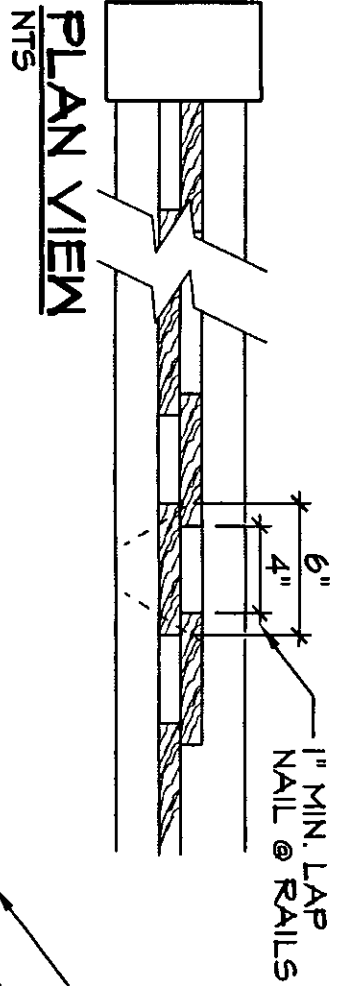
Figure No.

1

Title

**Residential Fence
Adjacent to Open Space**

November 2005
18A312000



- 1. 2 X 4 REDWOOD CAP (FLAT).
 - 2. 2 X 6 REDWOOD TOP TRIM.
 - 3. 2 X 6 REDWOOD BOTTOM TRIM.
 - 4. 1 X 6 REDWOOD BOARDS.
 - 5. 4 X 4 PRESSURE TREATED DOUGLAS FIR.
- ALL WOOD FENCING SURFACES SHALL BE PAINTED W/ DUNN EDWARDS PAINT. COLOR TO BE SELECTED BY DEVELOPER.

1 6' WOOD FENCE @ R.O.W.

L-2

SCALE: 1/2" = 1' - 0"



Stantec

Client/Project

SILVER SPRINGS L.L.C.
SILVER SPRINGS PARKWAY
PHASE 1

Figure No.

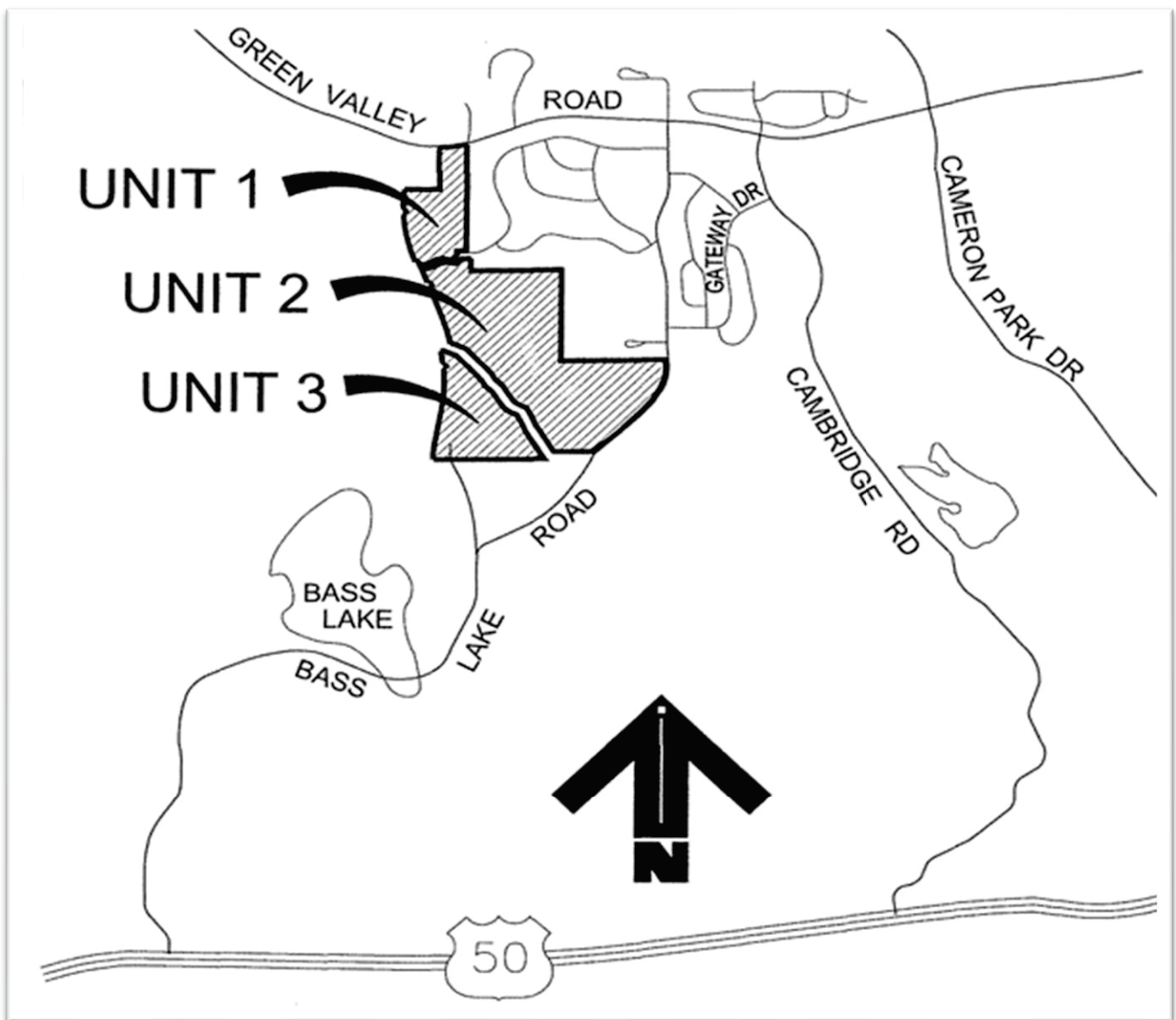
2

Title

6' Wood Fence @ R.O.W.

November 2005
18A312000

Wildland Urban Interface Fire Protection Plan



May 26, 2026

Prepared for: Silver Springs Subdivision Units 2 & 3

El Dorado County Permit # TM97-1330

Contact: TTLC Development, LLC



Phillips
Consulting
Services
Fire Safe Planning

Prepared by:

Ronald A. Phillips

530.217.7432

PLAN APPROVAL SHEET

The **Silver Springs Units 2 & 3 Wildland Urban Interface (WUI) Fire Protection Plan** (WFPP) has been designed to evaluate the level of potential fire hazard affecting or resulting from the approved project, and the methods and measures proposed to minimize that hazard. The plan has been developed to conform with California Code of Regulations Title 14 §§ 1270-1276 (Fire Safe Regulations), California Code of Regulations Title 24, Part 7 – § 602 (Fire Protection Plans) and El Dorado County Fire Protection Standard W-001 (Wildland Urban Interface Fire Protection Plans).

This Silver Springs Units 2 & 3 WUI Fire Safe Plan replaces the following previously approved plans for the Project:

- Silver Springs Units 2 & 3 Wildfire Safety Plan, prepared by William F. Draper, RPF dated May 22, 2006.

The WFPP shall be updated no less than once every 5 years, or as changes to state and local regulations occur, to ensure that the plan can be effectively utilized by all stakeholders.

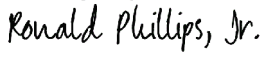
The Silver Springs Units 2 & 3 WUI Fire Protection Plan has been reviewed and approved by the following fire agencies located in El Dorado County:


DATE PUBLISHED: May 26, 2026

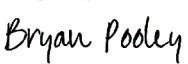
PREPARED BY:

APPROVED BY:

APPROVED BY:

DocuSigned by:

 DFF4B5E2CDDA4C4...
 Ronald A. Phillips
 Phillips Consulting Svcs.

Signed by:

 06EC2ADB34334F0...
 Austin Woo, Fire Marshal
 Rescue Fire Prot. District

Signed by:

 312BFEEE4EDA4AF...
 Bryan Pooley, Battalion Chief
 CAL FIRE – AEU

DISCLAIMER

Wildfires are unpredictable and can be impossible to stop under certain conditions, regardless of any implemented mitigation measures. The recommendations provided in this Fire Protection Plan are for general purposes only and are not designed to replace or substitute a fire agency official's decision during a wildfire or evacuation event. Phillips Consulting Services provides no guarantee as to the effectiveness of these recommendations in preventing loss of life or property in the event of a wildfire or any other natural or human-caused disaster. Phillips Consulting Services does not accept any liability for actions taken or not taken based on this Plan, or for its use for any purpose other than intended.

The emergency evacuation assessment described in Section 6.3 of the WFPP is based upon best practices and the professional experience and knowledge of Phillips Consulting Services staff. Emergency evacuation assessment is an emerging field and there are no clearly established standard practices currently used in the industry. Emergency evacuations can occur due to any number of events and locations beyond those explicitly identified in the WFPP. The analysis found in Section 6.3 serves only to represent informed estimates of likely evacuation scenario footprints and capacity constraints based on available data, and does not guarantee that an emergency evacuation will follow the calculation that is used in this assessment.

FORWARD

The **Silver Springs Units 2 & 3 WUI Fire Protection Plan** has been prepared for the Silver Springs Units 2 & 3 project which is located on El Dorado County Assessor Parcel #'s 126-068-002 to 126-068-004 and 126-069-006 to 126-068-008 in Rescue, California. The WFPP for the Project meets the requirements described in the California Wildland Urban Interface Code (CWUIC) and various other State and County statutes and regulations. The WFPP addresses the following topics:

- Project Description (Chapter 1)
- Regulatory Setting (Chapter 2)
- Wildfire Risk Analysis (Chapter 3)
- Fire Protection Planning (Chapter 4)
- Emergency Preparedness and Evacuation Planning (Chapter 5)
- Vegetation Management (Chapter 6)
- Key Findings, Applicable Codes and Design Features (Chapter 7)
- Plan Appendices (Chapter 8)

The goals of this WFPP are as follows:

1. Protect both the public and the environment by reducing the intensity and speed of wildfires that may start either within or adjacent to the development.
2. Maintain the proposed open space landscape while ensuring that it does not become overgrown mature vegetation with high dead fuel levels, while also protecting the visual, riparian, wildlife, and soil values.
3. Design fuel treatments so that native oaks are protected from wildfire damage.
4. Reduce the exposure of vulnerable buildings to high intensity flames.
5. Reduce the quantity of embers accumulating at a building based on factors related to the building characteristics and adjacent fuel treatments.
6. Reduce the likelihood of urban conflagration due to treatment of fuels in proximity to buildings and parcel hardening at points of transition.
7. Protect critical evacuation route(s) for use by residents and visitors in the community.
8. Enhance the level of preparedness by both residents and visitors for a safe evacuation during a wildfire or similar hazardous situation.

Attachment #2C

The WFPP specifically applies to the Project. The WFPP provides a framework for protection of residents and visitors from natural hazards, the prevention of fire, and preparation for responding to an emergency evacuation of the Project should the need arise. The WFPP is intended to be utilized during the development, construction, and occupancy phases of the Project.

For interpreting and applying the provisions found within each chapter the terms shall and should are found throughout. The use of the term “shall” refer to requirements of the Plan as mandated through State statute or regulation. The use of the term “should” refer to recommendations cited in the document by the authors.

END OF FORWARD

TABLE OF CONTENTS

SECTION	PAGE NO.
Cover Sheet.....	1
Plan Approval Sheet.....	2
Revision Sheet.....	3
Disclaimer.....	4
Forward	5
Table of Contents	7
List of Tables	9
List of Figures	10
Acronyms/Abbreviations	11
Definitions Associated with this Plan	12
Chapter 1: Project Description	17
Chapter 2: Regulatory Setting	22
Chapter 3: Wildfire Risk Analysis	28
Chapter 4: Fire Protection Planning	46
Chapter 5: Special Building Construction	57
Chapter 6: Emergency Preparedness and Evacuation Planning	71
Chapter 7: Vegetation Management	76
Chapter 8: Maintenance of Wildfire Resilience Requirements	88
Chapter 9: Plan Appendices	97
Appendix A: Critical Assets / Populations at Risk Checklist	97
Appendix B: CA Public Resource Code 4290 and 4291 Checklist	98
Appendix C: Emergency Evacuation Planning Checklist	99

Attachment #2C

SECTION	PAGE NO.
Appendix D: CA Code of Regulations Title 14	100
Appendix E: El Dorado County Code Section 110.16 (Building Code)	114
Appendix F: El Dorado County Fire Chiefs Association Standards	115
Appendix G: RFD Fire Code (Ordinance 2025-00)	116
Appendix H: Characteristics of Fire Smart Vegetation	139
Appendix I: Ready-Set-Go Wildfire Evacuation Program	141
Appendix J: El Dorado County Emergency Alert Notification System	142
Appendix K: FIREWISE USA Program	144
Appendix L: RFD Fire Protection Standard P-001 (Fire Setback Requirements)	145
Appendix M: About the Author	159

LIST OF TABLES

TABLE	PAGE NO.
Table 1: Hazard and Risk Assessment Factors	28
Table 2: Wildfire Risk Evaluation for the Project	30
Table 3: Fire-Flow Requirements for the Project	54
Table 4: Maintenance Frequency for Open Space / Roads / Trails.....	87

LIST OF FIGURES

FIGURE	PAGE NO.
Figure 1: General Vicinity Map	17
Figure 2: Project Site Plan	18
Figure 3: Existing Conditions Site Photos.....	19
Figure 4: Fire Hazard Severity Zone Map for the Project	32
Figure 5: Silver Springs Units 2 & 3 Topographic Map	34
Figure 6: Fire History for the Project Site	35
Figure 7: Vegetation Types found in Area	41
Figure 8: Fire Lane Marking Requirements.....	50
Figure 9: Parts of a Home with Labels Defined in this Section.....	60
Figure 10: Emergency Evacuation Zone Map	74
Figure 11: CAL FIRE Defensible Space Zones	79
Figure 12: Fuel Treatment Exhibit	83

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Term
APN	Assessor Parcel Number
ASTM	American Society for Testing and Materials
CAL FIRE	California Department of Forestry and Fire Protection
CBC	California Building Code
CCR	Covenants, Conditions, and Restrictions
CFC	California Fire Code
County	County of El Dorado, CA.
CWUIC	California Wildland Urban Interface Code
EDHCWD	Rescue County Water District
ECT	Evacuation Clearance Time
EID	El Dorado Irrigation District
EVA	Emergency Vehicle Access
HFHSZ	High Fire Hazard Severity Zone
HOA	Homeowner Association
IPAWS	Integrated Public Alert & Warning System
ISO	Insurance Service Office
LRA	Local Responsibility Area
OES	Office of Emergency Services
OS	Open Space
PGE	Pacific Gas & Electric Company
PRC	CA Public Resource Code
Project	Silver Springs Unit 2 & 3
RAVE	Fed-RAMP Authorized Mass Notification System
RFPD	Rescue Fire Protection District
SRA	State Responsibility Area
TFRA	Temporary Fire Refuge Area
WFPP	Wildland Urban Interface Fire Protection Plan
WUI	Wildland Urban Interface

DEFINITIONS ASSOCIATED WITH THIS PLAN

Accessory Building: A building or structure used to shelter or support any material, equipment, chattel, or occupancy other than a habitable building. Examples include detached decks, free standing pergolas, gazebos, detached private garages, sheds, and barns.

Authority Having Jurisdiction (AHJ): An organization, office, or individual responsible for enforcing codes, standards, or regulations and approving equipment, materials, installations, or procedures.

Building: Any structure, including those defined in El Dorado County Code Chapter 8.09, used or intended for supporting or sheltering any use or occupancy, as determined by the California Building Standard Codes.

California Building Code (CBC): Refers to the building construction standards described in California Code of Regulations Title 24, Part 2.

California Wildland-Urban Interface Code (CWUIC): Refers to the provisions addressing fire spread, accessibility, defensible space, water supply, and more for buildings constructed near wildland areas as described in California Code of Regulations Title 24, Part 7.

California Fire Code (CFC): Refers to the fire and life safety standards described in California Code of Regulations Title 24, Part 9.

Critical Fire Weather: A set of weather conditions (usually a combination of low relative humidity and wind) whose effects on fire behavior make control difficult and threaten life safety.

Critical Infrastructure: Public and private facilities deemed by a community to be essential for the delivery of vital services, protection of special populations, and the provision of other services of importance for that community. Examples include hospitals, fire stations, police and emergency services facilities, utility facilities, and communications facilities. See El Dorado County Code Section 8.09.030 for additional information regarding the use of this term.

Defensible Space: The design and maintenance of natural and/or landscaped areas in an area where mitigation actions are undertaken to reduce building loss from a wildfire. It is also intended

to provide access to firefighters for fire suppression actions and to provide a safe zone for them to work. Defensible space is based on four general concepts:

- A. Elimination of combustible vegetation and other materials within 5' of the building.
- B. Fuel removal or reduction within 100' of buildings in all directions.
- C. Thinning, pruning and removal of continuous and dense uninterrupted layers of vegetation.
- D. Removal of ladder fuels within 6' from the ground to prevent fire spread through tree canopies.

Driveway: A vehicular pathway route, meeting the requirements of both CWUIC Section 403 (Access) and CFC Section 503 (Fire Apparatus Access), that serves not more than four (4) residential units and any number of noncommercial or nonindustrial Utility and Miscellaneous Group U buildings on each parcel.

Embers: Are hot flying particles that can travel ½ mile or more ahead of the fire front. Where embers land is mostly determined by the local wind patterns. Also known as Firebrands.

Emergency Vehicle Access (EVA): A road or other connection designed to connect directly to a through road and used to comply with CWUIC Section 403 (Access) and CFC Section 503 (Fire Apparatus Access) requirements. The road shall serve as a secondary means of emergency access and civilian evacuation for the Project.

Evacuation: The organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care to safe areas.

Evacuation Order: An immediate threat to life. This is a lawful order to leave now. The area is lawfully closed to public access.

Evacuation Warning: Means a potential threat to life and/or property. The threat to life is not yet imminent.

Fire Hazard: means any condition, arrangement, act, or omission which:

- A. May obstruct, delay, hinder, or interfere with the operations of a fire department or the egress of occupants in the event of fire.

- B. Increases or may cause an increase of hazard or menace of fire to a greater degree than that customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing, or extinguishing fire; or

Fire-Smart Vegetation: Plants, shrubs, trees, and other vegetation that exhibit properties, such as high moisture content, little accumulation of dead vegetation and low sap or resin content, that make them less likely to ignite or contribute heat or spread flame in a fire than native vegetation typically found in the region.

Fuel: Refers to any combustible material, including petroleum-based products, cultivated landscape plants grasses, weeds and wildland vegetation.

Fuel Modification: A method of modifying fuel load by reducing the amount of non-fire-smart vegetation or altering the type of vegetation to reduce the fuel load.

Ignition Resistant: As applied to building construction materials means a material that, in the form in which it is used, resists ignition or sustained flaming combustion sufficiently to reduce losses from a wildland-urban interface conflagration under worst-case weather and fuel conditions. Any material conforming to American Society for Testing (ASTM) Standard No. E2768, or as otherwise approved by the fire agency, shall be considered ignition resistant for the purpose of this Plan.

Ladder Fuels: Means fuels that can carry a fire vertically between or within combustible material or hazardous vegetation.

Miscellaneous Structure: Are attached support structures located on the same lot that cannot be used for living or sleeping. Examples include decks, trellises, arbors, patio covers and fences.

Non-combustible: As applied to building construction material means a material that, in the form in which it is used, is one of the following:

- A. Material of which no part will ignite and burn when subjected to fire. Any material conforming to ASTM Standard No. E136 shall be considered non-combustible for the purpose of this Plan. or

Attachment #2C

B. Material having a structural base of non-combustible material as defined in Item A above, with a surface material not over 1/8 inch thick, which has a flame spread index rating of 50 or less. Flame spread index as used in this Plan refers to a flame spread index obtained according to tests conducted as specified by ASTM E84 or Underwriters Laboratory (UL) Standard No. 723.

Open Space: Natural or cultural resource areas that contain natural vegetation, fish, wildlife, or have historic, scenic, recreation and education value.

Outbuilding: A building or accessory building that is less than one hundred-twenty (120) square feet in size and not used for human habitation

Road: A public or private vehicular pathway to more than four (4) residential units, or to any industrial or commercial occupancy.

Secondary Egress: An adequate secondary egress route that is a road, navigable by a passenger vehicle weighing 6,000 pounds or less, of equal construction standard to the primary road. The secondary road does not have to be rated to carry the same quantity of traffic (e.g., a two-lane paved road and a one-lane paved road is acceptable).

Shaded Fuel Break: Refers to a strategically located area where the volume and arrangement of vegetation have been managed to limit fire intensity, fire severity, rate of spread, crown fire potential, and/or ember production. A shaded fuel break will not alone stop a wildfire. A shaded fuel break does not remove all vegetation in the treatment area and instead favors the growth of large native species by removing the understory ladder fuels, and invasive species.

Vulnerability: The conditions determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.

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 Hazard Assessment: A qualitative or quantitative assessment that identifies wildfire prone areas based on natural factors such as fuel/vegetation, slope, and weather patterns that increase the likelihood of wildfire occurring.

Wildfire Risk Assessment: Risk assessment identifies where wildfire is most likely to threaten something of community value, such as human life, property, natural/historic resources, or other resources of high value. Risk assessment can also include components of physical or social vulnerability such as pre-WUI code development, limited access/egress, high density housing, vulnerable populations, as well as aspects of coping capacities (e.g., fire department response time coverage, limited firefighting water supplies, limited emergency communications). As risk is the combination of hazard, exposure, and vulnerability, a high hazard location may not be high risk if there are no assets at risk. For example, a high hazard rating in an area with a low likelihood of consequences (e.g., a wildfire in an undeveloped area) could be considered low risk, whereas a medium hazard area with the potential for high consequences could be scored as high risk

Wildland: An area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar facilities.

Wildland Urban Interface (WUI): A geographical area identified by the state as a “Fire Hazard Severity Zone” in accordance with 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.

- A. Zone 0:** Also known as the “Ember Resistant Zone” or the “Immediate Zone”. Refers to the area extending 5-feet from an exterior wall surface or patio, deck, or attachment to a building or structure as measured on a horizontal plane.
- B. Zone 1:** Also known as the “Lean, Clean and Green Zone”. Refers to the area between five and thirty feet from the building, patio, deck, or attachment to a building or structure.
- C. Zone 2:** Also known as the “Reduced Fuel Zone”. Refers to the area between thirty and one hundred feet from the building, patio, deck, or attachment to a building or structure.

END OF DEFINITIONS

CHAPTER 1: PROJECT DESCRIPTION

1.1 Project Summary

Silver Springs Units 2 & 3 (Project) is a master plan community within the unincorporated area of Rescue, CA. The Project site is located on El Dorado County Assessor Parcel Numbers (APN) 115-370-001, 115-370-002 and 115-500-001 to 115-500-050. The Map Coordinate for the Project is latitude 38.68942N, by longitude -121.015606W. The Project applicant is TTLC Development, LLC. See Figure 1 for an Area Map of the Project and Surrounding communities.



Figure 1: General Vicinity Map

Attachment #2C

Silver Springs Units 2 & 3 is a master planned community that includes 181 new single-family residential lots¹, and four Open Space (OS) lots identified as Lots A-D. The Project is being developed over three phases (Phases 2A, 2B and 3). The Project is approximately 124 acres in total area. Residential lots range in size from .25 to 2.845 acres in size. All roads and drainage areas, except for individual lot driveways and drainage system connections, are publicly owned and maintained by the County of El Dorado. OS Lots A-D will be dedicated to the Cameron Park Community Service District (CSD) at built-out within the associated phase of the Project. See Figure 2 for the Project site plan.

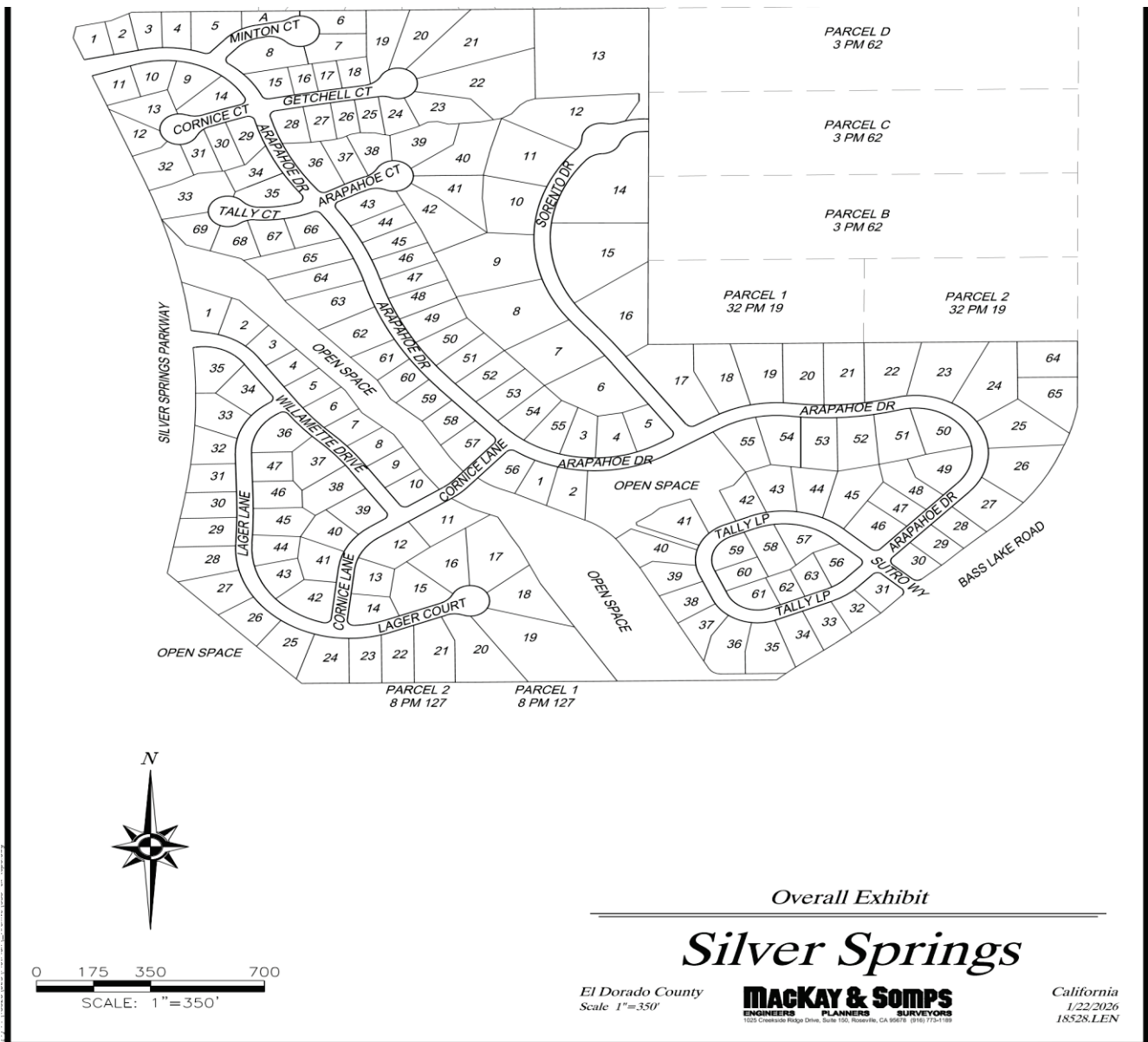


Figure 2: Project Site Plan (Courtesy of MacKay & Soms)

¹ There are 69 lots in Unit 2A, 65 lots in Unit 2B, and 47 lots in Unit 3.

Electrical power supply is provided to the Project by Pacific Gas & Electric (PGE). All power distribution lines serving the Project are underground. Municipal water supply for fire protection and domestic water consumption will be provided by the El Dorado Irrigation District (EID).

1.2 Existing Condition and Surrounding Uses

The Project is in Rescue, CA, an unincorporated area of the County of El Dorado. Rescue is approximately 33.41 square miles in size with a residential population of approximately 4,763 persons². Unit 3 of the Project is currently under construction. See Figure 3 for photographs that show the current conditions found at the Project.



Photo 3.1: Unit 3 Looking East



Photo 3.2: Unit 3 Looking North



Photo 3.3: OS Lot D Looking East



Photo 3.4: OS Lot B Looking West

Figure 3: Existing Condition Site Photos

² See 2020 U.S. Census Bureau information for Rescue.

Units 2A and 2B are currently undeveloped and in a natural landscape condition. Unit 3 is currently under construction with the road system completed and residential lots graded. Emergency water supply and fire hydrants are in place and are capable of meeting the 1,000 Gallons Per Minute (GPM) at 20 Pounds per Square Inch (PSI) fire-flow requirement for the Project. Street signs were observed to be in place in Unit 3. An existing PG&E power line currently bisects Units 2A and 2B and will be placed underground as part of those phases of the Project.

Existing vegetation within the Project includes, but are not limited to, California annual grasses, Black Oak (*Quercus velutina*), Blue Oak (*Quercus douglasii*), Interior Live Oak (*Quercus wislizenii*), California Buckeye (*Aesculus californica*) and Red Willow (*Salix Laevigata*). The oak trees are generally clustered into lands designated as Oak Woodlands in the four open space areas associated with the Project. Annual grasses are the main carrier of wildfire spread in the Project and surrounding areas.

Surrounding Uses

The following structures, slopes, vegetation, fuel breaks, water supply systems, and access roads are located within 1,000 feet of the Project:

- **North Side** – The Silver Springs Unit 1 and Pioneer Place Units 1-3 residential developments are located north of the Project. The land is a mixture of single-family residential custom designed lots and open space lands. These neighborhoods are located within a High Fire Hazard Severity Zone. Slopes are generally moderate and the predominant vegetation type found is Oak Woodland and annual grasses.
- **South Side** – The Bass Lake Village residential development, two individual rural residential properties at 5325 Silver Springs PKY and 2840 Bass Lake Road, and an undeveloped property at APN 115-030-012, are located south of the Project. Slopes are generally moderate and the predominant vegetation type found is Oak Woodland and annual grasses. The community is located within a High Fire Hazard Severity Zone.
- **East Side** – The Creekside Estates community, rural residential properties located at 2512, 2580, 2584, and 2600 Bass Lake Road, and undeveloped property at APN 115-020-003. This

community consists of rural residential parcels of between 2.5-20 acres in size. The community is located within a High Fire Hazard Severity Zone. Slopes are generally moderate and the predominant vegetation type found is Oak Woodland and annual grasses. Malcolm Dixon Road also serves this community.

- **West Side** – Silver Springs Lots 10 and 11 are located west of the Project. Lot 10 is approximately 22.68 acres in size and is undeveloped. Lot 11 is approximately 55.07 acres in size and is undeveloped. Slopes are generally moderate and the predominant vegetation type found is Oak Woodland and annual grasses. The land is located within a High Fire Hazard Severity Zone.

END OF CHAPTER

Chapter 2: REGULATORY SETTING

2.1 Chapter Overview

Development of the proposed Project is subject to federal and state laws, County ordinances, and regulations. The key provisions that would address hazards and emergencies within the WFPP are summarized below, and, in some cases, reproduced in the appendices.

The County of El Dorado, through its General Plan³, has identified natural hazards that include severe weather, seismic and geological events, landslides, flooding, and wildfires, as the highest vulnerability to County residents. A review of the information⁴ provided in the General Plan shows the Project as being at greatest risk to the threat of a wildfire. The focus of the WFPP will be to address efforts to reduce the wildfire threat within the Project and surrounding areas.

2.2 El Dorado County General Plan

The El Dorado County General Plan⁵ contains two sections that provide public safety policy guidance related to the Project. Chapter 5 (Public Services and Utilities Element) and Chapter 6 (Health and Safety Element). Chapter 5 was last amended in December 2015. Chapter 6 was last updated by the County in August 2024.

The following Health and Safety Element policies of the General Plan are applicable to the Silver Springs Units 2 & 3 development:

Policy 6.2.1.3 Require all existing and new development in State Responsibility Areas (SRAs) and Local Responsibility Area (LRA) Very High/ High Fire Hazard Severity Zones (VHFHSZ/HFHSZ) to enforce fire-resistant landscaping and defensible space requirements that meet or exceed Title 14, California Code of Regulations (CCR), Division 1.5, Chapter 7, Subchapter 2, Article 1-5 (Commencing with Section 1270) (State Minimum Fire Safe Regulations) and Subchapter 3, Article 3 (commencing with Section 1299.01) (Fire Hazard Reduction around Buildings and Structures

³ See *El Dorado County General Plan Public - Health, Safety and Noise Element*, (2019)

⁴ *ibid*

⁵ See El Dorado County General Plan (2004); [Adopted General Plan \(edcgov.us\)](https://www.edcgov.us); accessed August 31, 2023.

Regulations). Adequate compliance with these requirements shall be determined by the local Fire Protection Districts (FPDs) or other local fire agencies, as appropriate.

Policy 6.2.3.1. As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible FPD that, concurrent with development, adequate emergency and peak load water supply, water flow, fire access, and firefighting personnel and equipment will be available in accordance with applicable State and local fire district standards to support fire suppression efforts.

Policy 6.2.3.2. As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

Policy 6.2.3.4. All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

Policy 6.2.3.6. All new development within an SRA zone, or LRA VHFHSZ or HFHSZ shall prepare a WUI Fire Safe Plan that complies with established fire safety standards. Ingress and egress to the new development will be constructed utilizing the most current State Fire Safe Regulations, Fire Code, and/or County Code that meets these minimum requirements. Key components of a Fire Protection Plan include:

- A. Risk analysis; and
- B. Fire response capabilities; and
- C. Fire safety requirements – defensible space, infrastructure, and building ignition resistance; and
- D. Mitigation measures and design considerations for non-conforming fuel modification; and
- E. Wildfire education, maintenance, and limitations, and
- F. Evacuation planning

Policy 6.2.4.1. Discretionary development within high and very high fire hazard areas shall be conditioned to designate fuel break zones that comply with fire safe requirements to benefit the new and, where possible, existing development.

2.3 Fire Safe Regulations

California Public Resource Code (PRC) Section 4290. The State Board of Forestry has the authority to adopt regulations for minimum fire safety standards applicable to SRA lands under the authority of the department, and to LRA VHFHSZs. The Fire Safe regulations are codified in CCR, Title 14 (Natural Resources), Division 1.5 (Department of Forestry), Chapter 7 (Fire Protection) under Subchapter 2 (SRA Fire Safe Regulations), §§ 1270-1276. These regulations generally address the following:

- Standards for signs identifying streets, roads, and buildings.
- Minimum private water supply reserves for emergency fire use.
- Fuel modification standards for fuel breaks and greenbelts.
- Road and driveway standards for emergency fire equipment access and public evacuation.

They do not supersede local regulations that equal or exceed minimum regulations adopted by the State (PRC § 4290(c)). See Appendix D for additional information regarding the minimum fire safe regulations applicable to the Project.

California Building Standards Code

The State of California has adopted a minimum model code for use within all 58 counties of the State. These provisions can be found within California Code of Regulations Title 24 – Parts 1 through 12. The code is updated on a triennial basis with the last update occurring on January 1, 2026.

The California Building Standards Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes; and
- Building standards that have been adopted and adapted from national model codes to address California’s ever-changing conditions; and
- Building standards, authorized by the California legislature, that constitute amendments not covered by national model codes, that have been created and adopted to address California concerns.

All occupancies in California are subject to national model codes adopted into Title 24, and occupancies are further subject to amendments adopted by state agencies and ordinances implemented by local jurisdictions' governing bodies.

The key statewide codes relevant to the WFPP include but are not limited to the following: Part 2 – California Building Code – Volumes 1 & 2 (CBC), Part 7 – California Wildland-Urban Interface Code (CWUIC), and Part 9 – California Fire Code (CFC).

2.4 Defensible Space Regulations

California PRC Section 4291 / Government Code (GC) Section 51182.

These State statute and regulatory provisions define and describe mandatory fire protection measures and responsibilities for maintaining defensible space that apply to all property within the SRA in California. Per GC § 51182, defensible space regulations also apply to all property in LRA VHFHSZ and HFHSZ areas.

The defensible space requirements include, but are not limited to, the following:

- 100 feet minimum of vegetation management (“defensible space”) around homes; and
- Removal of dead/dying vegetation; and
- Vegetation removal around chimneys/stovepipes.

Depending on the area, defensible space requirements may include certain exemptions and exceptions from code. Moreover, jurisdictions may require extension of the minimum distance beyond property lines or as needed for insurance. The State Board provides direction for complying with the defensible space regulations in CCR Title 14, §§ 1299.01- 1299.05 which incorporates by reference additional information outlined in the State Board’s General Guidelines for Creating Defensible Space. Due to the recent passage of AB 3074 (2020), defensible space compliance will soon require more intense fuel reduction activities and the creation of an ember-resistant zone within 5 feet of a structure. The State Board will provide additional guidance and must amend the regulations to reflect these changes on or before January 1, 2026.

El Dorado County Code Chapter 8.09

The County of El Dorado has more restrictive requirements, in some cases, than State statutes and regulations pertaining to Defensible Space around homes and buildings. El Dorado County Codes and Ordinances Chapter 8.09 pertain to all requirements and administrative actions associated with Vegetation Management and Defensible Space. The purpose of this chapter is to provide for the removal of hazardous vegetation and combustible materials situated in the unincorporated areas of the County to reduce the potential for fire and to promote the safety and welfare of the community. The chapter applies to all improved parcels, and designated unimproved parcels, within the County and establishes annual on-going maintenance of those parcels to prevent vegetation from growing back and posing a fire hazard to the community.

2.5 Other Plans and Regulations

El Dorado County Local Hazard Mitigation Plan.

The County of El Dorado last updated its Local Hazard Mitigation Plan (LHMP) in April, 2019⁶. The purpose of the LHMP is to guide hazard mitigation planning to better protect the people and property of the County from the effect of hazard events. Based on a comprehensive risk assessment the LHMP identified that it is vulnerable to several hazards. The threat of wildfire was among those hazards identified as posing the highest risk to the communities and population within the County.

The wildfire risk assessment provisions within the LHMP are described in Section 3.2.15. Wildfires are identified within the LHMP⁷ as highly likely to occur within all areas of the County.

Prolong dry seasons, warmer temperatures created by climate change, drought and tree mortality are all significant factors in the increased risk of wildfire occurring in the County.

Rescue Fire Protection District Ordinance 2022-01 (Fire Code)

The Rescue Fire Protection District, otherwise known as the Rescue Fire Department (RFD), has adopted the 2022 California Fire Code (CFC) with several local amendments which are more

⁶ See El Dorado County Local Hazard Mitigation Plan; [ElDoradoCounty_LHMP.pdf \(edcgov.us\)](#); accessed April 26, 2026.

⁷ *ibid*

restrictive than those described in the CFC. RFD updates its local fire code ordinance in conjunction with the triennial update to the California Building Standards Code. Specific local amendments contained within the ordinance that may impact the Project include the following:

- Fire apparatus access road design criteria as described in Section 503.2.1; and
- Dead end roads and driveways as described in Section 503.2.5; and
- Fire lane marking requirements described in Section 503.3.1; and
- Security gate design criteria as described in Section 503.6; and
- Address identification criteria as described in Section 505.1; and
- Solar Photovoltaic Power Systems described in Section 1205; and
- LP-Gas storage tank limits as described in Section 6104.2; and
- Residential fire sprinkler system installation requirements found in Chapter 80; and
- Fire-Flow requirements for buildings as described in Appendix B; and
- Fire Apparatus access road design criteria described in Appendix D.

See Appendix G for additional information regarding the minimum fire code requirements that will be applicable to the Project that are proposed within this ordinance.

END OF CHAPTER

CHAPTER 3: WILDFIRE RISK ANALYSIS

3.1 Fire Hazard Versus Fire Risk

The threat of wildfire exposure to people, critical infrastructure, structures, and communities is based upon a comprehensive vulnerability assessment of an area. Wildfire risk is based on several factors: likelihood, intensity, exposure, and susceptibility. Understanding which factors affect the community can help to prioritize risk reduction strategies.

This vulnerability assessment is usually completed through the evaluation of both *fire hazard* and *fire risk* factors. The term “hazard” describes the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fires intensity or rate of spread such as topography or weather conditions. The term “risk⁸” describes the probability of adverse wildfire exposure to people, to structures, critical assets/infrastructure and other values at risk located in the WUI Zone.

A comprehensive fire risk analysis is an important component of this WFPP for the Project. The risk assessment described in the following sections of this Chapter evaluate those factors described in Table 1 when assessing the wildfire exposure potential for the Project:

Table 1: Hazard and Risk Assessment Factors

Hazard Assessment Factors	Risk Assessment Factors
<ul style="list-style-type: none"> • Vegetation (fuel) types present • Topography of the area • Weather conditions present during both seasonal and critical fire weather periods • Other criteria as determined by either CAL FIRE or the local fire agency 	<ul style="list-style-type: none"> • Local Fire Protection Capabilities • Water Supply Sources for Fire Protection • Hazardous Fuels and Structure Ignitability • Emergency Vehicle Access • Population in Area / Evacuation Routes • Critical Assets / Infrastructure at Risk

⁸ National Fire Protection Association Standard No 1144 (2018); Chapter 3, Section 3.3.19

3.2 Wildland Urban Interface Fire Risk Evaluation for the Project

The overall risk rating can be described as Low, Moderate, High, and Very-High. When analyzing individual fire risk factor ratings within the Project area the following terms are used:

- **LOW RISK** – Fire risk factors present typically do not support rapid fire spread.
- **MODERATE RISK** – Fire risk factors present may support moderate fire spread, but burning ember distribution is limited to less than ½ mile.
- **HIGH RISK** – Fire risk factors present may support rapid fire spread and ember distribution beyond ½ mile.
- **VERY-HIGH RISK** – Fire risk factors present may support extreme fire spread and intensity.

The following fire risk evaluation is the opinion of the WFPP author and is based upon field observations and research related to the Project and surrounding community. This risk evaluation is founded on information described in Table C101 (*Community WUI Fire Hazard Evaluation Framework*) of California Code of Regulations Title 24, Part 7 (2025 California Wildland-Urban Interface Code).

It is important to remember that the risk factor ratings described do not infer that a community is at greater or less risk due to its overall rating. Fires can, and do, cause significant damage to property even when they occur in areas that may receive an overall low or moderate rating. Failure to maintain adequate defensible space, critical fire weather conditions, and/or lack of available fire suppression resources due to other emergency incidents, may cause a fire to increase its intensity and fire spread beyond the capabilities of firefighters on scene.

Table 2 provides the analysis of the wildfire risk evaluation factors that are specific for the Project site. Each of the ten risk categories has an associated set of individual risk factor data layers, and each layer was ranked from low to very-high risk. See Sections 3.3 to 3.12 for the specific analysis for each category described within the above rating sheet.

Table 2: Wildfire Risk Evaluation for the Project

No.	Risk Factor	Low	Moderate	High	Very High	Rating
3.3	Fire Hazard Severity Zone			X		High
3.4	Fire History		X			Mod
3.5	Local Fire Protection Capabilities		X			Mod
3.6	Water Supply for Fire Suppression		X			Mod
3.7	Emergency Vehicle Access		X			Mod
3.8	Hazardous Fuels		X			Mod
3.9	Structure Ignition Potential			X		High
3.10	Evacuation Routes		X			Mod
3.11	Public Emergency Notification		X			Mod
3.12	Critical Assets / Infrastructure at Risk	X				Low
	Total	1	7	2	0	

Overall Wildfire Risk Rating: Moderate Risk

NOTE: No Very High-Risk factors are currently found in the Project area.

3.3 Fire Hazard Severity Zone

The term Fire Hazard refers to the dangerous accumulation of flammable fuels in open space areas and other Wildland Urban Interface areas (WUI). It is typically described at the landscape (area) level, usually referring to the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fire's intensity or rate of spread. Fire hazard is based on the vegetation types likely to be present over the next 50 years that contribute to fire severity and ember production, the topography of the area, and the average fire weather conditions present in the area.

Fire Hazard ratings are provided by CAL FIRE as part of their *Fire Hazard Zone Severity Mapping* program. One of the major hazards in the El Dorado County region is the threat of a disastrous wildfire endangering both people and property. The Project is also located within a designated⁹ Wildland Urban Interface community identified by the Federal Government as being at risk from a large wildfire due to fire behavior potential and values at risk.

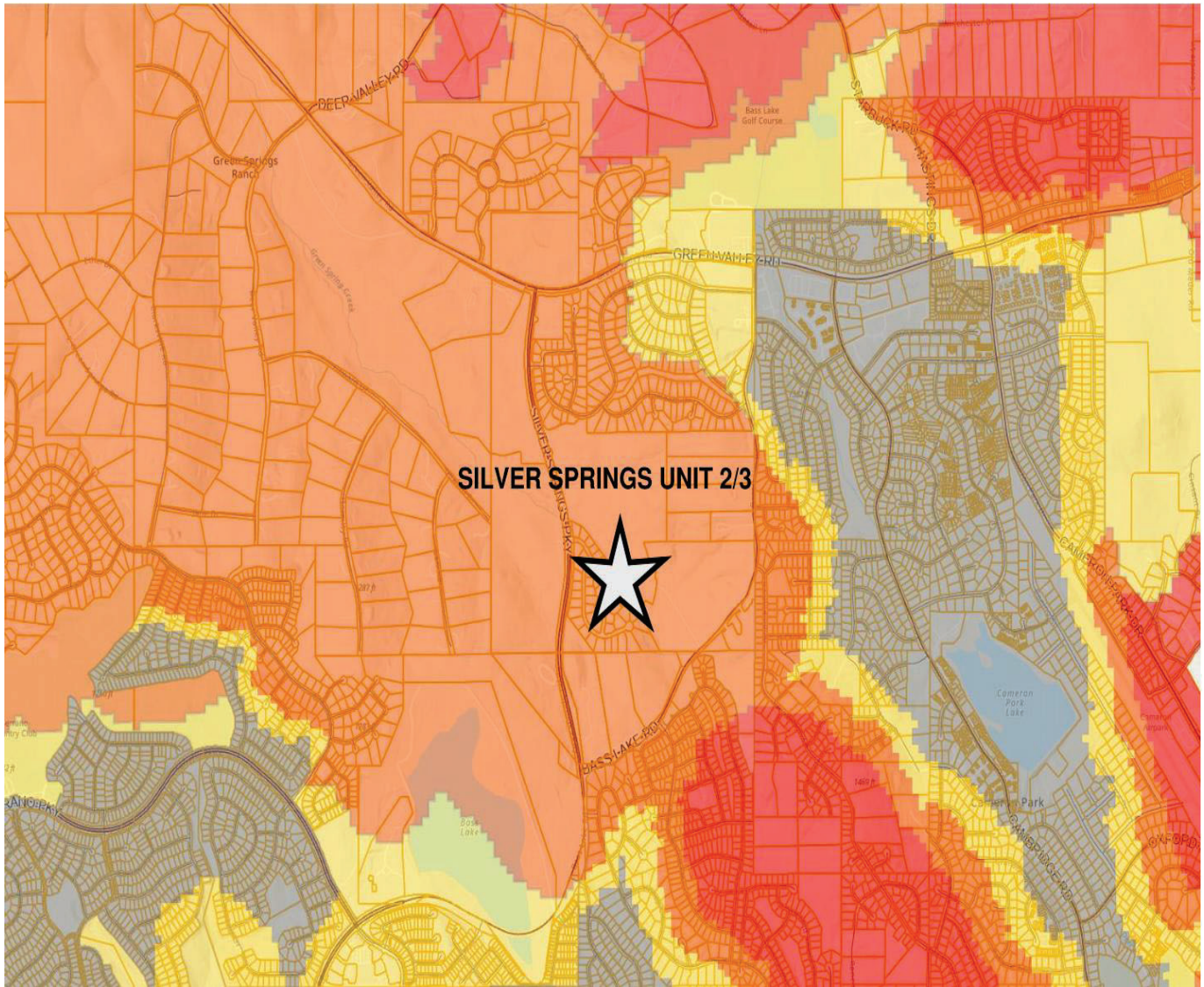
The area is vulnerable to the threat of wildfire throughout the year subject to a variety of conditions including, but not limited to:

- Daily weather conditions such as air temperature, humidity, wind speed, and direction.
- Climatic conditions such as drought, extended seasonal periods of hot, dry weather typically found in the summer and fall months, or seasonal rains typically found in the winter and spring months.
- Fuel moisture and growth cycle periods, especially in fine fuels such as the herbs and shrubs that are prevalent in the area.
- Human caused ignition factors such as arson, escaped debris burns and unsafe equipment operation.

The Project area is located within a State Responsibility Area (SRA) for wildfire management. Wildfire suppression and prevention efforts are provided by CAL FIRE. The current CAL FIRE Hazard

⁹ Federal Register *Urban Wildland Interface Communities within the Vicinity of Federal Lands that are at High Risk from Wildfires*; (January, 2001); [Federal Register: Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are at High Risk from Wildfire](#)

Severity Zone¹⁰ Map for El Dorado County identifies the Project as being within a **High Fire Hazard Severity Zone (HFHSZ)**. Lands within 1,000 feet of the Project are also in a High Fire Hazard Severity Zone. The predominant wildfire risks to the Project are located approximately 1 mile north in the Pine Hill Ecological Reserve area, and the open space areas east and south of the Project along Bass Lake Road. The fire hazard classification for the Project area is illustrated in Figure 4.



LEGEND

- Yellow** Moderate Fire Hazard Severity Zone
- Orange** High Fire Hazard Severity Zone
- Red** Very-High Fire Hazard Severity Zone
- Grey** Undesignated Fire Hazard Severity Zone

Figure 4: Fire Hazard Severity Zone Map for the Project

¹⁰ CAL FIRE; Fire Hazard Severity Zone Map for El Dorado County (April, 2024); [Fire Hazard Severity Zones in State Responsibility Area - El Dorado County \(azureedge.net\)](https://www.azureedge.net).

Local Fire Weather Conditions

El Dorado County's climate is classified as "Mediterranean" meaning it has distinct wet and dry seasons. Predominant local weather patterns in the El Dorado County area¹¹ are characterized by hot, arid, and mostly clear summers and short, cool, wet winters. Dry conditions traditionally begin around the beginning of May and last into late October. An average summer day is 95°-105° Fahrenheit (F), winds from the southwest at 0-10 miles per hour, and relative humidity levels in the 15-25 percent range. Summer lightning storms are infrequent in the area. On average, the strongest wind speeds in the Cameron Park area occur in March through May, but winds can frequently exceed 20 mph throughout the local fire season period. Winters are generally mild, with average daytime temperatures in the 50s° F. Rainfall is concentrated during the winter and spring months.

Fire weather conditions in El Dorado County area are typically dominated by three general weather phenomena: the Delta push influence¹², north wind events¹³, and east foehn winds¹⁴ caused by high pressure development in the Great Basin¹⁵. All three weather conditions cause potential increases in fire intensity and size. The Delta push influence is the most common and occurs frequently throughout the summer.

Typically, high pressure systems will dominate Northern California in the summer months, bringing extremely hot and dry conditions over much of the region. As these systems develop, they tend to originate near the Delta and Sacramento areas, bringing marine influence on the Sacramento Valley region. This is generally considered a good thing for fire behavior; slightly cooler afternoon temperatures and increased relative humidity. The downside is the strong winds that typically accompany these patterns can override any benefit that may come from marine air. The Rescue

¹¹ Ben Bolt Remote Automated Weather Station Site; National Weather Service. [Ben Bolt California \(dri.edu\)](#).

¹² The Delta push influence refers to a meteorological effect related to the Sacramento-San Joaquin Delta in California. When high-pressure systems develop over the Great Basin (east of the Sierra Nevada), they push air westward towards the coast. As this air encounters the coastal mountain ranges, including the Sierra Nevada, it gets funneled through gaps and canyons. This process leads to increased winds and can influence local weather patterns, especially in the foothill areas of El Dorado County.

¹³ North wind events, also called Diablo winds, are hot, dry downslope winds that originate from the northeast and typically affect parts of California's coastal ranges and the western slopes of the Sierra Nevada's.

¹⁴ East foehn winds are dry, relatively warm downslope winds that occur in the lee (downward side) of a mountain range. The descending air becomes warmer and can raise temperatures significantly in a matter of hours (Elvidge et. al. 2016).

¹⁵ See Strategic Fire Plan for Amador El Dorado Unit; 2025; [2025 AEU Unit Fire Plan](#)p.6.

area is periodically impacted by north and east wind patterns with the strongest events typically occurring during the spring and fall seasons. Fire growth is typically wind driven, however as these winds subside, fire immediately returns to fuel/topography driven in opposing directions to the wind driven direction.

Local Topographic Conditions

The topography in the general area of the Project is classified as being a “foothill” terrain type which transitions from the Central Valley area of California to the Sierra Nevada Mountain range. The Project is located south the Pine Hill Ecological Reserve area. The Project area is primarily rolling oak woodlands with gentle; undulating hills coupled with open fields and grasslands. The terrain is primarily flat with some locations between 10%-20% slope. The area generally has west facing aspects. See Figure 5 for the existing topographic condition of the Project area.



Figure 5: Silver Springs Units 2 & 3 Topographic Map

Elevations within the Project area range from 1160 feet along the west end of Unit 3, to 1345 feet above mean sea level along the eastern boundary of Unit 2. Slopes within the Project area are generally moderate (0-20%). RFD has confirmed that no strategic ridgelines are proposed currently within the Project boundaries.

The risk assessment factor assigned to the *Fire Hazard* vulnerability of the Project is rated as **High**. This rating is due to the natural vegetation (fuel) types found in the general area, local topography, and critical fire weather conditions frequently observed. It also includes the potential for a nearby wildfire to easily distribute embers and fire brands in the Project area.

3.4 Fire History

Fire history data provides important spatial data regarding fire spread, fire frequency, ignition sources, and vegetation types across a given landscape. Fire history reviewed for this analysis uses the annual historical fire perimeter data from across public and private lands in the Fire and Resource Assessment Program (FRAP) database from CAL FIRE. Wildfire history for the general area surrounding the Project is illustrated in Figure 6.

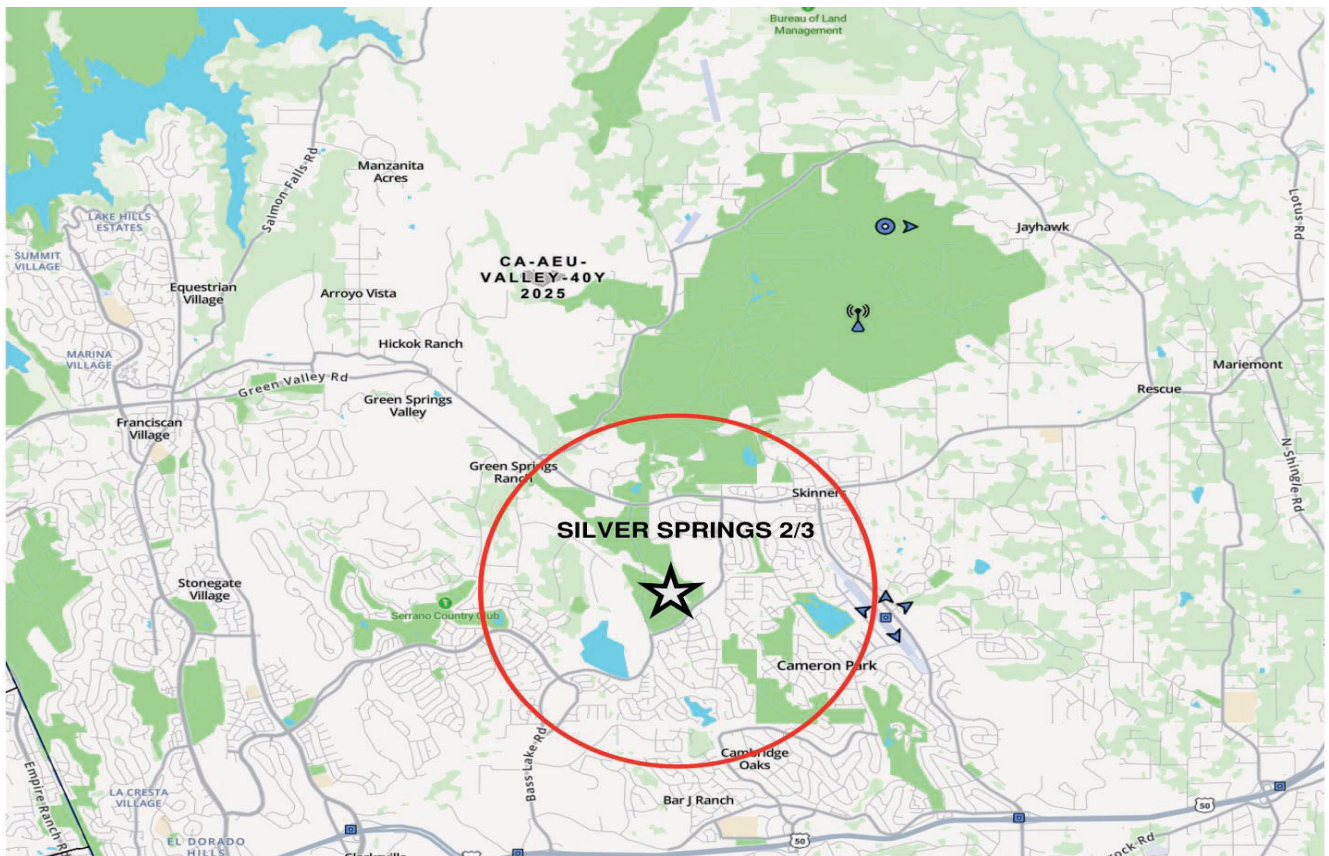


Figure 6: Fire History for the Project Site

Fire history data has been recorded by the State of California since 1900. According to available data from the CAL FIRE FRAP database¹⁶, one large¹⁷ wildfire has burned within a 1-mile radius of Silver Springs Units 2 & 3 since 2020. In 2025 the "Valley" fire damaged 40 acres in the Sweet Valley Road area north and west of the Project. Two older fires, the 2002 "Hickok" fire damaged 294 acres north and west of the Project, and the 2001 "Ethel" fire damaged 10 acres west of the Project.

While reviewing fire cause data reported by CAL FIRE for El Dorado County over the period between 2012-2022, the following ten leading causes of local wildland fires were identified:

- | | |
|-------------------------|--------------------------------|
| 1) Debris Burning (26%) | 6) Power Equipment (9%) |
| 2) Undetermined (16%) | 7) Arson (7%) |
| 3) Equipment (14%) | 8) Natural - Lightning (2%) |
| 4) Other (10%) | 9) Recreation / Campfires (2%) |
| 5) Vehicle (10%) | 10) Smoking (2%) |

It is important to note that the frequency of fire causes does not necessarily correlate with [a] the numbers of acres destroyed, [b] the number of persons injured or killed by a wildfire, or [c] the number of structures damaged or destroyed by a wildfire. As an example, the Caldor wildfire, the largest fire during this reporting period for acreage lost, structures damaged and/or destroyed, and injuries and / or deaths, was determined to be caused by target shooting activity which falls into the "other"¹⁸ category. Factors such as severe weather conditions present when the wildfire ignites, structure density in proximity to the wildfire, response and availability of firefighting resources, and the level of preparedness by the property owner prior to the fire igniting are also critical factors in the outcome of the wildfire. Nine of the ten fire ignition cause categories are human related¹⁹.

The risk assessment factor assigned for the *Fire History* vulnerability of the Project is rated as **Moderate**. The local fire history for the area around the Project shows an increased probability of a wildfire impacting the Project area. Fire frequency in the general area of the Project shows that

¹⁶ See CAL FIRE FRAP Program Website: [Fire Perimeters | CAL FIRE](#)

¹⁷ Defined by CAL FIRE as a wildfire that burnt 10 acres of timber, 30 acres of brush, or 300 acres of grassland.

¹⁸ "Other" common causes that fall into this category include wildfire that are caused by a structure fire, spontaneous combustion, fireplace ashes deposited in the wildland, barbecuing, cooking fires, and fireworks.

¹⁹ Excludes Natural-Lightning caused fires.

large wildfires occur in the northern area of Rescue on average of once every 20 years. This makes it highly probable that a wildfire will impact the Project area in the lifespan of the buildings located within it. As most wildfires are human caused it is likely that the frequency of fires in the area will increase.

3.5 Local Fire Protection Capabilities

Local government fire protection and rescue services for the Project are provided by the Rescue Fire Department (RFD). Wildland fire protection responsibility remains under the authority of the California Department of Forestry and Fire Protection, Amador-El Dorado-Alpine-Sacramento Ranger Unit (CAL FIRE). Emergency medical services, including ground ambulance transport, are provided to the Project by El Dorado County Community Service Area No. 7 (CSA 7).

There are two (2) nearby fire stations in the vicinity of the Project:

- El Dorado Hills Fire Department (EDHFD) Station No. 86 is located at 3670 Bass Lake Road. Station 86 is approximately 2.45 miles south of the Project site. This station houses Engine 86, an Advanced Life Support (ALS) Type 1 fire engine staffed each day with a minimum of three (3) firefighters, and Medic 86, a CSA 7 ALS ground ambulance staffed each day with two paramedics.
- Cameron Park CSD Fire Department (CAM) Station No. 88 located at 2961 Alhambra Drive in Cameron Park. Station 88 is approximately 2.60 miles east of the Project site. This station houses Engine 88, an advanced life support Type I fire engine staffed each day with two (2) firefighters.

The next three (3) closest fire stations are RFD Fire Station 83 located at 5221 Deer Valley Road in Rescue, EDHFD Station 84 located at 2180 Francisco Drive in El Dorado Hills, and CAM Fire Station 89 located at 3200 Country Club Drive in Cameron Park. All three fire stations are approximately 15 minutes or less from the Project when traveling in typical road conditions for responding fire apparatus. The closest aerial ladder truck serving the Project is EDHFD Truck 85 located at 1050 Wilson Blvd.

During a wildfire a coordinated response²⁰ between RFD and CAL FIRE will take place. The nearest CAL FIRE stations to the Project are Station 43 located at 5660 Mother Lode Drive in El Dorado, Station 50 located at 5061 Marshall Road in Garden Valley, and Station 70 located at 4731 Pedro Hill Road in Pilot Hill. All three fire stations are approximately 20 minutes or greater from the Project when traveling in typical road conditions for responding fire apparatus.

The Project is located within an Insurance Service Office (ISO) Public Protection Class 4/4Y rating area. Emergency response travel times for the first arriving unit to the Project are, on average, less than 8 minutes²¹. These response times are consistent with El Dorado County General Plan Policy 5.1.2.2 which calls for an average response time to emergency calls eight minutes or less in community region areas.

The risk assessment factor assigned to the *Local Fire Protection Capability* serving the Project is described as **Moderate**. The Project is served by a local fire department that meets the emergency response travel time requirements of the County. An effective initial alarm response force²² can be achieved with the deployment of fire engines from RFD, CAL FIRE, and the surrounding fire agencies to contain a Low-Hazard²³ structure fire to the building of origin.

3.6 Water Supply Source for Fire Protection

The design, installation, and maintenance of the water supply system for fire protection shall be in accordance with CCR Title 14 §§ 1275-1275.04 (Emergency Water Standards) and CCR Title 24 – Part 9 (California Fire Code), Section 507 (Fire Protection Water Supplies). The Project is located within the municipal water service area of the El Dorado Irrigation District (EID). The Project is required to meet a minimum fire flow requirement of up to 1,000 gallons per minute (GPM) with 20-pounds per square inch (PSI) residual pressure remaining in the system per the requirements of RFD.

²⁰ CAL FIRE has legal responsibility for the suppression and prevention of wildfires within the Project area currently.

²¹ Response times are based on an average 90 second turnout time by firefighters from their station plus travel time using the closest roads available to the project. The response time standard the county uses to evaluate the adequacy of the project meeting General Plan Policy 6.2.3.1 are based on the closest station (Station 86) only, and not the average response times of all resources responding to an incident.

²² Defined as the minimum number of firefighters and equipment that must reach a specific emergency incident within a maximum prescribed travel [driving] time.

²³ Defined as one-two-or three-family dwellings and scattered small business and industrial occupancies.

The risk assessment factor assigned to the *Water Supply Source for Fire Protection* serving the Project is described as **Moderate**. The water system serving the Project is capable of meeting the required fire-flow demands of RFD. The average spacing between fire hydrants within all areas of the Project shall be no greater than 500-feet apart along fire apparatus access roads.

3.7 Emergency Vehicle Access

Primary access to the Project is provided by Silver Springs Parkway and Bass Lake Road. Both are public roads operated by the County of El Dorado that will allow for both emergency vehicle access and civilian evacuation from the area to occur concurrently. Green Valley Road is located north of the Project and will also provide Emergency Vehicle / Evacuation Access routes²⁴ into and out of the Project area. Secondary access out of the Project is provided via a road connection located at Sutro Way and Bass Lake Road.

The Project is served by a public road system network that is designed in accordance with both state and local fire safe regulations, and the conditions of approval described in TM97-1330 for emergency vehicle access. All roads are located within a 40-foot-wide public right-of-way. No security gates or traffic calming measures are proposed to serve these public right-of-ways.

Primary access into Unit 2A is via Silver Springs Parkway and Arapahoe Drive. Primary access into Unit 2B is via Bass Lake Road at Sutro Way. Primary access into Unit 3 is via Silver Springs Parkway at Willamette Drive. All units will have secondary access routes available to the other units via internal roads in the Project. Secondary access routes are required in each unit when there are 30 or more occupied dwellings located in that unit.

The risk assessment factor assigned to the local *Emergency Vehicle Access* serving the Project is described as **Moderate**. The Project is located within the Rescue rural region which may lead to road congestion delaying emergency equipment access during peak traffic times. In addition, all roads in the area are two-lane roads that can potentially be impacted by concurrent events leading to the evacuation routes becoming compromised during a wildfire.

²⁴ The term *Emergency Vehicle Access* is defined as a road or connection designed to connect directly to a through road and used to comply with 14CCR§1273.08. The road shall serve as a secondary means of emergency vehicle access and civilian evacuation for the Project.

3.8 Hazardous Fuels

The term Hazardous Fuels²⁵ is used to describe the following types of flammable vegetation found in the community:

- Excess woody materials on the ground or in the forest understory or canopy that can increase the severity of a wildfire; and
- Any kind of living or dead vegetation that is flammable; and
- “Weeds” and dead or dying trees that endanger public safety by creating a fire hazard.

Hazardous Fuels serve as one of the primary pathways for wildfires to spread into the Wildland Urban Interface (WUI) community. This is accomplished by one or more of the following means:

- Direct flame contact, when buildings ignite through direct contact with flames from an approaching wildfire; and
- Radiation, the intense heat emitted by flames that increases the temperature of combustible materials on or within a building; and
- Firebrand ignition, when flammable vegetation or structural materials break off and travel ahead of an advancing wildfire, as seen with embers.

The Project site is located within areas classified as “Grassland” or “Oak Woodland” habitat. The predominant natural vegetation types found within 1-mile of the Project include Tall Grasses (GR2), and Oak Woodland with understory fuels (TU4). Live and dead fuel loading in the area are generally described as Moderate.

The Project is located south of the Pine Hill Ecological Reserve and Deer Valley areas. Those areas are covered with continuous unmanaged vegetation that has sufficient fuel to sustain the spread of a surface fire to the area of the Project. The Project is in an area that has a moderate slope (0-20%) in a mixture of vegetation types that will also permit firebrand ignition to easily reach the Project during a wildfire from both the south and east.

Hazardous Fuels for the general area surrounding the Project are illustrated in Figure 7²⁶.

²⁵ *Treating Hazardous Fuels at a Scale that Makes a Difference*; U.S. Forest Service Fact Sheet FS-1189e, April 2022

²⁶ Pyrocast GIS Fuel Map (Accessed April 23, 2026); [Wildfire Forecasts \(pyrocast.org\)](https://www.pyrocast.org)

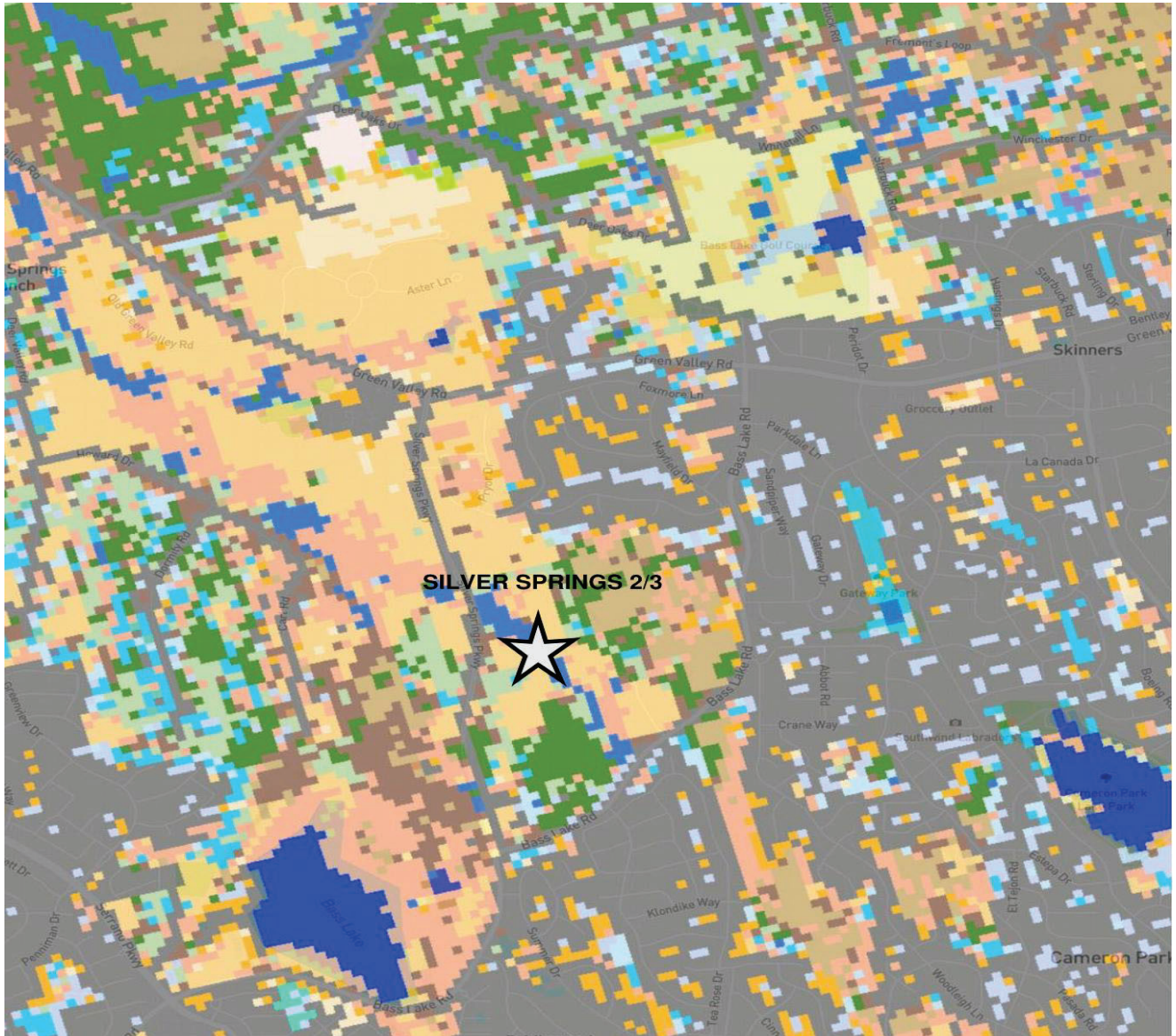


Figure 7: Vegetation Types Found in Area (Data source: PyreCast Wildfire Forecasting Platform (pyrecast.com))

The risk assessment factor assigned to the *Hazardous Fuels* located on the Project is described as **Moderate**. The Project is adjacent to the Pine Hill Preserve area of the County. This area is currently classified as a wildland area. The Pine Hill and Deer Valley drainages generally run in a north-south direction which will allow wildfires to spread into the Project area due to local topographic and weather conditions present at the time of the fire. No natural physical barriers, such as large waterways, greenbelts, and rock outcroppings, exist in the area to slow down or prevent fire progression. The use and maintenance of the “Fire Smart Vegetation” concepts described in Chapter 7, especially within 30-feet of buildings and structures, will be critical in reducing the risk of vegetation ignition that can lead to building-to-building fire spread.

3.9 Structure Ignition Potential

Building features, such as the materials used to protect roof assemblies and exterior walls, can determine a building's susceptibility to ignition. Fire intensity within 100-feet of a building and embers landing on or within 5-feet of a building, represent the greatest exposure from a wildfire. Together their capacity to ignite buildings is a major factor in building-to-building ignition and urban conflagration potential. Once an ignition occurs the survival of a building is dependent on the fire protection resources (e.g. built-in fire protection systems, firefighting personnel, water supply capability, etc.) that can be committed to extinguish the fire before it spreads to adjacent buildings.

The risk assessment factor assigned to the *Structural Ignition Potential* for the Project is described as **High**. The potential for building-to-building fire spread is greatest within those areas of the Project where buildings, and accessory buildings, are located within 30-feet of each other. Continuous combustible materials, including wood fencing and ornamental landscaping, can easily serve as a means for fire spread to occur that will threaten both the inhabitants and buildings.

3.10 Evacuation Routes

The California Office of Emergency Services (CALOES) defines the term "Evacuation" to mean "the organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas." The decision to initiate a local evacuation during a wildfire emergency rest with the public safety agencies (law enforcement and fire) based on a comprehensive threat assessment made in the field. The implementation and enforcement of evacuation orders rests with law enforcement.

Evacuation types typically focus on one or more of the following methods:

- Evacuation Warnings Issued by Public Safety Officials; and
- Evacuation Orders Issued by Public Safety Officials; and
- Temporary Refuge Area / Shelter in Place decisions made by residents/visitors.

The principal goal of a wildfire evacuation is to protect the public from the threat of a wildfire without injury or death.²⁷ To achieve this goal the objectives of a manageable and successful evacuation by the public include the following:

- Immediate identification of a wildfire threat and constant awareness of the fire behavior that may impact your location; and
- Receiving emergency alerts and communications from public safety officials and responding to their directions in an appropriate fashion; and
- Recognizing the need to depart from the area in a judicious and prepared departure; and
- Safely and competently evacuating to an area outside a hazardous area.

During an unplanned evacuation of the area during a wildfire event, it is not unusual for people leaving to encounter obstacles (e.g. fallen trees, down utility lines and poles across roadways, and vehicle accidents) that can result in evacuation routes being partially or fully blocked. Early traffic control by law enforcement at the Silver Springs Parkway / Green Valley Road and Silver Springs Parkway / Bass Lake Road intersections will be critical in ensuring an orderly evacuation process.

The risk assessment rating assigned to the *Evacuation Routes* category for the Project is described as **Moderate**. All evacuation routes serving the Project are two-lanes. The potential exists for these routes to be compromised or obstructed during a wildfire. A coordinated on-going set of evacuation drills and exercises for the entire area should be considered as soon as practical with local law enforcement and fire officials.

Should an evacuee encounter obstacles such as described above, or a blocked evacuation route due to congestion, panic like that noted in the 2025 wildfires in Los Angeles is a possibility. An important decision-making process by the residents of the Project once a wildfire in the local area is discovered is to leave as early as possible. See Chapter 6 for additional steps that residents and visitors can take to prepare for an evacuation.

²⁷ See *Literature Review of the State-of-the-Science in Wildfire Evacuation* (2022); Marin Wildfire Prevention Authority.

3.11 Public Emergency Notification

Providing current and reliable information to large numbers of people during a wildfire is an important part of reducing negative outcomes and ensuring public safety. Community notification is an important aspect of evacuation planning. Evacuations are often initiated by emergency officials who issue notifications and instructions to the affected populations using various tools such as opt-in mass alert systems, Reverse-911, the Integrated Public Alert & Warning System (IPAWS), social media, and the internet. Sirens and door-to-door notifications may also be utilized. If time allows, evacuations may be conducted in phases, starting by notifying and evacuating areas of the community that may be affected first.

In El Dorado County all public safety agencies have partnered to implement the *RAVE* alert notification system.²⁸ The alert system is managed by the El Dorado County Sheriff's Office and allows for public safety agencies to quickly send an emergency alert to citizens in all geographic areas of the County. This system enables the El Dorado County Sheriff's Office of Emergency Services (County OES) to provide residents with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons, and evacuations of buildings or neighborhoods. El Dorado RAVE provides community members with emergency notifications through telephone call, text message, and email notifications.

El Dorado County has been authorized by FEMA to use the Integrated Public Alert & Warning System (IPAWS). This is FEMA's national system for local alerts that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration's Weather Radio.

The risk assessment factor assigned to the *Public Emergency Notification* category for the Project is described as **Moderate**. The County of El Dorado has access to both Opt-in / Opt-out emergency alert systems for use in notifying people about a wildfire impacting their community. However, it

²⁸ El Dorado County RAVE, Citizen Notification System; [El Dorado County Emergency Alerts \(edso.org\)](http://elso.org)

should be noted that communication infrastructure outages and failures can accompany destructive wildfires thereby disrupting these systems. The County is also authorized to utilize the IPAWS system for local alerts. Finally, it is the practice of County OES to send law enforcement officers door-to-door to provide in person evacuation noticing to residents and visitors when an evacuation order is implemented thereby further reducing the risk of individuals not receiving word of a wildfire or similar emergency.

3.12 Critical Assets / Infrastructure at Risk

The identification and analysis of Critical Assets and Infrastructure at Risk is an important part of a comprehensive fire risk analysis. This analysis also looks at potential risks associated with public service sites designated in California as being “Essential” that must conform to current seismic design criteria. Refer to *Appendix B: Critical Assets / Infrastructure at Risk Table* for additional information on the various categories of uses that have been identified within the Project area.

The risk assessment factor assigned to the *Critical Assets / Infrastructure at Risk* category for the Project is described as **Low**. no *Essential Service* facilities, At- Risk Population, or Hazardous Materials/Solid Waste facilities are proposed within the Project.

END OF CHAPTER

CHAPTER 4: FIRE PROTECTION PLANNING

4.1 Chapter Overview

The purpose of this Chapter is to describe the recommended fire prevention and emergency planning best practices for the Project. This Chapter is consistent with nationally recognized and accepted practices for the preservation of life and property from the hazards of fire and other dangerous conditions associated with a wildfire and/or urban conflagration. This Chapter is based on a Project-specific wildfire hazard and risk assessment as described in Chapter 3 and includes analysis on the following subjects:

- Road and Building Address Signage Requirements; and
- Emergency Vehicle Access Requirements; and
- Emergency Water Supply Requirements; and
- Building and Parcel Siting and Setback Requirements; and
- Applicable Building Codes and Standards for Wildfire Safety; and
- Fire Protection System Requirements.

4.2 Road, Building, and Site Identification Signage Requirements

The address installation, location and visibility on the building shall meet the requirements found in CCR Title 14, Division 1.5, Chapter 7, Sections 1274.00-1274.04, CCR Title 24, Part 9, Section 505, El Dorado County Code Section 110.04, and RFD Fire Protection Standard No. B-001 (Addressing of Buildings). The following subsections provide additional information regarding these requirements related to this Project.

4.2.1 Road Name Requirements

El Dorado County Code Chapter 110.04 provides uniform numbering system requirements for all new and existing developments and buildings to enhance the ability of emergency responders to respond rapidly to fire, medical and law enforcement incidents. Section 110.04.090 of the County Code describes the road naming standards of the County that apply to new and existing developments. All private roads within the Project have been approved for use by the County.

4.2.2 Road Sign Requirements

Newly constructed or approved roads shall be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming as approved by the County of El Dorado. Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet. Road signs shall meet the following criteria:

- A.** The location and type of road sign installed shall conform with El Dorado County Department of Transportation Design Standard 105B (3/90).
- B.** A sign identifying traffic access or flow limitations, including but not limited to, weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions shall be placed:
 - At the intersection preceding the traffic access limitation, and
 - No more than one hundred (100) feet before such traffic access limitation.
- C.** A “Dead-End” road sign shall be installed at the following locations in accordance with CCR Title 14, Section 1274.02 (d):
 - Unit 2B - Sorento Drive

All road signs shall be posted at the beginning of construction and shall be maintained thereafter.

4.2.3 Building Address Requirements

All buildings within the Project shall be issued an address by the County of El Dorado which conforms with the overall address system. Utility and miscellaneous buildings are not required to have a separate address. The address installation, location and visibility on the building shall meet the requirements found in CCR Title 24, Part 9 (Fire Code), Section 505, and RFD Fire Protection Standard No. B-001 (Addressing of Buildings).

The following provisions shall be met for the placement of address numbers on a building:

- A. All homes shall have a permanently posted address which shall be plainly legible and visible from the road fronting the property.
- B. Address numbers shall be either internally or externally illuminated.
- C. Address numbers shall be contrasting in color to the sign background, and with a number height of not less than 4-inches and with a stroke width of 1/2-inch.
- D. Address numbers shall not be spelled out.
- E. Address numbers shall be posted between 4-feet and 7-feet above grade.
- F. A separate address sign shall be posted on accessory dwelling units (ADU) or granny flat structure.

When the building is located more than 100-feet from the provided road serving the Project an address sign shall be placed at the driveway entrance onto the parcel. The address sign shall meet the following additional criteria:

- A. Signs shall be mounted between 4-feet and 7-feet above grade.
- B. Posted no further than 5-feet from either the driveway or roadway travelled way, and on the same side of the road as the serviced driveway.
- C. Oriented perpendicular to the direction of travel on the roadway and legible from both directions of travel on the driveway.
- D. Address numbers shall be reflective and contrasting in color to the sign background, and with a number height of not less than 4-inches and with a stroke width of 1/2-inch.

In all cases, the address shall be posted by the builder at the beginning of construction and shall be maintained thereafter by the property owner.

4.3 Emergency Vehicle Access Road Requirements

Emergency vehicle access is an important element of the WFPP for the Project area. Fire apparatus access is necessary to provide fire protection services to their jurisdiction as well as respond to a variety of other emergencies such as medical emergencies, motor vehicle accidents, hazardous material spills, electrical hazards, floods, and construction accidents. Fire apparatus access can be described as the means (e.g., roads, bike paths, trails, etc.) by which firefighters can enter an area to quickly mitigate a wildfire incident before it spreads to adjacent properties and critical

assets / infrastructure at risk. Public and private roads constructed within the Project shall conform with the requirements found in this section of the WFPP. See Subsection 4.3.4 for specific requirements for driveways greater than 150 feet in length.

4.3.1 Secondary Access Road Requirements

RFD Fire Code Appendix Section D107 requires developments of one-or two-family dwellings, where the number of dwelling units exceeds 30 dwellings, shall be provided with no less than two separate and approved emergency vehicle access roads. The following specific requirements apply to the Project:

- Unit 3 shall be provided with an approved secondary access road connection from Cornice Lane in Unit 3 to Arapahoe Drive in Unit 2A, and Arapahoe Drive to its connection at Silver Springs Parkway. The secondary access road shall be constructed and accepted by RFD prior to the issuance of the thirty-first (31) occupancy permit in Unit 3 of the Project.

4.3.2 Dead-End Roads

CWUIC Section 403.1.9 limits the maximum length of dead-end roads to no greater than 1,320 feet when serving parcels zoned for 1 acre to 4.99 acres.

4.3.3 Road Design Requirements

An approved emergency vehicle access road shall be provided for all buildings located within the Project. The emergency vehicle access road shall meet the requirements found in CFC Section 503, RFD Fire Protection Standard No. B-003 (Emergency Apparatus Access Ways), and TM197-1330, and shall extend to within 150 feet of all portion of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. The following road construction provisions shall be met on all emergency vehicle access roads:

- A.** All fire apparatus access roads serving the Project shall be constructed to a minimum unobstructed width of 26-feet and meet the current design requirements of CFC Section 503.
- B.** Buildings or portions of buildings hereafter constructed within the Project shall be accessible to fire apparatus by way of an approved fire apparatus access road with an asphalt, concrete,

or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds. Road structures shall be designed and maintained to support at least 40,000 pounds.

- C. At no point shall the grade for all roads exceed 16% unless approved by RFD. Approach and departure angles in fire apparatus access roads shall not exceed 5% over 5-feet as required by CFC Section 503.2.8.
- D. The inside turning radius for any fire apparatus access road shall be 30 feet or greater. The outside turning radius for an access road shall be 50 feet or greater.

On-street parking shall conform with the current fire lane requirements described in the RFD Fire Code and as described in Figure 8.

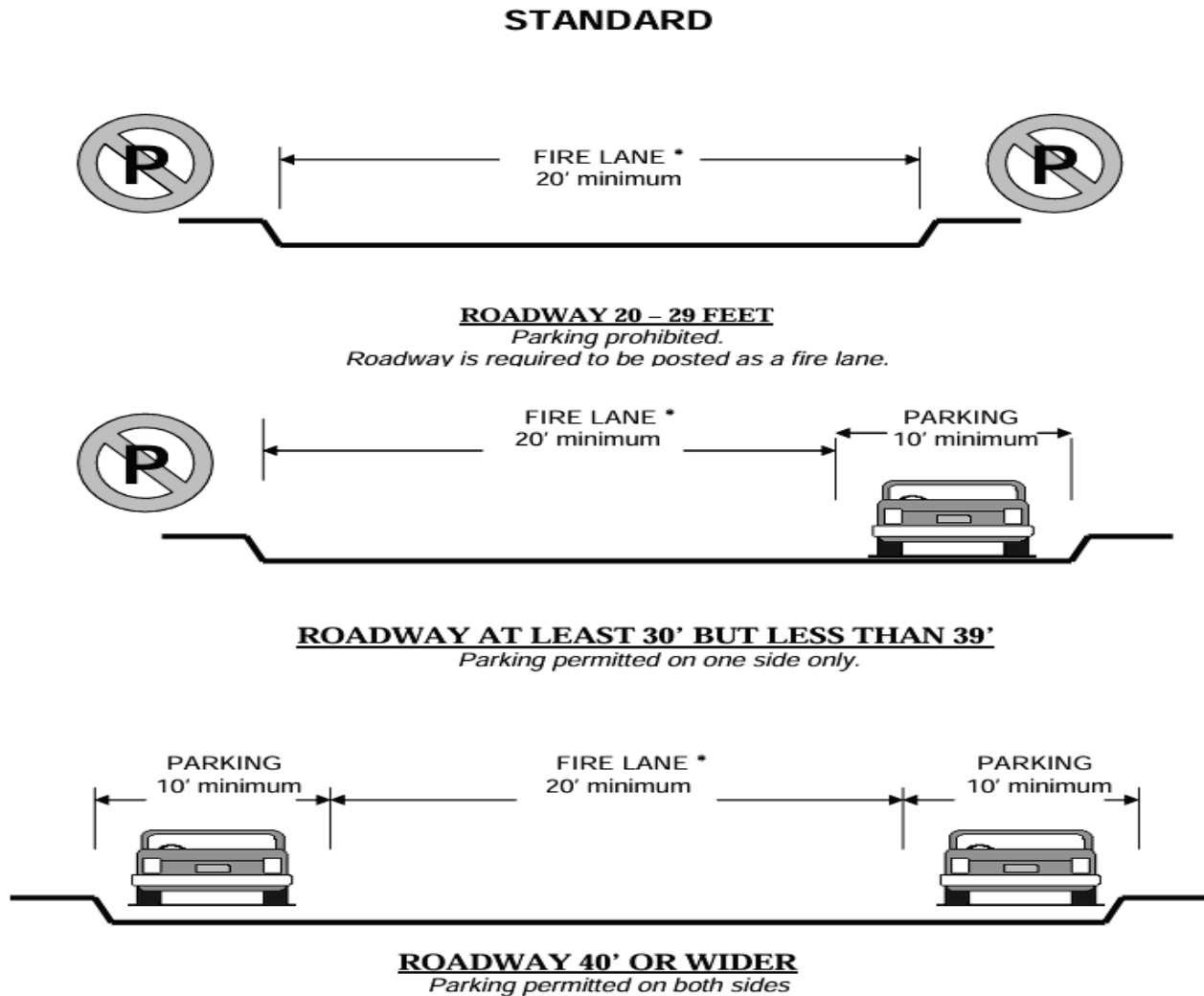


Figure 8: Fire Lane Marking Requirements for Roads

Fire lanes shall be identified in the following manner.

- A.** The designation shall be indicated by one of the following means: (1) by a sign posted immediately adjacent to, and visible from, the designated place clearly stating in letters not less than one inch in height that the place is a fire lane, or (2) by outlining or painting in red and, in contrasting color, marking the place with the words “NO PARKING - FIRE LANE”, which are clearly visible from a vehicle, or (3) by a red curb or red paint on the edge of the roadway upon which is clearly marked the words “NO PARKING - FIRE LANE”.
- B.** Where a fire hydrant is located on a road, approved signs or markings that include the words “NO PARKING – FIRE LANE,” shall be provided. Approved red-curb markings stating showing that it is illegal to park in front of or within 15-feet to each side of a fire hydrant shall be posted and maintained. See the current edition of RFD Fire Protection Standard No. B-004 (No Parking – Fire Lane) for additional details.

No speed bumps, speed humps, speed control dips, etc. shall be permitted on emergency vehicle access roadways. All other traffic calming devices shall be prohibited unless approved by RFD as required by CFC 503.4.1.

4.3.4 Driveway Requirements

Driveways to individual lots shall be constructed to the requirements below as described in California Fire Code Section 503.1.1 (with local amendments by RFD), California Code of Regulations Title 14, Sections 1273.00 – 1273.09 (CCR Title 14, Section 1273), and the Silver Springs Units 2 & 3 (TM97-1330) conditions of approval:

- A.** Approved fire apparatus access shall be provided for every building or portion of a building hereafter constructed or moved into or within the Silver Springs Units 2 & 3 project. The fire apparatus access road or driveway shall comply with the requirements of this section and shall extend to within 150-feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

1. The fire code official is authorized to increase the dimension of 150-feet where any of the following conditions occur:
 - i. In one-and two-family dwellings that are equipped with an automatic fire sprinkler system the distance can be increased from 150-feet to 300-feet. All requirements found in CCR Title 14, Sections 1273 (e.g. minimum width, maximum grade, road surfaces, vertical clearances, etc.), remain applicable.
 - ii. Fire apparatus access roads and driveways cannot be installed because of location on the property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
 - iii. There are not more than two Group R-3 or Group U occupancies.
 2. Where approved by the fire code official, fire apparatus access roads and driveways shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.
- B.** Approach and departure angles along fire apparatus access roads shall not exceed 5% over 5-feet as required by RFD Fire Code Section 503.2.8.
- C.** Driveways shall provide not less than 12-feet of unobstructed width, not including shoulders, throughout the entire length of the road. An unobstructed horizontal clearance of not less than 14-feet, and a vertical clearance of 13'6", shall be provided along the length of the driveway.
- D.** Driveways exceeding 150-feet in length, but less than 800-feet, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800-feet turnouts shall be provided no more than 400-feet apart.
- E.** Turnouts shall be a minimum 10-feet in width and 30-feet in length with minimum 25-foot tapered ends.
- F.** Driveways shall be designed and maintained to support the imposed live load of not less than 75,000 pounds gross vehicle weight for emergency vehicle access.

Exception: Where the highest roof surface of the building is less than 30-feet from the grade plane of the driveway the imposed live load may be reduced to 40,000 pounds gross vehicle weight.

- G.** Driveways accessed by grades that exceed 12% shall be provided with either an asphalt or concrete surface covering.
- H.** At no point shall driveway grades exceed 16% unless the following additional driveway construction methods are provided:
 - 1.** Driveways shall have a surface covering of either Type 2 asphalt slurry, or a concrete broom finish to improve vehicle traction.
 - 2.** The maximum grade authorized shall not exceed 20% at any point along the driveway.
 - 3.** Where required a turnaround shall be constructed and maintained on driveways over 300-feet in length. The turnaround shall be located within 50-feet of the building.

4.3.5 Automatic Security Gates Across Private Driveways

- A.** Gated entrances located across driveways shall comply with the following criteria:
 - 1.** Gated entrances shall be approved by RFD prior to its installation.
 - 2.** All gates providing access from a road to a driveway shall be located at least 30-feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.
 - 3.** The gate entrance shall be at least 2-feet wider than the width of the driveway.
 - 4.** Gates shall be of a horizontal swing, horizontal slide, vertical lift, or vertical pivot type.
 - 5.** Construction of gates shall be of materials that allow manual operation by one person.
 - 6.** Gate components shall be always maintained in an operative condition and replaced or repaired when defective.
 - 7.** Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by RFD.
 - 8.** Methods of locking shall be submitted for approval by RFD.
 - 9.** Electric gate operators, where provided, shall be listed in accordance with UL 325.
 - 10.** Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200.

4.4 Emergency Water Supply Requirements

Section 1275.02 (Water Supply) of California Code of Regulations Title 14 (Fire Safe Regulations), and Section 507 (Fire Protection Water Supplies) of California Code of Regulations Title 24 – Part 9 (California Fire Code), both require an approved water supply that is capable of supplying the required fire flow for fire protection for all new building’s hereafter constructed. As the number of buildings and their square footages is not known at this date the following general information on required fire flows is the only data currently available for analysis. The required fire flows for determining the water supply needs for the project are described in Table 3.

Table 3: Fire-Flow Requirements²⁹ for the Project

Fire-Flow Calculation Area (square feet)	Automatic Sprinkler System Type	Minimum Fire-Flow (gallons per minute)³⁰	Flow Duration (hours)
0-3,600	CFC 903.3.1.3 ³¹	1,000	1
3,601 and greater	CFC 903.3.1.3	½ Value in CFC Table B105.1 (2)	2

4.5 Open Burning, Recreational Fires and Portable Outdoor Fires

To mitigate the risk of wildfires originating within the Project the HOA shall enforce the following fire safety measures:

- A.** Prohibit smoking and other burning materials within open spaces. At the entrance to any trail, “No Smoking” signs shall be posted; and
- B.** Prohibit wood burning campfires, bonfires, and recreational fires in all areas; and
- C.** Prohibit debris burning, regardless of state and local regulations permitting such activities, in all areas.

²⁹ “Fire Flow” is the flow rate of a water supply, measured at 20 pounds per square inch (psi) residual pressure, that is available for firefighting.

³⁰ CFC Appendix Section B103.2 authorizes the fire code official to increase the fire-flow requirements when conditions indicate an unusual susceptibility to group fires or conflagrations.

³¹ See NFPA Standard 13D (*Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes*) as amended by the State of California in Title 24 – Part 9, Chapter 80.

4.6 Fire Safety During Construction Activities

During the development of the Project the site will transition from an open grassland to a developed residential community. To reduce the fire threat during construction the Project shall comply with California Fire Code (CCRT24 - Part 9), Chapter 33 (Fire Safety During Construction and Demolition) as required by RFD and CAL FIRE. The relevant provisions found in this Chapter of the fire code include the following provisions.

4.6.1 Access for Firefighting

- A.** Fire apparatus access for fighting shall be provided to within 150 feet of all buildings under construction.
- B.** Fire apparatus access roads shall be maintained unobstructed at all times.

4.6.2 Precautions Against Fire Ignition

- A.** Temporary LP-gas storage tanks shall have a minimum clearance of 10 feet down to bare minimum soil in all directions.
- B.** Smoking is prohibited except in approved areas. Signs stating NO SMOKING shall be posted in the construction area as determined by RFD. Persons shall not smoke within 15 feet of combustible materials or vegetation.
- C.** Equipment and devices generating heat, sparks, or open flames capable of igniting nearby combustibles shall not be used in open space areas without approval from RFD.
- D.** Outdoor fires, including campfires, debris burning, and the burning of construction materials, shall be prohibited in the construction area.
- E.** Hazardous materials in excess of 10 gallons of liquid, 200 cubic feet of gas, or 10 pounds of solids shall comply with the applicable provisions described in CFC Chapter 33. Storage areas for hazardous materials shall be maintained clear of combustible vegetation and waste materials.
- F.** Vehicle and equipment fueling shall be conducted in designated locations at least 10 feet from combustible debris or building material storage areas, and 30 feet from hot work areas.

4.6.3 Hot Work

- A.** Welding, cutting, and other hot work shall comply with CFC Chapter 35. Hot work shall be performed in designated fire-safe areas.
- B.** Hot work areas shall maintain a minimum clearance of 30 feet between the work site and grass, brush, and other combustible materials.
- C.** Hot work shall not be performed in open space areas unless said work is performed in accordance with an RFD permit.
- D.** All personnel involved in hot work shall be trained in the safe operation of the equipment. This will include providing training at “tailgate safety meetings”. Personnel shall be made aware of the risks involved and emergency procedures, such as how to transmit an alarm, how to use a portable fire extinguisher, and who is responsible for calling 9-1-1.

END OF CHAPTER

CHAPTER 5: SPECIAL BUILDING CONSTRUCTION

5.1 Chapter Overview

The purpose of this Chapter of the WFPP is to describe the minimum requirements for land use and building construction within Silver Springs Units 2 & 3. The Project shall conform with the following standards:

- 2026 edition of California Wildland Urban Interface Code (CWUIC) Chapters 5 and 6.
- 2026 Rescue Fire Department (RFD) Standard P-001 *Residential Setback for Structure Defensible Space*
- Institute of Business and Home Safety (IBHS) *Wildfire Prepared Home* Technical Standard (December, 2025)

Silver Springs Unit 2 & 3 is located within a High Fire Hazard Severity Zone. The purpose of these land use and building construction standards is to increase the ability of buildings located in the Project to resist the intrusion of flames and embers projected by a fire and to reduce the potential of conflagration losses and the likelihood of life and property loss due to a wildfire. All land use and buildings have been designed, constructed and maintained for all future owners of the community to obtain commercial fire insurance for their properties.

Silver Springs Units 2 & 3 have been designed to meet the requirements found in the IBHS *Wildfire Prepared Neighborhood (WFPPN)* program. This program is intended to address the increasing threat of wildfires, particularly in areas prone to such disasters. This program focuses on creating neighborhoods that are better equipped to withstand wildfires through specific design and mitigation strategies.

Each dwelling in the Project is also designed to the *Wildfire Prepared Home Plus (WFPP)* designation program. Established in 2022, WFPP is the first-ever wildfire mitigation program allowing homeowners to earn a designation by completing a set of science-based actions addressing three vulnerable areas of a home – the roof, specific building features and defensible space – to meaningfully reduce their home’s wildfire risk. The WFPP program takes a systems-based approach and features two designation levels (Base, Plus). The Plus level builds upon base-level requirements and adds enhanced protection against direct flame contact and radiant heat.

Once a designation is achieved, homeowners must take an active role in maintaining the three-year designation by submitting an annual review that verifies ongoing landscaping maintenance, so the property continues to comply with program requirements and is better protected from wildfire.

5.2 Building and Parcel Siting and Setback Requirements

CWUIC Section 608 requires all parcels to provide a minimum thirty (30) foot setback for all buildings from all property lines and/or the center of the road, except as provided by the provisions described in this code section, and as approved by RFD³².

When a 30-foot setback is not possible for practical reasons, which may include but are not limited to parcel dimensions or size, topographic limitations, or other easements, RFD requires³³ that the structure be constructed and maintained in accordance with the current provisions described in RFD Fire Protection Standard # P-001 (Residential Setback for Structure Defensible Space).

See Section 5.4 and Appendix L of the WFPP for the specific provisions that RFD requires a building to meet when it is located within 30-foot fire-safe setback. When the Project is seeking to construct a building within the required 30-foot fire-safe setback the restrictive covenant materials shall be submitted for RFD review and approval prior to the issuance of a building permit.

- A. Setback Exemption Request Letter.** Applies to structures encroaching the SRA required setback only. This request letter states the conditions (i.e., site topography) driving the request for exemption.
- B. Setback Compliance Plan.** Applies to structures encroaching the SRA required fire safe setback only. This plan shall illustrate the location of all structures located on the parcel, location of property lines, and location of required setbacks. This plan shall also illustrate the fire protection features to be installed (i.e., decks, soffits, windows, doors, skylights, vents, etc.), inclusive of the manufacturer's specifications, and the specific setback conditions required based upon structure location.

³² All 181 dwellings within the Project shall meet the requirements found in this chapter regardless of setbacks.

³³ See the current edition of RFD Fire Protection Standard No. P-001 (Residential Setback for Structure Defensible Space) for additional details.

C. Setback Compliance Plan. Applies to structures encroaching the SRA required fire safe setback only. This plan shall illustrate the location of all structures located on the parcel, location of property lines, and location of required setbacks. This plan shall also illustrate the fire protection features to be installed (i.e., decks, soffits, windows, doors, skylights, vents, etc.), inclusive of the manufacturer's specifications, and the specific setback conditions required based upon structure location.

D. Restrictive Covenant notarized and recorded with the El Dorado County Recorder-Clerk's Office. All requirements identified in Item B of the General section above shall be included within the Restrictive Covenant document. Once recorded you are then required to submit a copy of the recorded Restrictive Covenant (including the document number that the County provides on the document) to RFD.

Permit approval to construct a building located in the fire-safe setback will not be granted without a Restrictive Covenant being recorded with the County of El Dorado and this information being provided to RFD.

5.3 Applicable Building Codes and Standards for Wildfire Safety

California Code of Regulations (CCR) Title 24, also known as the California Building Standards Code, is a collection of three types of building standards:

- Those standards adopted by state agencies without modification from those found in the national model codes; and
- Standards that have been modified from the national model codes that address those unique issues facing California; and
- California statutory based standards that create amendments that are not addressed by the national model codes.

All buildings and occupancies in the State are subject to the standards found in the California Building Standards Codes. The last update to the Building Standards Codes occurred on January 1, 2026. The relevant wildfire exposure standards that the Project is subject to can be found in Part 7

(California Wildland Urban Interface Code), and Part 9 (California Fire Code). See Figure 9 for an exhibit that will assist builders and future landowners with terms associated with this section.

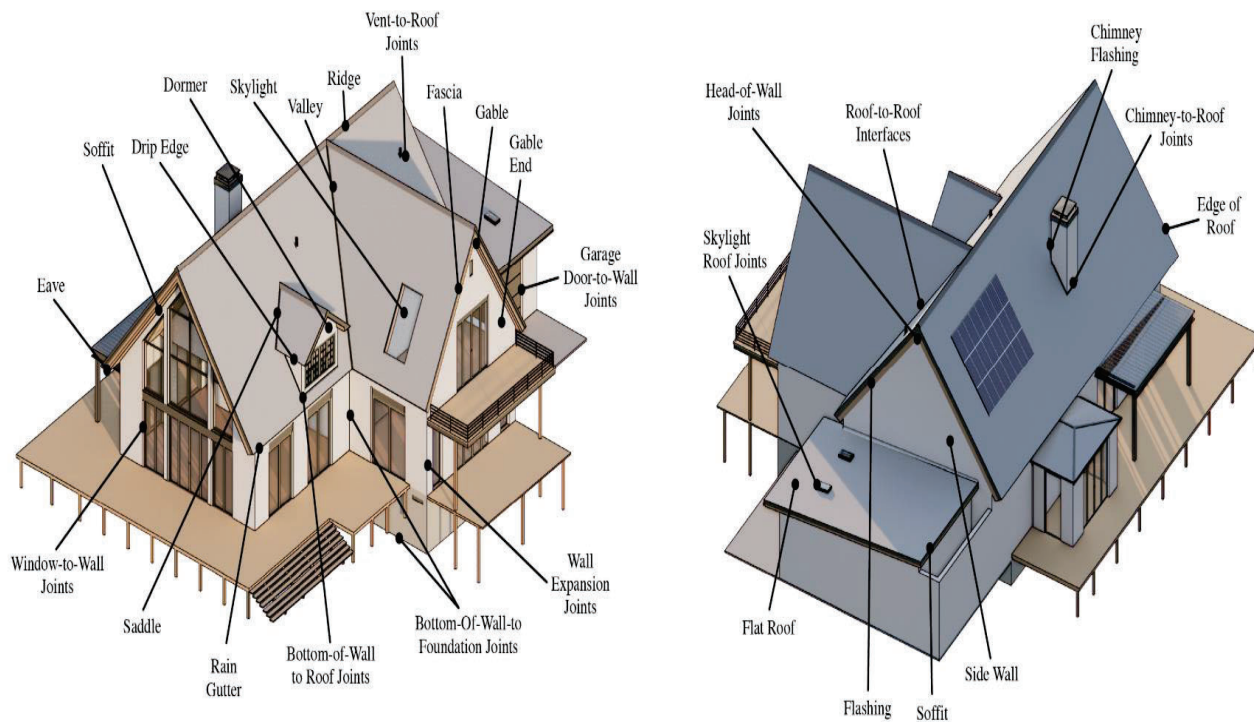


Figure 9: Parts of a Home with Labels for Features Defined and Discussed in This Section³⁴

5.4.1 Roof Assembly Requirements

The primary concern with roof coverings on buildings is the large surface area for potentially catching embers and burning debris, or the roof slope which can expose the roof to radiant heat exposure and direct flame impingement. To reduce this risk the following measures shall be implemented.

- A.** Roofs shall have a roof assembly as required in CWUIC Section 504.2 that complies with a Class A fire classification when tested in accordance with ASTM E108 or UL 790. Class A rated roof covering types include, but are not limited to, fiberglass composition asphalt shingles, concrete and clay tiles, metal shingles or sheets, and slate.

³⁴ Image adapted from Marshall Fire Mitigation Assessment Team: Wildfire-Resilient Detailing, Joint Systems, and Interfaces of Residential Building Components, FEMA, 2023. <https://www.fema.gov/>

- B.** Where provided, valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of 72-pound mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 running the full length of the valley.
- C.** For roof assemblies where the profile allows a space between the roof covering and roof deck the materials installed shall comply with CWUIC Section 504.2.1. The space at the eave ends shall be fire stopped to preclude entry of flames or embers or have one layer of cap sheet complying with ASTM D3909 installed over the combustible roof deck. Hip and ridge caps shall be mudded in to prevent instruction of fire or embers.
- D.** All portions of a roof covering applied during an addition, alteration, or repair to an existing structure shall comply with the provisions described in this subsection as required by CWUIC Section 507.1.

5.4.2 Vents

The intrusion of embers through vents and chimneys is a major source of vulnerability that can lead to structure ignition during wildfires. Both inlet and outlet vents, including 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, are sources of weakness that can lead to ignition of interior building contents and other building components. To reduce this risk chimneys and roof vents shall be constructed in accordance with CWUIC Section 504.10 and the following.

- A.** WUI flame and ember-resistant vents, conforming with the requirements described in ASTM E2886, shall be used to protect exterior wall openings and roof coverings.
 - Dryer and central vacuum air vents shall be metal and equipped with a noncombustible louver or flap.
 - Turbine vents (e.g., whirlybird vents) are prohibited.
 - Use corrosion-resistant, metal vent and flashing materials.
- B.** Ventilation openings for all other areas of the building shall comply with the requirements found in CWUIC Section 504.10 and the following:

- The maximum net free area of vent openings should be limited to 144 square inches.
- Fire-resistant sealants should be provided in lieu of non-fire rated caulking.
- Metal flashing should be installed at vent, chimney, and skylight roof joints to limit ember penetration or direct flame penetration into the roof substrate.
- Non-combustible materials (e.g., mineral wool) should be provided to fill expansion joints.

C. Chimneys serving fireplaces, barbecues, incinerators, or decorative heating appliances in which solid or liquid fuel is used, shall be provided with a spark arrestor. Spark arrestors shall be constructed of woven or welded wire screening of 12 USA standard gage wire (0.1046 inch) having openings not exceeding ½ inch. Provide spark arrestor caps on all chimneys.

5.4.3 Protection of Gutters

Combustible debris such as leaves and pine needles can accumulate in gutters, especially from nearby or overhanging trees. If ignited the combustible debris burning in the gutter will expose the edge of the roof covering, typically the fascia and/or roof sheathing, to fire spread. To reduce this risk gutters and downspouts shall be constructed in accordance with CWUIC Section 504.4 and the following.

- A.** Gutters shall be covered with an approved non-combustible material (e.g. metal) to prevent the accumulation of leaves and debris in the gutter.
- B.** Gutters and downspouts shall be maintained clear of vegetative debris.

5.4.4 Solar Panels

Solar panels have associated risks that contribute to building ignition. Combustible portions of a solar panel can provide fuel that can support a fire. To reduce this risk the following measures shall be implemented.

- A.** Class A rated panels shall be used on all new and existing buildings.

5.4.5 Protection of Eaves

Eaves are located at the down-slope edge of a sloped roof and serve as a transition between the roof and wall. To reduce this risk eaves shall be constructed in accordance with CWUIC Section 504.3 and the following.

- A.** Eaves shall be enclosed (soffited) with noncombustible material (e.g., fiber-cement, stucco, or metal).
- B.** Facias shall be non-combustible. This can be met by using non-combustible materials (e.g. fiber cement, Hardie board, metal, etc.) or by being covered with a non-combustible material like stucco.

5.4.6 Exterior Walls

Exterior wall surfaces can provide a means for fire intrusion due to the combustibility of the exterior cladding. Exterior walls often have a sublayer that is of combustible materials. An often-overlooked area of ember intrusion is the foundation overlap where a gap between the foundation and the siding can provide nesting or retention of embers against a combustible surface, including stucco or masonry cladding. A 6-inch vertical non-combustible zone at this location has the highest importance because even if non-combustible siding is used, combustible sheathing is still commonly used behind the cladding. To reduce this risk exterior walls shall conform with CWUIC Section 504.5 and the following.

- A.** A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete.
- B.** Projections shall be non-combustible, ignition-resistant, or one (1) hour fire rated in accordance with CWUIC, Section 504.7 and/or NFPA 1144, Section 5.2.
- C.** Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone, or brick.

- D. Where provided, all shutters (decorative and operable) shall have all exposed surfaces constructed of non-combustible material.
- E. Gable end, crawl space and other vents that mount on a vertical wall or in the under-eave area shall be tested in accordance with ASTM E-2886 and approved to prevent flame or ember penetration into the structure.

5.4.7 Exterior Glazing (Windows, Skylights, and Glazed Openings within Doors)

Windows, skylights and other glazed openings are a vulnerable area of walls due to the potential for glass breakage from direct flame contact or radiant heat, particularly if the glass in the windows is annealed glass. Recent studies show that tempered glass is more than four times more resistant to radiant heat exposure than annealed glass. Windows with tempered glass will have an etched label on the glass. To reduce this risk exterior glazing shall comply with CWUIC Section 504.8 and the following.

- A. Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall comply with one of the following:
 - 1. Multipaned glass with at least two tempered panes.
 - 2. Glass with a fire-protection rating of not less than 20 minutes, when tested in accordance with NFPA 257, or UL 9.
 - 3. Glass block (windows only)

Exception: Skylights may be constructed with one outer tempered pane and one inner laminated pane.

- B. Operable skylights, regardless of glass configuration, shall be protected with a noncombustible mesh screen where mesh openings shall not exceed 1/8-inch in diameter.
- C. Ignition resistant or non-combustible framing materials should be utilized when possible.

5.4.8 Exterior Doors

Exterior doors can be compromised during a wildfire due to an extended radiant heat exposure from surrounding combustibles. Weather stripping and glass panels can fail over time allowing flames and embers to penetrate around the door into the structure. To reduce this risk exterior doors shall be constructed in accordance with CWUIC Section 504.10 and the following.

- A.** Exterior doors of buildings shall comply with one of the following requirements:
1. Non-combustible construction; or
 2. Solid-core wood not less than 1 ¾ inches thick; or
 3. Have a fire-resistance rating of not less than 20 minutes when tested in accordance with NFPA 252, UL 10B, or UL 10C; or
 4. Doors made of combustible material (e.g. non-solid core wood doors) are permissible provided a non-combustible exterior storm door is installed as the outermost door.
 5. In addition to the above, all of the following are required:
 - The exterior door frame shall be constructed with a non-combustible threshold.
 - Where provided, windows within doors and glazed doors shall be constructed in accordance with the exterior glass requirements of Section 5.4.7(A) of the WFPP.
- B.** Exterior Sliding and French Doors may be constructed of materials allowed in CWUIC Section 504.9. Glass within the door shall be multipaned glass with at least two tempered panes and the non-combustible threshold provision described in Section 5.4.8 (A,5) of the WFPP.
- C.** Provide where possible ignition resistant or non-combustible framing materials.

5.4.9 Garage Doors

Exterior vehicle access doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides, and tops of doors, from exceeding 1/8 inch. To reduce this risk exterior doors shall be constructed in accordance with CWUIC Section 504.9.1 and the following.

- A.** Weather-stripping products made of materials that: (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials) for a period of 2,000 hours, when the maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10%; and (b) exhibit a V-2 or better flammability rating when tested to UL 94 (Standards for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances).
- B.** Doors should overlap jambs and headers.
- C.** Vehicle access door jambs and headers should be covered with metal flashing.
- D.** Residential vehicle access door automatic openers shall have a battery backup function so that the vehicle access door automatic opener is operational without interruption during an electrical outage.

5.4.10 Attached Patios, Balconies, Decks, and Overhang Structures

Attached patios, balconies, decks and overhang structures can pose a significant hazard during a wildfire. One of the main concerns associated with balconies and decks is the large surface area that allows for embers to easily ignite combustible materials. For decks and other similar features (e.g., stairs) that are at or near grade, these building components are also susceptible to direct flame impingement and radiant heat from surface fuels and other nearby vegetation. To reduce this risk attached projections shall comply with CWUIC Section 504.87 and the following.

- A.** Decks shall be constructed and maintained in accordance with one of the following methods:
 - 1.** All deck components, including posts, joists, railings, stairs, and walking surfaces, shall be constructed entirely of non-combustible materials.
 - 2.** Overhead structures, where provided, shall be completely non-combustible and shall meet the same material requirements as the building.
 - 3.** Outdoor kitchens, bars, and built-ins, where provided, shall be constructed entirely of non-combustible materials.
- B.** For exposed undersides of balconies and decks of combustible construction, consider enclosing to grade with solid fire-resistant materials of 1/16-inch screening.

- C. Create a Zone 0 area around and under the deck and make sure that all combustible items are removed from underneath and around the deck. Lay weed barrier or gravel under and around the deck to prevent vegetation from growing under or near the deck.
- D. Install a minimum 6-inch metal flashing, applied vertically on the exterior of the wall, at all deck to wall intersections.
- E. Seal any gaps and joints with appropriate firestopping and fire caulking materials where possible to prevent ember or flame intrusion.

5.4.11 Detached Accessory Dwelling Units and Accessory Structures

Accessory buildings and miscellaneous structures can pose a significant risk of fire spread to other buildings on the property during a wildfire. These buildings and structures can serve as pathways for wildfires to spread throughout the lot and threaten the home. Accessory buildings and miscellaneous structures shall comply with CWUIC Section 504.11 and the following.

- A. All Structures [e.g., Overhead Structures (e.g., Pergolas, Carports, Gazebos) Sheds, Garages, Greenhouses, Playsets, etc.] with a footprint greater than or equal to 15 square feet and within 30 feet of the building and attachments, where provided, shall meet all the following requirements:
 - 1. Structures shall be at least 10 feet from the building and attachments.
 - 2. Structures shall meet the same wildfire resilience requirements for the building, such as roof covering, gutters and downspouts, vents, 6-inch vertical noncombustible wall covering clearance, decks, and the 0-5 Foot Noncombustible Zone surrounding them.
 - 3. Space multiple structures at least 10 feet apart from each other. Each structure's 0–5 Foot Noncombustible Zone under and around the structure shall not overlap the 0–5 Foot Noncombustible Zone required for the building, decks, or other structures within 30 feet.
 - 4. Shall have no more than 3 total ADUs and accessory structures within 30 feet.
 - 5. Additionally, open detached carports and garages, where provided, shall not store combustible items.
- B. Open carport structures with exposed combustible interior wall covering (e.g., wood), shall be enclosed.

- C.** Where hot tubs and saunas are provided, they shall comply with all of the following:
- 1.** Shall be located at least 10 feet from the building's exterior walls and from other large combustibles, and not under a combustible overhead structure (e.g., covered porch, pergola, or gazebo).
 - 2.** When installed on a combustible surface (e.g., wood or composite deck), shall have noncombustible material under the hot tub and sauna, extending to 2 feet beyond all sides.
 - 3.** When installed on a non-combustible surface or patio (e.g., concrete patio), the 0–5 Foot Non-combustible Zone shall be maintained around the hot tub or sauna.

5.4.12 Fire Protection System Requirements

All buildings within the Project are required to comply with the applicable fire protection system requirements described in CFC Chapter 9. An approved automatic fire sprinkler system is required by these regulations within all new single-family buildings within the Project. The design³⁵ of these fire sprinkler systems shall conform with CFC 903.3.1.3 (NFPA 13D Sprinkler Systems) and the current edition of the EDHCWD Fire Code Ordinance. The installation of these systems within buildings shall also conform with the design and installation standards of the County of El Dorado and RFD. Smoke and Carbon Monoxide alarm devices shall be provided in all occupied living areas of each building as described in CFC Sections 907.2.11 and 915.

5.5 Fences

Fences can be very hazardous during a wildfire by allowing fire spread to occur through pathways that lead to the building. In addition, the bottom of fences collect debris that, when combined with combustible fencing, can become a fuel source to carry fire directly to the building. To reduce this risk the following measures shall be implemented.

- A.** Back-to-back (parallel) combustible fencing (meaning separate fences that are combustible and closer than 5 feet apart) are not permitted.
- B.** Keep combustible mulch materials, trash cans, and other combustibles away from fences.

³⁵ See Chapter 8 - Appendix G – NFPA 13D on p.132-133 for specific EDHCWD Fire Code requirements.

- C.** Fencing materials located within 5-feet of a building shall be constructed of non-combustible materials. Areas located between 0-feet and 5-feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of five (5) feet.

Exception:

if one or both back-to-back (parallel) fences are constructed with noncombustible materials (e.g., concrete or metal).

- D.** Side yard and rear yard fencing, located 5-feet to 10-feet from buildings, shall be constructed of ignition-resistant materials.
- E.** Fencing adjacent to non-irrigated open space lots shall be constructed of non-combustible materials.

5.6 LP-Gas Storage Systems

Liquified Petroleum (LP) gas storage system installations shall obtain a *Permit to Construct* from RFD prior to the installation of the system. The proposed location of the LP-Gas tank shall meet the minimum separation requirements from buildings and property lines as described in CFC Section 6104 and, when required by Section 4.5 of the WFPP, the following additional measures:

- A.** Shall be at least 30 feet from the building; or
- B.** Shall have at least 20 feet of clearance under and around the tank that meets the following measures.
- 1.** 10 feet of non-combustible clearance under and around the tank by maintaining the clearance to bare minimum soil or non-combustible hardscape (e.g. gravel, pavers, river rocks, decomposed granite, steppingstones, or concrete).
 - 2.** An additional 10 feet of vegetation management with annual grasses removed or mowed to less than 4 inches in height, removal of plants, shrubs, bushes, and small trees, and removal of dead plants, shrubs, trees, limbs, logs and stumps.

Vehicle barrier protection shall be provided for LP-gas storage tanks in accordance with the following means:

- A. Concrete filled guard posts shall be constructed of steel not less than four (4) inches in diameter; and
- B. Spaced not more than 4-feet between posts on center; and
- C. Set not less than 3-feet deep in a concrete footing of not less than fifteen (15)-inches diameter; and
- D. Set with the top of the posts not less than 3-feet above ground; and
- E. Located not less than 3-feet from the protected installation.

RFD Fire Code Section 6104.2 limits the maximum capacity of LP-Gas systems within the community. This requirement reads as follows: “For the protection of heavily populated or congested areas, storage of liquified petroleum gas shall not exceed an aggregate capacity in any one installation of 2,000 gallons within the limits established by law as set forth in the fire code adoption ordinance or other regulation adopted by the jurisdiction. *The storage of liquefied petroleum gas more than an aggregate of 2,000-gallon water capacity is allowed when approved by the fire code official, based upon a comprehensive fire risk analysis, and a special/conditional use permit issue by the County of El Dorado.*”

5.7 Outdoor Furniture

Furniture shall have a non-combustible frame (e.g., cast iron, aluminum, or metal), including but not limited to, hanging chairs, rocking/lounge chairs, swinging benches, picnic benches, tables, and chairs, and sections and ottomans.

Exception:

A limited number of small combustible items (e.g., chair cushions) are permitted if they can be relocated indoors or 30 feet away during Red Flag Warnings or extended absences.

END OF CHAPTER

CHAPTER 6: EMERGENCY PREPAREDNESS AND EVACUATION PLANNING

6.1 Chapter Overview

The purpose of this chapter is to describe the community evacuation planning analysis for the Project and surrounding neighborhoods in the event of an evacuation warning or order being issued by local officials of a local wildfire or similar event. This proactive evacuation planning is designed to equip both the local community and new developments within them with essential knowledge and strategies for wildfire evacuation preparedness. See Chapter 9 - Appendix C for additional details.

This Chapter is based on a Project-specific hazard and risk assessment as described in Chapter 3, and includes analysis on the following subjects:

- Community Evacuation Types and Decision Making
- Silver Springs Units 2 & 3 Pre-Evacuation Planning
- Emergency Evacuation Education Materials
- Emergency Notification

6.2 Community Evacuation Types and Decision Making

The California Office of Emergency Services (CALOES) defines the term evacuation to mean “the organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas.” The decision to initiate a local evacuation during a wildfire emergency rests with the public safety agencies (law enforcement and fire) based on a comprehensive threat assessment made in the field. The implementation and enforcement of evacuation orders rests with law enforcement.

Evacuation types typically focus on one or more of the following methods:

- Evacuation Warnings Issued by Public Safety Officials
- Evacuation Orders Issued by Public Safety Officials
- Shelter in Place decisions made by residents/visitors

The principal goal of a wildfire evacuation is to protect the public from the threat of a wildfire without injury or death.³⁶ To achieve this goal the objectives of a manageable and successful evacuation by the public include the following:

- Immediate identification of a wildfire threat and constant awareness of the fire behavior that may impact your location; and
- Receiving emergency alerts and communications from public safety officials and responding to their directions in an appropriate fashion; and
- Recognizing the need to depart from the area in a judicious and prepared departure; and
- Safely and competently evacuating to an area outside a hazardous area.

Emergency evacuations during a wildfire can be generally described as being either immediate or planned need events. Immediate need evacuations are ordered when a developing wildfire incident poses an increased threat to human life occurs in proximity, generally 60 minutes or less, in nearby communities and homes. Planned need evacuations are often coordinated hours or days before the evacuation is ordered allowing law enforcement officers, firefighters, and others to work together to ensure an organized movement of civilians out of harm's way.

If possible, people will be able to evacuate before being affected by the fire. However, this reality depends on the location of the fire, the speed that it is spreading, and the time it takes to evacuate. This required time depends on many variables, including when and how an emergency notification can be sent and received, the decisions of individual evacuees, and the modes of transportation and traffic conditions. Evacuations during a wildfire can lead to panic and poor decision making by civilians, especially when evacuees are confronted with smoke, embers, and spot fire conditions from an approaching wildfire. Evacuees, including visitors temporarily staying in the community, can lack knowledge of the available evacuation routes, and can encounter obstacles (e.g. down power lines, trees, vehicle accidents, and disabled vehicles), which can result in blocked roads and evacuation routes. This chaotic situation is exacerbated when public safety agencies are concurrently attempting to access the community using the same routes.

³⁶ See *Literature Review of the State-of-the-Science in Wildfire Evacuation* (2022); Marin Wildfire Prevention Authority.

Some populations and communities are more susceptible to the impacts of wildfire threats due to access and functional needs of the residents and visitors (e.g., elderly, disabled, low income, low English proficiency). Early awareness and actions are necessary to safely evacuate an area. It is imperative that pre-evacuation planning efforts occur frequently between the community and local public safety agencies.

6.3 Silver Springs Units 2 & 3 Pre-Evacuation Planning

The County of El Dorado does not have an adopted emergency response plan or emergency evacuation plan, with which the proposed project could interfere. Nevertheless, this section will more broadly consider emergency response and evacuation and the project's potential effects thereupon. However, multiple evacuation options are available from the project site, and in the event of emergency, the evacuation route will be determined by the Public Safety Officials at the emergency scene based on numerous considerations, including the location of the wildfire.

The Project is provided with two routes of egress (Silver Springs Parkway / Bass Lake Road) during a wildfire evacuation. Based on the multiple potential evacuation routes in different directions identified below, road capacity, limited project size, and mitigation measures proposed, the risk of a wildfire impacting existing evacuation routes serving the community will be reduced, and the project will not block, limit, adversely change, or negatively impact routes utilized for evacuation. Evacuation options from the project site include:

- **From Silver Springs Parkway:** Residents and visitors may evacuate from Silver Springs Units 2 & 3 on Silver Springs Parkway to either Green Valley Road or Bass Lake Road.
- **From Bass Lake Road:** Residents and visitors may evacuate from Silver Springs Units 2 & 3 to from Bass Lake Road to either Green Valley Road, Serrano Parkway, or Highway 50.

The El Dorado County Sheriff's Office of Emergency Services (County OES) has pre-identified emergency evacuation zones throughout the County. The Silver Springs Units 2 & 3 development is in the "Central EDH" evacuation zone as identified by County OES. It is important for residents and visitors to know which evacuation zone they are located in. See Figure 10 for additional information.

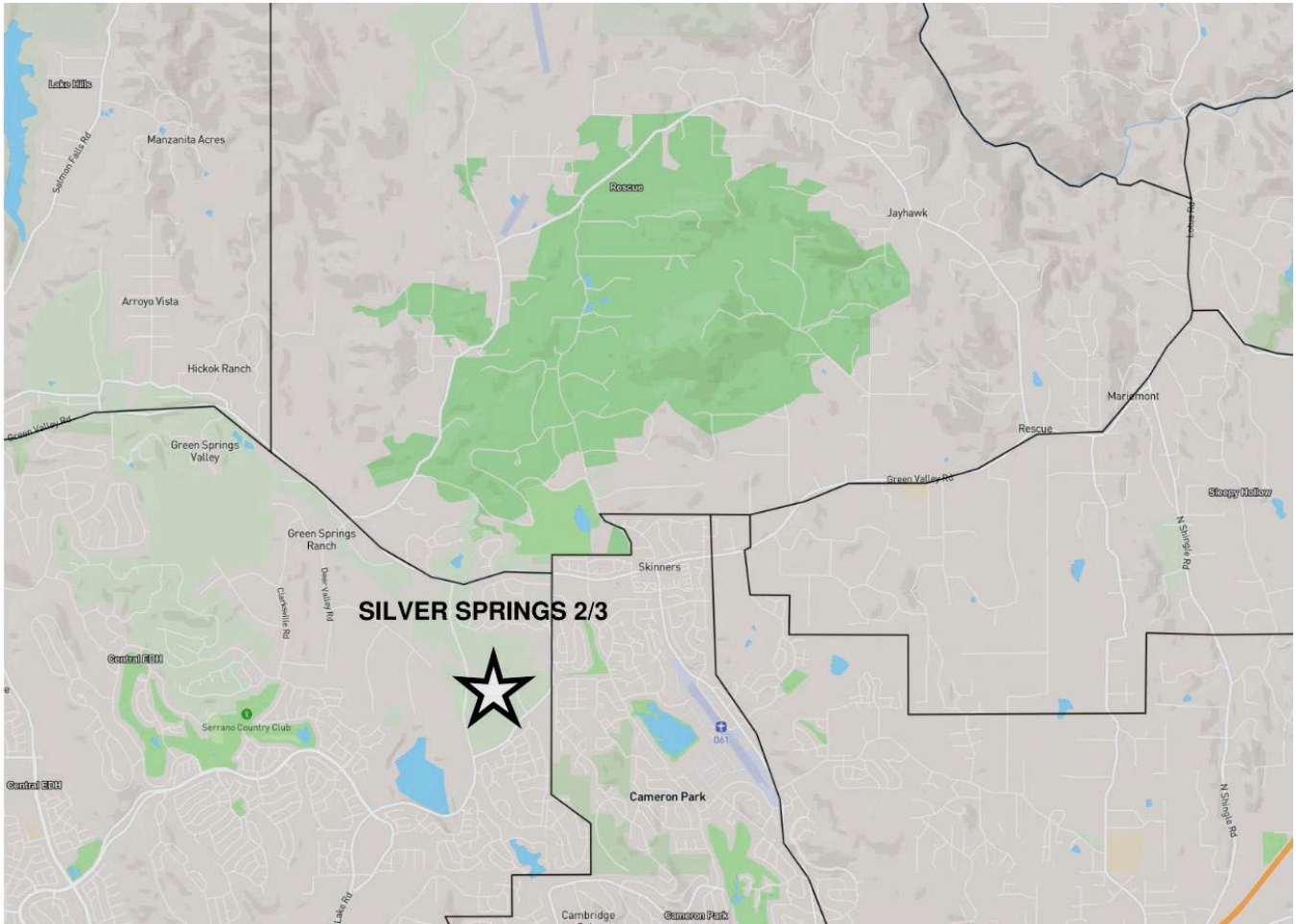


Figure 10: Evacuation Zone Map for Silver Springs Units 2 & 3 (Courtesy of Perimeter Map)

Future residents and visitors should always remain vigilant to the threat of a wildfire in the area. Residents should utilize the resources described in Sections 6.4 and 6.5 and be prepared to evacuate their families and animals when ordered to evacuate by a law enforcement or fire official. To increase preparedness for a potential wildfire evacuation the owner(s) should consider limiting parking to residents only during red-flag fire weather conditions in residential areas with limited roadway capacity and leave all gated entrances in the open position to improve evacuation capacity.

6.4 Emergency Evacuation Education Measures

CAL FIRE has an effective community education program to assist residents and visitors prepare for a wildfire³⁷. The program is titled *Ready-Set-Go* and is designed to assist persons in preparing

³⁷ CAL FIRE, *Ready Set Go*; <http://www.readyforwildfire.org/> .

for and leaving a residence threatened by a local wildfire. This information should be made available to new and existing residents in Silver Springs Units 2 & 3 through information packets and community websites whenever practical. See Chapter 9 – Appendix I for additional information about this program.

6.5 Emergency Notification Alert Systems

Community notification is an important aspect of evacuation planning. Evacuations are often initiated by emergency officials who issue notifications and instructions to the affected populations using various tools such as opt-in mass alert systems, reverse-911, the Integrated Public Alert & Warning System (IPAWS), social media, and the internet. Sirens and door-to-door notifications may also be utilized. If time allows, evacuations may be conducted in phases, starting by notifying and evacuating areas of the community that may be affected first.

In El Dorado County all public safety agencies have partnered to implement the *RAVE* alert notification system.³⁸ The alert system is managed by the El Dorado County Sheriff's Office and allows for public safety agencies to quickly send an emergency alert to citizens in all geographic areas of the County. This system enables County OES to provide residents and visitors with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons, and evacuations of buildings or neighborhoods. El Dorado RAVE provides community members with emergency notifications through telephone call, text message, and email notifications. See Chapter 8 - Appendix J for additional information on RAVE and how to sign-up to receive alerts from County OES.

El Dorado County has been authorized by FEMA to use the Integrated Public Alert & Warning System (IPAWS). This is FEMA's national system for local alerts that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration's Weather Radio.

END OF CHAPTER

³⁸ El Dorado County RAVE, Citizen Notification System; [El Dorado County Emergency Alerts \(edso.org\)](http://elcso.org)

CHAPTER 7: VEGETATION MANAGEMENT

7.1 Chapter Overview

The purpose of this chapter is to describe the recommended long-term comprehensive fuel management and prioritized hazardous fuel reduction treatments in WUI areas to reduce flame intensity as it gets closer to a building through three stages of fire spread:

- Converting tall continuous flames into sparse fires with shorter flames within 30–200 feet of the building.
- Converting short and sparse flames into low-intensity creeping fire within 5–30 feet of the building.
- Stopping the creeping fire from reaching the home by using non-combustible materials within 0–5 feet of the building.

This Chapter is based on California Government Code Section 51182 and California Fire Code Section 4903 and includes analysis on the following subjects:

- Defensible Space Requirements
- Fire-Smart landscape Requirements Near Structures
- Roadside Clearance Requirements
- Shaded Fuel Break Zone Criteria for Open Space Areas
- Fuel Reduction During Construction
- Reoccurring Fuel Reduction Maintenance Frequency

7.2 Defensible Space Requirements

The term “Defensible Space” refers to reducing the wildfire vulnerability in WUI Zones by actions that will decrease the potential of heat, flames and embers spreading to buildings. Defensible space work around buildings should be performed within 3 zone areas based on the fire risk reduction efforts necessary to protect the occupants and property. See Figure 11 below to match the item number with the corresponding zone. The 3 defensible space zones around buildings are described as:

Zone 0 – Ember Resistant Zone

Zone 0 extends 5-feet from buildings, accessory structures, decks, etc.

This zone includes the area under and around all attached decks and requires the most stringent wildfire fuel reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the building. The following provides guidance for this zone, which may change based on future regulations developed by the California Board of Forestry and Fire Protection. See Section 7.3.1 of this WFPP for additional requirements.

1. Use hardscape like gravel, pavers, concrete, and non-combustible mulch materials. No combustible bark or mulch is permitted.
2. No vegetation (trees, shrubs, bushes, plants, grass, weeds, etc.) shall exist within or overhang the building.
3. The roof, gutters and downspouts shall be kept clear of combustible debris such as leaves and pine needles.
4. Overhanging limbs or branches from nearby trees and bushes shall be trimmed back outside Zone 0.
5. Relocate firewood and lumber to a minimum of 30-feet from buildings.
6. Avoid placing combustible fencing, gates, trellis, and arbors attached to the home and use non-combustible alternatives.
7. Place garbage and recycling containers outside this zone.
8. Place boats, RVs, vehicles, and other combustible items outside this zone.

Zone 1 – Lean, Clean and Green Zone

Zone 1 extends 30-feet from buildings, decks, etc. or to the property line, whichever is closer.

9. Remove all dead plants, grass, and weeds (vegetation).
10. Remove dead or dry leaves and pine needles from yard, roof, and rain gutters.
11. Remove branches that hang over roof and keep dead branches 10-feet away from your chimney.

12. Trim trees regularly to keep branches a minimum of 10- feet from other trees.
13. Relocate wood piles to Zone 2.
14. Remove or prune flammable plants and shrubs near windows.
15. Remove vegetation and items that could catch fire from around and under decks, balconies, and stairs.
16. Create a separation between trees, shrubs and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

Zone 2 – Reduced Fuel Zone

Zone 2 extends from 30-feet to 200-feet out from buildings, accessory structures, decks, etc. or to the property line, whichever is closer.

17. Cut or mow annual grass down to a maximum height of 4 inches.
18. All exposed wood piles must have a minimum of 10 feet clearance around them, down to bare mineral soil, in all directions.
19. Create horizontal space between shrubs and trees. (See diagram)
20. Create vertical space between grass, shrubs, and trees. (See diagram)
21. Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 3 inches.

All Zones

22. Mow before 10:00 am, but never when its windy or excessively dry.
23. Protect water quality, do not clear vegetation near waterways to bare soil. Vegetation removal can cause soil erosion – especially on steep slopes.
24. Logs or stumps embedded in the soil must be removed in Zone 0. In Zones 1 and 2 they need to be removed or isolated from other vegetation.

Many of these efforts shall be performed by the landowner except in cases where the setback distance of the building extends onto another property and/or open space land. In those cases, a

coordinated effort will be required between the individual property owners. Figure 11 provides additional information on defensible zone spaces around buildings.

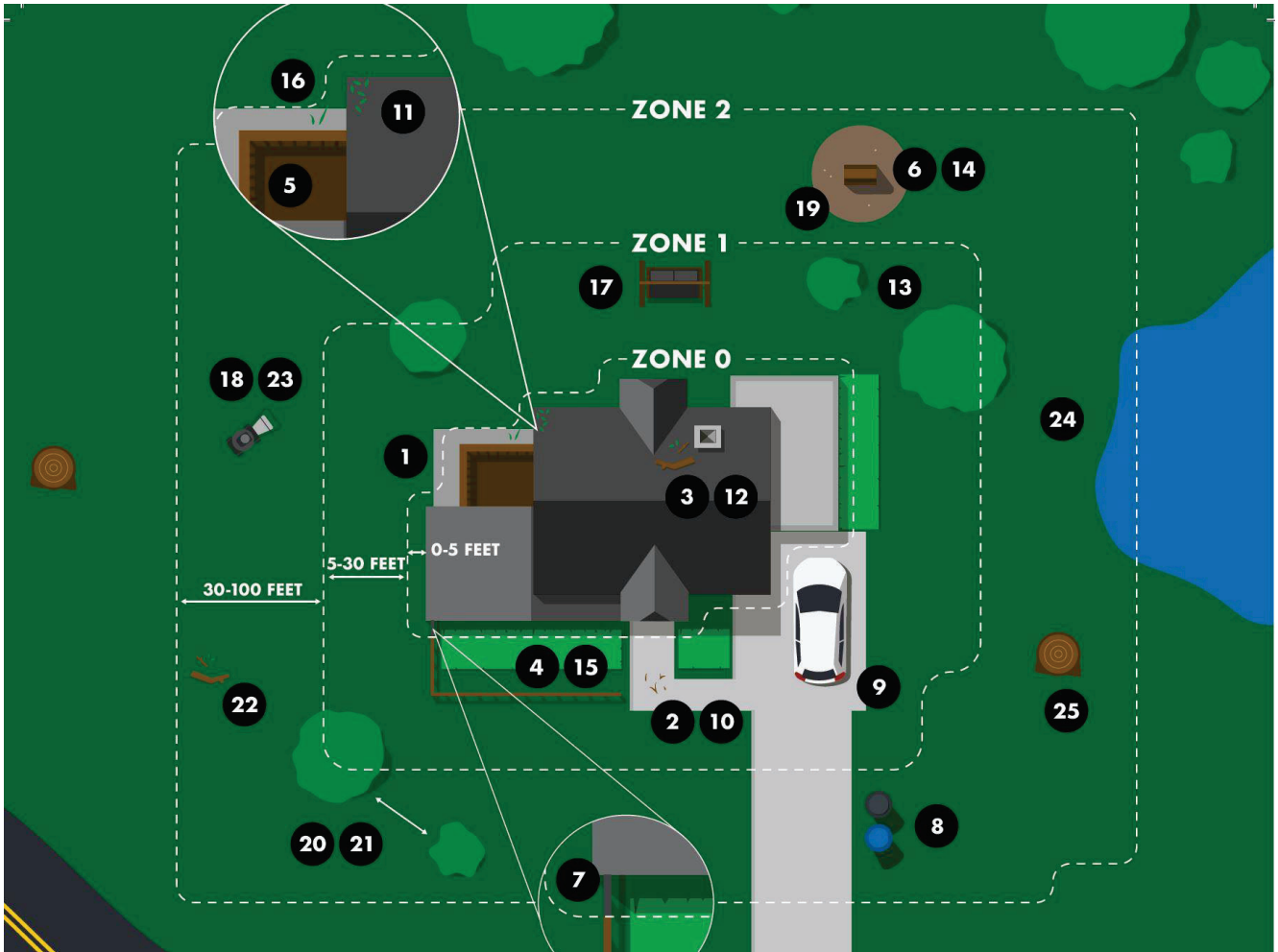


Figure 11: CAL FIRE Defensible Space Zones

7.3 Fire Smart Vegetation Requirements Near Buildings

The Project shall utilize “Fire-Smart Vegetation” within Defensible Space Zones 1 (5-30 feet) and 2 (30-100 feet) and avoid the use of certain highly flammable trees and vegetation within 30-feet of buildings and structures as identified in this section and Chapter 9 - Appendix I of this WFPP.

Exception: New trees such as conifers, palms, pepper trees and Eucalyptus species, shall be permitted provided the tree is planted and maintained in accordance with one of the following:

- A. The tree is planted so that the tree’s drip line at maturity is a minimum of 30-feet from a structure.

- B.** The tree is planted so that the tree's drip line at maturity is a minimum of 10-feet from any combustible structure, and is well pruned and maintained so as not to form a means of rapidly transmitting fire from other nearby vegetation to the structure or from the structure to nearby vegetation, or to interrupt the advance of embers towards a structure.

For landscape materials to be considered fire-smart vegetation, it must meet at least one of the following:

- A.** Be identified as fire-smart vegetation in an approved book, journal or listing from an approved organization.
- B.** Be identified as fire-smart vegetation by a licensed landscape architect with supporting justification.
- C.** Plants considered fire-smart vegetation and approved by RFD.

7.3.1 Ember Resistant Zone

Planting of vegetation for new landscaping shall be selected to reduce vegetation in proximity to a structure and shall comply with CWUIC Section 603, Chapter 7 of this WFPP, and the following.

- A.** A "Noncombustible Zone" shall be installed and maintained in accordance with the following:
 - 1.** A "Non-combustible Zone" shall be established around the perimeter of the building. The "Non-combustible Zone" is measured horizontally from the edge of the building's exterior walls and, if present, the outermost posts of a combustible deck or overhead structure, extending outward to 5 feet. This non-combustible area also extends vertically to the sky and shall meet all of the following requirements:
 - 2.** All vegetation (e.g., grass, weeds, flowers, succulents, cacti, plants, shrubs, bushes, and vegetative debris) within 5 feet is prohibited.
 - 3.** All trees, limbs, branches, and vines that are within and that overhang the Noncombustible zone shall be removed.
 - 4.** All combustible groundcover materials (e.g., wood and rubber mulch, artificial turf, and exposed weed cloth) are prohibited.

5. Noncombustible hardscape materials (e.g., gravel, pavers, river rocks, decomposed granite, steppingstones, and concrete) are permitted.

7.3.2 Shrubs Near Buildings

Shrubs shall be installed and maintained in accordance with CWUIC Section 603.4.1 and the following:

- A. Shrubs, bushes, and plants taller than 2 feet shall not be placed under trees.
- B. Individual shrubs or clustered groups (“islands”) may be used, provided each cluster has total foliage less than 10 feet in horizontal diameter and is treated as a single shrub.
- C. Shrubs, bushes, and plants, or shrub groupings shall have horizontal spacing from other vegetation of 2 times the height of the tallest plant up to a maximum spacing requirement of 10 feet.
- D. Privacy hedges and rows of bushes shall be located a minimum of 10 feet from the building’s exterior walls.

7.3.2 Trees Near Buildings

Trees shall be installed and maintained in accordance with CWUIC Section 603.4.2 and the following:

- A. Tree limbs and branches shall be pruned to a minimum height of 6 vertical feet above the ground, or one-third the height of the tree if the tree is under 18 feet tall.
- B. All tree branches at least 10 feet away from chimney and stovepipe outlets.
- C. Privacy rows of trees shall be located a minimum of 10 feet from the building’s exterior walls.

7.3.3 Ground Cover Materials

The installation and use of shredded rubber, pine needles, shredded cedar, and similar mulch materials shall be prohibited within Defensible Space Zone 0 (Ember Resistant Zone) and 1 (Lean, Clean and Green Zone) around buildings.

7.4 Silver Springs Units 2 & 3 Roadside Clearance Requirements

Silver Springs Units 2 & 3 has several emergency vehicle access roads that require fuel management treatments to maintain safe egress during an evacuation and reduce fire ignitions. The following vegetation management criteria shall be implemented annually near roads and trails:

- A.** Emergency vehicle access roads shall have roadside clearance of all hazardous vegetation within 20-feet of the road edge when unimproved lands are present.

The Landscape lots along Silver Springs Parkway shall be maintained in accordance with this section until such time that they are improved and maintained in accordance with an approved landscape plan. See Section 7.6 of the WFPP for specific treatment criteria for use in meeting the requirements of this section.

7.5 Silver Springs Units 2 & 3 Shaded Fuel Breaks

Shaded Fuel Breaks (SFBs) shall be constructed and maintained within the Project in accordance with CCR Title 14 – Section 1276.03 for all non-irrigated open space areas found in Lots A-D. SFBs shall extend from the property line of the adjacent residential lot out 30-feet, or to the boundary with a protected habitat or waterway, whichever is less, to ensure that adequate defensible space is provided for the building. Fuel modification in these areas must balance fire hazard reduction with water quality, wildlife habitat, and soil protection.

Each Shaded Fuel Break shall be established and accepted by RFD prior to the issuance of the first building construction permit issued by the County of El Dorado within the unit that the open space is connected to (i.e. the south side of Lots B and D shall be completed as part of Unit 3) in the Project. Maintenance of the Shaded Fuel Breaks shall be the responsibility of the landowner prior to the transfer of the obligation to the HOA. All work shall be completed prior to May 1st each year unless otherwise ordered to complete this work earlier by RFD due to drought or other fire conditions being present. See Section 7.6 of this WFPP for the prescriptive requirements for SFBs.

Figure 12 provides additional information on SFBs and roadside clearance locations that require fuel treatment efforts by the HOA or landowner.

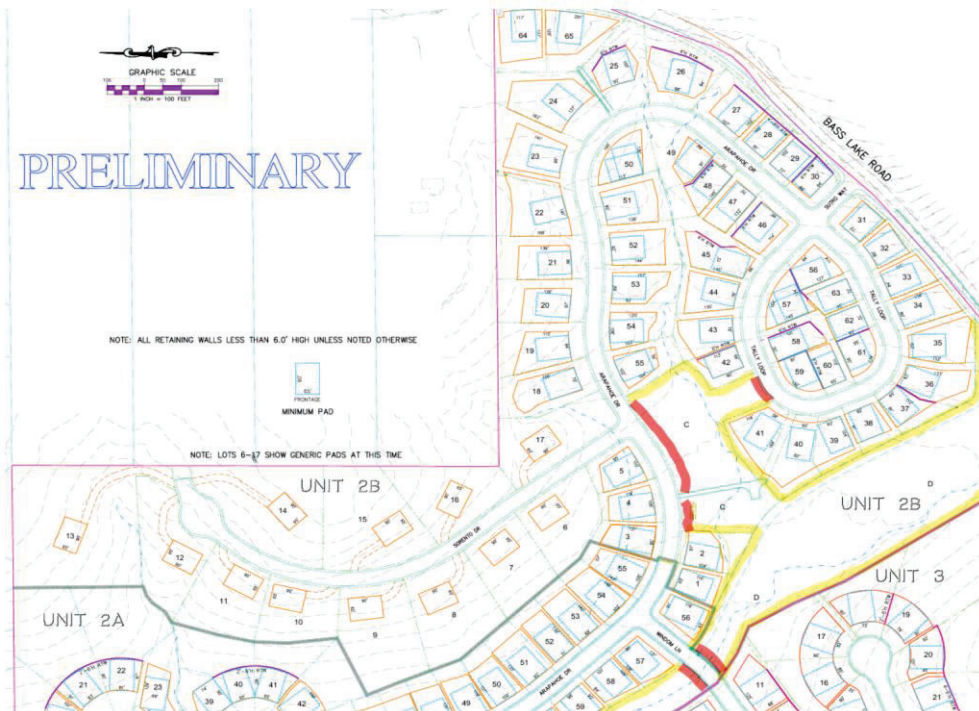
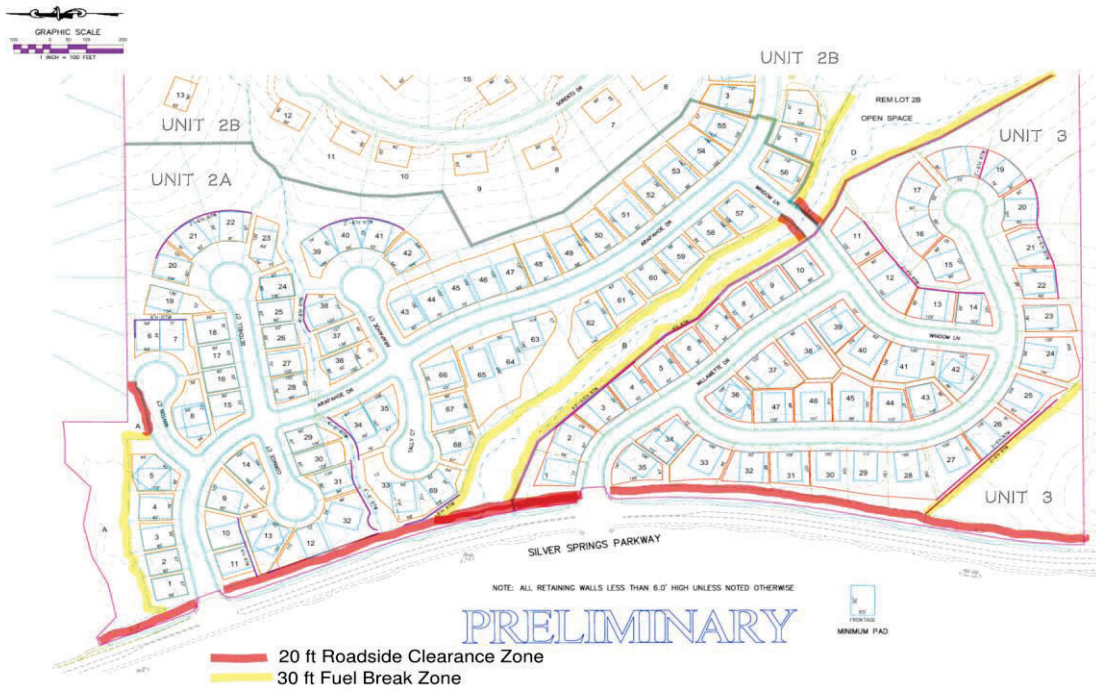


Figure 12: Fuel Treatment Exhibits

7.6 Silver Springs Units 2 & 3 Wildfire Prevention Measures

- A.** Fine living fuels (e.g. annual grasses) shall be maintained below 2-inches in height within 30-feet of the property line, or within 100-feet of structures, and in all other areas just after the grasses cure in early spring. Additional fuel treatment work may be necessary throughout the year within 100-feet of all structures where practical, to maintain defensible space requirements.
- B.** Dead and diseased standing trees, all downed trees and tree branches less than 8-inches in diameter located on the ground, tree slash materials, and combustible debris within 30-feet of property lines, and 100-feet of structures, shall be removed as required by RFD or CAL FIRE.
- C.** Mature or multi stemmed oaks can present a serious wildfire problem if untreated. Treat the oaks within 30-feet of property lines, and 100-feet of structures, to the following specifications:
 - 1.** Remove all dead limbs and stems; and
 - 2.** Cut off green stems at 10-feet above the ground that arch over and are growing down towards the ground.
 - 3.** Oaks with more than 50% mistletoe should be considered for removal/replacement. They will become a fire maintenance issue. Oak trees with less than 50% mistletoe in their canopy should be pruned to eliminate the mistletoe.
- D.** Tree limbs on mature live trees shall be limbed up to a height of 6-feet above the ground, except when more than 1/3 of the live crown is required to be removed. Tree branches are to be limbed to at least 8-feet when possible. The minimum height may be lowered when trees are young or small; or if it is unsafe to reach a 8-foot height due to terrain, equipment, or skill level.
- E.** Live understory fuels over 1-foot in height within 30-feet of the property line, or within 100-feet of structures, are to be removed to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

Attachment #2C

- F.** Existing Grey Pines should be considered for removal / replacement when located within 100 feet of a residential dwelling.
- G.** Fuel reduction shall include the removal of all dead vegetation 4-inches or less in diameter. Trunks shall be cut flush with the ground. The removal of additional trees shall be done in consultation with CAL FIRE, RFD and County staff.
- H.** Threatened and/or endangered species may be present within the SFB areas. The recommendations of the Project biologist shall be implemented with respect to avoiding loss or harm to the affected species, or restoration and/or compensation measures to be undertaken if the species' habitat cannot be avoided. For example, if nesting raptors are present, the nesting tree shall not be removed, and no tree removal or mechanical activity shall occur within a buffer zone established around the nest until the young have fledged. The Federal and/or State agency with jurisdiction over the affected protected species shall also be consulted.
- I.** It is desirable to remove as much brush and large vegetation as possible within the Shaded Fuel Break areas. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more than 5-feet in width.
- J.** The cutting of vegetation materials shall be done with a CAL FIRE approved spark arrester and maintained in effective working order as required by PRC 4442(a)(b)(c).
- K.** The removal of annual grasses and other fine fuels shall be completed using plastic string weed trimmers or other RFD or CAL FIRE approved equipment.
- L.** Chipping of material is permitted. Chipped material shall be removed from the site unless otherwise approved by the landowner representative and RFD. Animal grazing may be permitted in open space areas when approved by CAL FIRE, RFD, and the County of El Dorado.
- M.** Prescribed burning, mechanical discing, and / or herbicide use is prohibited within the Shaded Fuel Break areas unless such use is approved by CAL FIRE, RFD and the County of El Dorado.
- N.** Approved fire suppression equipment is always required on-site during the fuel-reduction activities.

- O. All fuel reduction work shall be performed using every reasonable measure to minimize erosion, ground disturbing activities, and soil damage. Where the ground is exposed by fuel reduction efforts, the area shall be revegetated (i.e., seeded) and/or erosion control measures shall be installed prior to October 15.
- P. Pruning of live trees shall be performed in accordance with the Best Management Practices set forth by the International Society of Arboriculture (ISA) and conform to ANSI A300 Standards for Tree Care.

7.7 Hazardous Fuel Reduction on Unimproved Residential Lots

Unimproved parcels within 100 feet of buildings, either when vacant or under construction, can pose a significant fire risk to adjacent occupied buildings. To reduce the risk of wildfires spreading to nearby buildings, RFD requires all unimproved properties to comply with Ordinance 2022-01 (Fire Code). This ordinance applies to all unimproved parcels located within the Project regardless of size.

The abatement of hazardous vegetation posing a fire hazard in the community shall be removed from the unimproved property by no later than May 1st each year. If the property owner fails to remove this fire hazard by the specified date RFD may abate the fire hazard at the owners' expense and/or issue an administrative citation.

7.8 Annual Fuel Reduction Maintenance Frequency

Effective mitigation of the wildfire risk will require on-going fuel thinning and vegetation removal. The coordination of fuel reduction work between the applicant, RFD and CAL FIRE staff, and the adjacent landowner(s) to complete these projects in a timely fashion is imperative for the success in minimizing the wildfire risk in the Project area. All maintenance shall be performed prior to May 1st each year unless otherwise ordered to complete this work earlier by RFD due to drought or other fire conditions being present.

Table 4 provides additional details regarding the recommended maintenance frequency for various activities described in the Plan.

Table 4: Maintenance Frequency for Open Space / Roadside Treatment Areas

Action Item	Party Responsible	Frequency
Complete annual inspection of the SFBs using the criteria found in Section 6.5.	Landowner	Annual
Remove/trim annual grasses to less than 2-inches in height within 30-feet of buildings and 4-inches height within 100-feet of adjacent property lines.	Landowner	Annual
Remove biomass materials from the site and dispose of in accordance with best practices.	Landowner	Annual
Remove debris piles, dead trees (snags) or dying trees, down trees, and limbs. ³⁹	Landowner	Annual
Removal of understory fuels that contribute to fire spread.	Landowner	Annual
Removal or treatment of invasive exotic plant species that may invade the area cleared in the SFBs areas.	Landowner	Annual
Remove ladder fuels (tree limbs) to 8-foot DBH and increase tree canopy spacing.	Landowner	10 Year + As Needed

In accordance with California Code of Regulations Title 14, Section 1276.03 (g), (h) maintenance mechanisms shall be established to the satisfaction of RFD to ensure that fuel breaks and emergency vehicle trail access is maintained over time. The mechanisms required to ensure adequate maintenance levels shall be binding upon the property for which the fuel break and emergency vehicle trail access is found, and may include written legal agreements, permanent fees, taxes, or assessments through the HOA, or other funding mechanism.

END OF CHAPTER

³⁹ This plan recognizes that dead and dying trees may provide a beneficial use for the habitat. The removal of this vegetation should be completed after an inspection by representatives from CAL FIRE, RES and the Landowner has been completed and a scope of work agreed on by both parties.

CHAPTER 8: MAINTENANCE OF WILDFIRE RESILIENCE REQUIREMENTS

8.1 Chapter Overview

The purpose of this chapter is to describe the on-going obligations of both the community and individual land owners that are described in this WFPP to reduce wildfire risk, protect life safety, and preserve insurability and property value.

8.2 Maintenance of Wildfire Resilience Standards

The Authority Having Jurisdiction (AHJ) shall ensure that the Silver Springs 2 & 3 community remains in compliance with the requirements of both the restrictive covenant requirements of RFD, and the Institute of Business and Home Safety (IBHS) *Wildfire Prepared Neighborhood* (WFPN) designation program. The AHJ shall take all reasonable actions necessary to preserve such designation, including maintaining required wildfire mitigation features, conducting inspections, enforcing compliance, and coordinating periodic redesignation with IBHS. No action by the AHJ or any individual Owner of a residential property shall materially alter the community in a manner that would jeopardize or invalidate the WFPN designation.

8.2 Responsibilities of the CSD Regarding WFPN Designation

The CSD shall be responsible for the following:

A. Annual Landscape and Defensible Space Inspection

To preserve wildfire mitigation standards and maintain WFPN designation, the AHJ shall conduct an annual inspection of each residential property and all common areas to verify compliance with applicable wildfire mitigation standards, including but not limited to:

- Maintenance of the 0–5-foot non-combustible zone
- Compliance with defensible space and vegetation management standards
- Removal of combustible materials adjacent to structures
- Maintenance of fuel modification zones and common area vegetation.

B. Individual land owners (Owner) shall provide reasonable access to their property for the purpose of conducting such inspections.

- C. If deficiencies are identified, the AHJ shall provide written notice and require corrective action within a specified timeframe.
- D. The AHJ shall have the authority to enforce compliance with wildfire mitigation requirements necessary to maintain WFPN designation, including:
 - Issuing violation notices
 - Requiring corrective actions
 - Conducting follow-up inspections
 - Performing necessary mitigation work and assessing the cost to the Owner if violations are not corrected within the required timeframe.

8.3 Wildfire Prepared Neighborhood Fees and Assessments

To preserve the community's designation under the IBHS WFPN program, the AHJ shall be responsible for coordinating required inspections and redesignation processes, and paying all associated program fees to IBHS or its authorized representatives.

Such fees may include, but are not limited to:

- Fees associated with annual vegetation and wildfire mitigation inspections required to verify ongoing compliance with WFPN standards.
- Fees associated with periodic neighborhood redesignation, which may occur approximately every three (3) years or at intervals required by IBHS.
- Administrative, inspection, documentation, and program management costs necessary to maintain the WFPN designation.

Such costs shall be treated as common expenses of the AHJ and may be assessed to individual land owners in accordance with the AHJ assessment authority.

8.3 Owner Responsibilities

Each Owner of a residential lot shall meet the following measures:

- A. Maintenance of the Non-combustible Zone

Attachment #2C

Each Owner shall maintain a minimum five-foot (0–5 ft) noncombustible zone around all structures on the Lot in accordance with the Wildfire Prepared Neighborhood standards. Within this zone, owners shall:

- Remove combustible vegetation and materials.
- Prohibit the storage of combustible items including firewood, lumber, propane cylinders, combustible furniture, or debris.
- Maintain only non-combustible ground covers such as gravel, stone, pavers, or other materials approved by the AHJ.
- Ensure tree limbs and vegetation do not overhang into the zone.

B. Vegetation and Landscape Maintenance

Owner shall maintain landscaping in a manner consistent with wildfire mitigation standards required for the community's Wildfire Prepared Neighborhood designation. Owners shall:

- Maintain vegetation spacing and plant health.
- Remove dead, dying, or combustible vegetation.
- Maintain separation between shrubs, trees, and structures as required by Association guidelines.
- Avoid planting vegetation that may increase wildfire risk near structures.

C. Maintenance of Wildfire-Resilient Home Features

Owner shall maintain all wildfire-resistant construction features installed on their home including but not limited to:

- Ember-resistant vents
- Roof assemblies, enclosed eaves, and gutters/covers
- Exterior siding and wall assemblies
- Windows and doors
- Decking and attachments.

Owner shall not alter or remove wildfire-resistant materials in a way that reduces the home's wildfire performance.

D. Restrictions on Modifications

No Owner shall construct, install, or modify improvements that could compromise wildfire resilience standards required for the community. Examples include but are not limited to:

- Installing combustible fences attached to structures
- Adding combustible landscaping within the 5-foot zone
- Modifying exterior materials to combustible alternatives
- Installing structures or attachments that reduce required spacing

All exterior improvements must be reviewed and approved by the CSD Architectural Review Committee.

E. Inspection Cooperation

Owner shall allow reasonable access to their property for purposes of:

- Annual wildfire mitigation inspections conducted by the AHJ
- Inspections required to maintain Wildfire Prepared Neighborhood designation
- Periodic redesignation inspections conducted by IBHS or its authorized representatives

Owner shall correct any identified deficiencies within the timeframe established by the Association.

F. Compliance with Wildfire Mitigation Rules

Owner shall comply with all wildfire mitigation rules, policies, and guidelines adopted by the AHJ to maintain the Wildfire Prepared Neighborhood designation. Failure to comply may result in enforcement actions including notices of violation, fines, or corrective action as authorized under the governing documents.

8.3 Accessory Dwelling Unit (ADU) Wildfire Resilience Provision

The construction or installation of an Accessory Dwelling Unit (“ADU”) on a Lot may alter wildfire exposure conditions by introducing additional structures that may function as connective fuels, increasing the potential for structure-to-structure ignition during a wildfire. Because the presence, placement, and construction of additional structures may affect compliance with the standards of the Wildfire Prepared Home (WFPH) and Wildfire Prepared Neighborhood (WFPN) programs, the addition of an ADU may result in the loss or ineligibility of an individual home designation and may affect the eligibility of the neighborhood designation if required wildfire mitigation standards cannot be maintained. Owner shall maintain the following measures related to an ADU.

A. ADU Construction Standards

Any ADU constructed within the community should be designed and constructed in a manner that maintains or improves wildfire resilience and minimizes the risk of connective fuel pathways between structures. To reduce the probability that an ADU negatively affects parcel-level or neighborhood-level wildfire performance the following shall be required:

- ADUs shall comply with all applicable state and local wildfire construction standards.
- ADUs are strongly encouraged, and may be required by the Association, where permitted by law, to meet the construction and material requirements consistent with Wildfire Prepared Home Plus (WFPH+) standards, including wildfire-resistant materials, ember-resistant construction features, and ignition-resistant attachments.
- ADUs shall be designed and located, where feasible, to minimize the potential for structure-to-structure ignition between buildings. ADUs located 30’ from structures will not be considered as an increase in risk.

B. Impact on Designations

Owner acknowledges that:

- The addition of an ADU may require reassessment of the property and the neighborhood under IBHS wildfire resilience standards.
- If the addition of an ADU results in conditions that no longer meet applicable wildfire resilience criteria, the parcel designation and/or the Wildfire Prepared Neighborhood designation may be suspended or revoked.

- The CSD shall not be responsible for any loss of designation resulting from the construction or placement of an ADU.

C. Architectural Review of ADU Prior to Placement on Property

Prior to construction of an ADU, Owner must obtain approval from the CSD Architectural Review Committee. The Committee may require submission of plans demonstrating:

- wildfire-resistant construction materials
- separation or mitigation measures to reduce connective fuel pathways
- compliance with applicable wildfire resilience guidelines adopted by the Association.

The Committee may condition approval on design modifications intended to preserve wildfire resilience within the community.

8.4 Fire Protection Statutes and Regulations Applicable to the Project

- A.** The Project shall comply with all applicable provisions as described in California Code of Regulations Title 14 (Fire Safe Regulations) and 24 (Building Standards Code).
- B.** The Project is located within a *High Fire Hazard Severity Zone* and as such a seller of a real property in this neighborhood is subject to California Civil Code Section 1102.19. The seller shall provide future buyers documentation from either CAL FIRE or RFD stating that property is following El Dorado County Code Chapter 8.09 regarding vegetation management and defensible space.
- C.** Unit 3 shall be provided with an approved secondary access road connection from Cornice Lane in Unit 3 to Arapahoe Drive in Unit 2A, and Arapahoe Drive to its connection at Silver Springs Parkway. The secondary access road shall be constructed and accepted by RFD prior to the issuance of the thirty-first (31) occupancy permit in Unit 3 of the Project.
- D.** All roads and driveways within the Project shall be constructed and maintained in accordance with the approved tentative map requirements as previously approved by RFD and CAL FIRE. See Chapter 8 – Appendix D and G for additional details.
- D.** A “Dead-End” road sign shall be installed at the following locations in accordance with CCR Title 14, Section 1274.02 (d):

- Unit 2B - Sorrento Drive
- E.** No speed bumps, speed humps, speed control dips, etc. shall be permitted on fire access roadways. All other traffic calming devices shall be prohibited unless approved by RFD.
- F.** All driveways more than 150-feet in length shall conform with the requirements described in Section 5.3.3 of this WFPP.
- G.** Approved vehicle access for firefighting shall be provided to all construction sites as required by CFC Chapter 33. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
- H.** All buildings, except for utility and accessory structures, shall be provided with approved address identification prior to occupancy.
- I.** The Project shall meet the minimum fire-flow requirements as described in Chapter 8 - Appendix G, and as required both in California Fire Code (CFC) Section 507, and RFD Ordinance 2022-01 (Fire Code).
- J.** The Project shall provide an approved water supply for fire protection, either temporary or permanent, that shall be installed and maintained in continuous operation as soon as combustible building materials arrive on the site in accordance with CFC Sections 3313.2 through 3313.5.
- K.** The Project shall meet the fire protection requirements described in Chapter 4 of the WFPP.
- L.** All buildings shall be constructed and maintained in accordance with the current design standards found in *California Wildland Urban Interface Code (CWUIC)* Chapter 5 (Special Building Construction Regulations).
- M.** All residential dwellings in the Project will be provided with an approved automatic fire sprinkler system designed in accordance with the CFC. Upon occupancy these systems shall be operable and always maintained by the individual landowners.
- N.** All buildings constructed shall have a minimum 30-foot setback from property lines, or the “practical effect” provision approved by RFD, to reduce the threat of a wildfire impinging directly on the building. Setback areas may contain driveways, parking areas, and/or other non-combustible surfaces. The minimum setback areas may be reduced based upon findings that support the practical reason for the reduction and alternative methods are implemented to

reduce building-to-building ignition. When a practical reason for the reduction is necessary the Project shall implement the provisions contained within Sections 4.5 and 4.6 of this WFPP.

8.5 WUI Fire Protection Plan Implementation Strategies

- A.** The Project shall meet the Vegetation Management Plan requirements described in Chapter 7 of the WFPP.
- B.** Each Shaded Fuel Break shall be established and accepted by RFD prior to the issuance of the first building construction permit issued by the County of El Dorado within the unit that the open space is connected to (i.e. Open Space Lots A and B shall be completed in Unit 1) within the Project.
- C.** Shaded Fuel Breaks and roadside clearance shall be completed within the Project phase prior to permitted building construction within that phase of the Project. Maintenance mechanisms shall be established to ensure the fire behavior objectives and thresholds are maintained over time. The maintenance mechanisms shall be binding upon the property for which the fuel break is established, shall ensure adequate maintenance levels, and may include written legal agreements, permanent fees, taxes, or assessments through the AHJ as required by CCR Title 14, Section 1276.03 (e), (g), and (h).
- D.** Emergency vehicle access into the open space areas to serve the shaded fuel breaks shall be provided and maintained as described in Section 7.6.1. of the WFPP.
- E.** A copy of the *Silver Springs Units 2 & 3 WUI Fire Safe Plan* shall be provided to each new owner of a residential property located within the Project.
- F.** To mitigate the risk of wildfires originating within the Project the Silver Springs Units 2 & 3 owners shall enforce the following wildfire safety measures:
 - Prohibit smoking and other burning materials within open space areas; and
 - Prohibit wood burning campfires, bonfires, and recreational fires in all areas; and
 - Prohibit debris burning, regardless of state and local regulations permitting such activities, in all areas.

8.6 Emergency Preparedness and Evacuation Preparedness Strategies

Attachment #2C

- A.** CAL FIRE *Ready-Set-Go* education materials and the methods that residents can take to sign-up to receive emergency alert notifications from the County of El Dorado should be made available to all new residents of the Project for their use in preparing for an evacuation. RFD and CAL FIRE should be encouraged to visit the neighborhood annually to discuss this material and answer questions by the homeowners. See Chapter 8 – Appendix J-L for additional details.
- B.** To increase preparedness for a potential wildfire evacuation the HOA should consider limiting parking along roads during red-flag fire weather conditions in all residential areas.

END OF CHAPTER

Chapter 9: PLAN APPENDICES

Appendix A: Critical Assets / Populations at Risk Checklist

Facility Type	Essential Service	At Risk Populations	Hazmat / Solid Waste Sites	Facility Count
Fire Station	X			0
Police Station	X			0
Emergency Evacuation Shelter*	X			0
Government Facilities	X			0
General Acute Care Hospital	X			0
Medical Health Facility		X		0
Adult Residential Care Facility		X		0
Child Care Facility		X		0
Adult Care Facility		X		0
Public Elementary School		X		0
Private Elementary School		X		0
Public Middle School		X		0
Private Middle School		X		0
Public High School		X		0
Private High School		X		0
College / University		X		0
Vulnerable Population Centers**		X		0
Water Treatment Plant	X			0
Water Storage Facility	X			0
Water Conveyance System	X			0
Electrical Transmission Lines	X			0
Electrical Substation	X			0
Sewer Lift Station	X		X	0
Telecommunications Facilities	X			0
Corporation Yard	X			0
Other	X	X	X	0
* Includes General Population, Access/Functional Needs Shelters, and Animal Shelters				
** Includes Disadvantaged, Disabled and Low-Income Census Areas				

Appendix B: PRC 4290 and 4291 Checklist

Project Name:				
	CCR Title 14	Conforms	Does Not Conform	N/A
<i>Safe Access and Egress</i>				
Road Width	§1273.01	X		
Roadway Surface	§1273.02	X		
Road Grades	§1273.03	X		
Road Radius	§1273.04	X		
Road Turnarounds	§1273.05	X		
Road Turnouts	§1273.06	X		
Road and Driveway Buildings	§1273.07	X		
Dead-end Roads	§1273.08	X		
Gate Entrances	§1273.09	X		
<i>Signing and Building Numbering</i>				
Road Name Signs	§1274.01	X		
Road Sign Installation	§1274.02	X		
Addresses for Buildings	§1274.03	X		
Address Installation, Location	§1274.04	X		
<i>Fire Water Standards</i>				
Application	§1275.01	X		
Approved Fire Water Supply	§1275.02	X		
Hydrants	§1275.03	X		
Signing of Water Sources	§1275.04	X		
<i>Building Siting and Fuel Mod.</i>				
Building and Parcel Siting/Setbacks	§1276.01	X		
Ridgelines	§1276.02	X		
Fuel Breaks	§1276.03	X		
Greenbelts, Open Spaces	§1276.04	X		
Disposal of Flammable Vegetation	§1276.05	X		

Appendix C: Emergency Evacuation Planning Checklist

No.	Risk Factor	Yes	No	Unknown
1	Existing Evacuation Plan is Current?			X
2	General Population Shelters Identified?			X
3	Special Care Shelters Identified?			X
4	Animal Care Shelters Identified?			X
5	Temporary Safe Refuge Areas Identified?			X
6	Emergency Evacuation Routes Identified?	X		
7	Mass Notification System Identified/Used?	X		
8	Ready-Set-Go or Similar Program Used?	X		
9	Evacuation Plans Available to the Public?			X
10	Are First Responders Briefed on the Plan?			X
	Total			

Notes:

1. El Dorado County OES has not publicly created an emergency evacuation plan for use by the public and first responders as of the date of this plan.
- 2-4. El Dorado County OES has not publicly designated emergency evacuation shelters throughout the County prior to large-scale emergencies.
- 5-6. The primary emergency evacuation routes in the Rescue area have not been formally designated by El Dorado County OES as of the date of this plan. The primary transportation routes out of the area include Silver Springs Parkway, Green Valley Road, and Bass Lake Road.
7. El Dorado County OES uses *RAVE* as its emergency notification system. The system relies on notifications through existing telephone lines and through “opt-in” sign-ups for cell phones and other devices. See Chapter 8 – Appendix K for additional information on this notification system.
- 8-10. RFD and the adjacent fire agencies utilize tactical pre-fire plans that brief first responders on various pre-fire information.

Appendix D: California Code of Regulations Title 14 §1270-1276

UNOFFICIAL COPY

State Minimum Fire Safe Regulations

Board of Forestry and Fire Protection



FOR INFORMATIONAL USE ONLY

View the official California Code of Regulations online at
govt.westlaw.com/calregs

As of April 1, 2023
California Code of Regulations
Title 14 Natural Resources
Division 1.5 Department of Forestry
Chapter 7 - Fire Protection
Subchapter 2 State Minimum Fire Safe Regulations
Articles 1-5

UNOFFICIAL COPY

Contents

Article 1 Administration 3

 § 1270.00. Title 3

 § 1270.01. Definitions 3

 § 1270.02. Purpose 5

 § 1270.03. Scope 5

 § 1270.04. Provisions for Application of these Regulations 6

 § 1270.05. Local Regulations 6

 § 1270.06. Inspections 6

 § 1270.07. Exceptions to Standards 7

 § 1270.08. Distance Measurements 7

Article 2 Ingress and Egress 8

 § 1273.00. Intent 8

 § 1273.01. Width 8

 § 1273.02. Road Surface 8

 § 1273.03. Grades 8

 § 1273.04. Radius 8

 § 1273.05. Turnarounds 8

 § 1273.06. Turnouts 9

 § 1273.07. Road and Driveway Structures 9

 § 1273.08. Dead-end Roads 10

 § 1273.09. Gate Entrances 10

Article 3 Signing and Building Numbering 11

 § 1274.00. Intent 11

 § 1274.01. Road Signs 11

 § 1274.02. Road Sign Installation, Location, and Visibility 11

 § 1274.03. Addresses for Buildings 11

 § 1274.04. Address Installation, Location, and Visibility 11

Article 4 Emergency Water Standards 12

 § 1275.00. Intent 12

 § 1275.01. Application 12

 § 1275.02. Water Supply 12

 § 1275.03. Hydrants and Fire Valves 12

Article 5 Building Siting, Setbacks, and Fuel Modification 13

 § 1276.00 Intent 13

 § 1276.01. Building and Parcel Siting and Setbacks 13

 § 1276.02. Ridgelines 14

 § 1276.03. Fuel Breaks 14

 § 1276.04 Greenbelts, Greenways, Open Spaces and Parks 15

 § 1276.05 Disposal of Flammable Vegetation and Fuels 15

UNOFFICIAL COPY

Article 1 Administration**§ 1270.00. Title**

Subchapter 2 shall be known as the "State Minimum Fire Safe Regulations," and shall constitute the minimum Wildfire protection standards of the California Board of Forestry and Fire Protection.

§ 1270.01. Definitions

The following definitions are applicable to Subchapter 2.

- (a) **Agriculture:** Land used for agricultural purposes as defined in a Local Jurisdiction's zoning ordinances.
- (b) **Board:** California Board of Forestry and Fire Protection.
- (c) **Building:** Any Structure used or intended for supporting or sheltering any use or Occupancy, except those classified as Utility and Miscellaneous Group U.
- (d) **CAL FIRE:** California Department of Forestry and Fire Protection.
- (e) **Dead-end Road:** A Road that has only one point of vehicular ingress/egress, including cul-de-sacs and Roads that loop back on themselves
- (f) **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. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or Development, excluding the physical Structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, Road names and Building identification, and fuel modification measures.
- (g) **Development:** As defined in section 66418.1 of the California Government Code.
- (h) **Director:** Director of the Department of Forestry and Fire Protection or their designee.
- (i) **Driveway:** A vehicular pathway that serves no more than four (4) Residential Units and any number of non-commercial or non-industrial Utility or Miscellaneous Group U Buildings on each parcel. A Driveway shall not serve commercial or industrial uses at any size or scale.
- (j) **Exception:** An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions, such as recorded historical sites, that provides mitigation of the problem.
- (k) **Fire Apparatus:** A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support emergency response, including but not limited to the suppression of fires.
- (l) **Fire Authority:** A fire department, agency, division, district, or other governmental body responsible for regulating and/or enforcing minimum fire safety standards in the Local Jurisdiction.
- (m) **Fire Hydrant:** A valved connection on a water supply or storage system for the purpose of providing water for fire protection and suppression operations.
- (n) **Fuel Break:** A strategically located area where the volume and arrangement of vegetation has been managed to limit fire intensity, fire severity, rate of spread, crown fire potential, and/or ember production.
- (o) **Greenbelts:** open space, parks, wildlands, other areas, or a combination thereof, as designated by Local Jurisdictions, which are in, surround, or are adjacent to a city or urbanized area, that may function as Fuel Breaks and where Building construction is restricted or prohibited.
- (p) **Greenways:** Linear open spaces or corridors that link parks and neighborhoods within a community through natural or manmade trails and paths.

UNOFFICIAL COPY

- (q) Hammerhead/T: A "T" shaped, three-point Turnaround space for Fire Apparatus on a Road or Driveway, being no narrower than the Road or Driveway that serves it.
- (r) Hazardous Land Use: A land use that presents a significantly elevated potential for the ignition, prolonged duration, or increased intensity of a Wildfire due to the presence of flammable materials, liquids, or gasses, or other features that initiate or sustain combustion. Such uses are determined by the Local Jurisdiction and may include, but are not limited to, power-generation and distribution facilities; wood processing or storage sites; flammable gas or liquids processing or storage sites; or shooting ranges.
- (s) Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that approves or has the authority to regulate Development.
- (t) Municipal-Type Water System: A system having water pipes servicing Fire Hydrants and designed to furnish, over and above domestic consumption, a minimum of 250 gpm (950 L/min) at 20 psi (138 kPa) residual pressure for a two (2) hour duration.
- (u) Occupancy: The purpose for which a Building, or part thereof, is used or intended to be used.
- (v) One-way Road: A Road that provides a minimum of one Traffic Lane width designed for traffic flow in one direction only.
- (w) Residential Unit: Any Building or portion thereof which contains living facilities including provisions for sleeping, eating, cooking and/or sanitation, for one or more persons. Manufactured homes, mobile homes, and factory-built housing are considered Residential Units.
- (x) Ridgeline: The line of intersection of two opposing slope aspects running parallel to the long axis of the highest elevation of land; or an area of higher ground separating two adjacent streams or watersheds.
- (y) Road: A public or private vehicular pathway to more than four (4) Residential Units, or to any industrial or commercial Occupancy.
- (z) Road or Driveway Structures: Bridges, culverts, and other appurtenant Structures which supplement the Traffic Lane or Shoulders.
- (aa) Same Practical Effect: As used in this subchapter, means an Exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including:
- (1) access for emergency wildland fire equipment,
 - (2) safe civilian evacuation,
 - (3) signing that avoids delays in emergency equipment response,
 - (4) available and accessible water to effectively attack Wildfire or defend a Structure from Wildfire, and
 - (5) fuel modification sufficient for civilian and fire fighter safety.
- (bb) Shoulder: A vehicular pathway adjacent to the Traffic Lane.
- (cc) State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.
- §(ee) Structure: That which is built or constructed or any piece of work artificially built up or composed of parts joined together in some definite manner.
- (ff) Traffic Lane: The portion of a Road or Driveway that provides a single line of vehicle travel.
- (gg) Turnaround: An area which allows for a safe opposite change of direction for Fire Apparatus at the end of a Road or Driveway.
- (hh) Turnout: A widening in a Road or Driveway to allow vehicles to pass.

UNOFFICIAL COPY

- (ii) Undeveloped Ridgeline: A Ridgeline with no Buildings.
- (jj) Utility and Miscellaneous Group U: A Structure of an accessory character or a miscellaneous Structure not classified in any specific Occupancy permitted, constructed, equipped, and maintained to conform to the requirements of Title 24, California Building Standards Code.
- (kk) Vertical Clearance: The minimum specified height of a bridge, overhead projection, or vegetation clearance above the Road or Driveway.
- (ll) Vertical Curve: A curve at a high or low point of a Road that provides a gradual transition between two Road grades or slopes.
- (mm) Very High Fire Hazard Severity Zone (VHFHSZ): As defined in Government Code section 51177(i).
- (nn) Wildfire: Has the same meaning as “forest fire” in Public Resources Code Section 4103.

§ 1270.02. Purpose

- (a) Subchapter 2 has been prepared and adopted for the purpose of establishing state minimum Wildfire protection standards in conjunction with Building, construction, and Development in the State Responsibility Area (SRA) and, after July 1, 2021, the Very High Fire Hazard Severity Zones, as defined in Government Code § 51177(i) (VHFHSZ).
- (b) The future design and construction of Structures, subdivisions and Developments in the SRA and, after July 1, 2021, the VHFHSZ shall provide for basic emergency access and perimeter Wildfire protection measures as specified in the following articles.
- (c) These standards shall provide for emergency access; signing and Building numbering; private water supply reserves for emergency fire use; vegetation modification, Fuel Breaks, Greenbelts, and measures to preserve Undeveloped Ridgelines. Subchapter 2 specifies the minimums for such measures.

§ 1270.03. Scope

- (a) Subchapter 2 shall apply to:
 - (1) the perimeters and access to all residential, commercial, and industrial Building construction within the SRA approved after January 1, 1991, and those approved after July 1, 2021 within the VHFHSZ, except as set forth below in subsection (b).
 - (2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971;
 - (3) all tentative and parcel maps or other Developments approved after January 1, 1991; and
 - (4) applications for Building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the perimeters and access to the Buildings were not imposed as part of the approval of the parcel or tentative map.
- (b) Subchapter 2 does not apply where an application for a Building permit is filed after January 1, 1991 for Building construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the Buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.
- (c) Affected activities include, but are not limited to:
 - (1) permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d);
 - (2) application for a Building permit for new construction not relating to an existing Structure;

UNOFFICIAL COPY

- (3) application for a use permit;
 - (4) Road construction including construction of a Road that does not currently exist, or extension of an existing Road.
- (d) The standards in Subchapter 2 applicable to Roads shall not apply to Roads used solely for Agriculture; mining; or the management of timberland or harvesting of forest products.

§ 1270.04. Provisions for Application of these Regulations

This Subchapter shall be applied as follows:

- (a) the Local Jurisdictions shall provide the Director of the California Department of Forestry and Fire Protection (CAL FIRE) or their designee with notice of applications for Building permits, tentative parcel maps, tentative maps, and installation or use permits for construction or Development within the SRA, or if after July, 1 2021, the VHFHSZ.
- (b) the Director or their designee may review and make fire protection recommendations on applicable construction or development permits or maps provided by the Local Jurisdiction.
- (c) the Local Jurisdiction shall ensure that the applicable sections of this Subchapter become a condition of approval of any applicable construction or Development permit or map.

§ 1270.05. Local Regulations

- (a) Subchapter 2 shall serve as the minimum Wildfire protection standards applied in SRA and VHFHSZ. However, Subchapter 2 does not supersede local regulations which equal or exceed the standards of this Subchapter.
- (b) A local regulation equals or exceeds a minimum standard of this Subchapter only if, at a minimum, the local regulation also fully complies with the corresponding minimum standard in this Subchapter.
- (c) A Local Jurisdiction shall not apply exemptions to Subchapter 2 that are not enumerated in Subchapter 2. Exceptions requested and approved in conformance with § 1270.07 (Exceptions to Standards) may be granted on a case-by-case basis.
- (d) Notwithstanding a local regulation that equals or exceeds the State Minimum Fire Safe Regulations, Building construction shall comply with the State Minimum Fire Safe Regulations.

§ 1270.06. Inspections

Inspections shall conform to the following requirements:

- (a) Inspections in the SRA shall be made by:
 - (1) the Director, or
 - (2) Local Jurisdictions that have assumed state fire protection responsibility on SRA lands, or
 - (3) Local Jurisdictions where the inspection duties have been formally delegated by the Director to the Local Jurisdictions, pursuant to subsection (b).
- (b) The Director may delegate inspection authority to a Local Jurisdiction subject to all of the following criteria:
 - (1) The Local Jurisdiction represents that they have appropriate resources to perform the delegated inspection authority.
 - (2) The Local Jurisdiction acknowledges that CAL FIRE's authority under subsection (d) shall not be waived or restricted.
 - (3) The Local Jurisdiction consents to the delegation of inspection authority.
 - (4) The Director may revoke the delegation at any time.
 - (5) The delegation of inspection authority, and any subsequent revocation of the delegation, shall be documented in writing, and retained on file at the CAL FIRE Unit headquarters that administers SRA fire protection in the area.
- (c) Inspections in the VHFHSZ shall be made by the Local Jurisdiction.

UNOFFICIAL COPY

(d) Nothing in this section abrogates CAL FIRE's authority to inspect and enforce state forest and fire laws in the SRA even when the inspection duties have been delegated pursuant to this section.

(e) Reports of violations within the SRA shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.

(f) When inspections are conducted, they shall occur prior to: the issuance of the use permit or certificate of Occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or Building permit.

§ 1270.07. Exceptions to Standards

(a) Upon request by the applicant, an Exception to standards within this Subchapter may be allowed by the Inspection entity in accordance with 14 CCR § 1270.06 (Inspections) where the Exceptions provide the Same Practical Effect as these regulations towards providing Defensible Space. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06, shall be made on a case-by-case basis only. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06 shall be forwarded to the appropriate CAL FIRE unit headquarters that administers SRA fire protection in that Local Jurisdiction, or the county in which the Local Jurisdiction is located and shall be retained on file at the Unit Office.

(b) Requests for an Exception shall be made in writing to the Local Jurisdiction listed in 14 CCR § 1270.06 by the applicant or the applicant's authorized representative.

At a minimum, the request shall state the specific section(s) for which an Exception is requested; material facts supporting the contention of the applicant; the details of the Exception proposed; and a map showing the proposed location and siting of the Exception. Local Jurisdictions listed in § 1270.06 (Inspections) may establish additional procedures or requirements for Exception requests.

(c) Where an Exception is not granted by the inspection entity, the applicant may appeal such denial to the Local Jurisdiction. The Local Jurisdiction may establish or utilize an appeal process consistent with existing local building or planning department appeal processes.

(d) Before the Local Jurisdiction makes a determination on an appeal, the inspector shall be consulted and shall provide to that Local Jurisdiction documentation outlining the effects of the requested Exception on Wildfire protection.

(e) If an appeal is granted, the Local Jurisdiction shall make findings that the decision meets the intent of providing Defensible Space consistent with these regulations. Such findings shall include a statement of reasons for the decision. A written copy of these findings shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in that Local Jurisdiction.

§ 1270.08. Distance Measurements

All specified or referenced distances are measured along the ground, unless otherwise stated.

UNOFFICIAL COPY

Article 2 Ingress and Egress**§ 1273.00. Intent**

Roads, and Driveways, whether public or private, unless exempted under 14 CCR § 1270.03(d), shall provide for safe access for emergency Wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a Wildfire emergency consistent with 14 CCR §§ 1273.00 through 1273.09.

§ 1273.01. Width.

- (a) All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping. These traffic lanes shall provide for two-way traffic flow to support emergency vehicle and civilian egress, unless other standards are provided in this article or additional requirements are mandated by Local Jurisdictions or local subdivision requirements. Vertical clearances shall conform to the requirements in California Vehicle Code section 35250.
- (b) All One-way Roads shall be constructed to provide a minimum of one twelve (12) foot traffic lane, not including Shoulders. The Local Jurisdiction may approve One-way Roads.
- (1) All one-way roads shall, at both ends, connect to a road with two traffic lanes providing for travel in different directions, and shall provide access to an area currently zoned for no more than ten (10) Residential Units.
- (2) In no case shall a One-way Road exceed 2,640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each One-way Road.
- (c) All driveways shall be constructed to provide a minimum of one (1) ten (10) foot traffic lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13' 6").

§ 1273.02. Road Surface

- (a) Roads shall be designed and maintained to support the imposed load of Fire Apparatus weighing at least 75,000 pounds, and provide an aggregate base.
- (b) Road and Driveway Structures shall be designed and maintained to support at least 40,000 pounds.
- (c) Project proponent shall provide engineering specifications to support design, if requested by the Local Jurisdiction.

§ 1273.03. Grades

- (a) At no point shall the grade for all Roads and Driveways exceed 16 percent.
- (b) The grade may exceed 16%, not to exceed 20%, with approval from the Local Jurisdiction and with mitigations to provide for Same Practical Effect.

§ 1273.04. Radius

- (a) No Road or Road Structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.
- (b) The length of vertical curves in Roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.

§ 1273.05. Turnarounds

- (a) Turnarounds are required on Driveways and Dead-end Roads.

UNOFFICIAL COPY

- (b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with the figures in 14 CCR §§ 1273.05(e) and 1273.05(f). If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.
- (c) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the Driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.
- (d) A turnaround shall be provided on Driveways over 300 feet in length and shall be within fifty (50) feet of the building.
- (d) Each Dead-end Road shall have a turnaround constructed at its terminus. Where parcels are zoned five (5) acres or larger, turnarounds shall be provided at a maximum of 1,320 foot intervals.
- (e) Figure A. Turnarounds on roads with two ten-foot traffic lanes.
- Figure A/Image 1 on the left is a visual representation of paragraph (b).
- (f) Figure B. Turnarounds on driveways with one ten-foot traffic lane.
- Figure B/Image 2 on the right is a visual representation of paragraph (b).

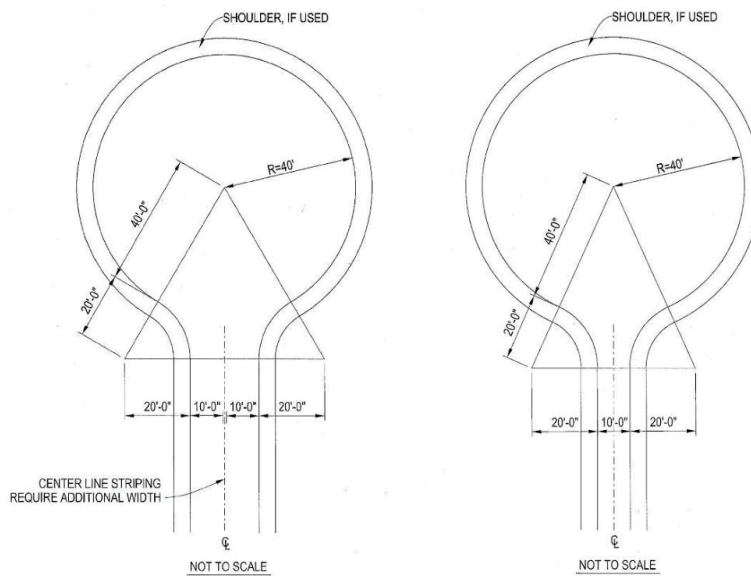


FIGURE FOR 14 CCR § 1273.05. TURNAROUND EXAMPLES

§ 1273.06. Turnouts

Turnouts shall be a minimum of twelve (12) feet wide and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.

§ 1273.07. Road and Driveway Structures

- (a) Appropriate signing, including but not limited to weight or vertical clearance limitations, One-way Road or single traffic lane conditions, shall reflect the capability of each bridge.
- (b) Where a bridge or an elevated surface is part of a Fire Apparatus access road, the bridge shall be constructed and maintained in accordance with the American Association of State and

UNOFFICIAL COPY

Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the local authority having jurisdiction.

(c) Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, barriers, or signs, or both, as approved by the local authority having jurisdiction, shall be installed and maintained.

(d) A bridge with only one traffic lane may be authorized by the Local Jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

§ 1273.08. Dead-end Roads

(a) The maximum length of a Dead-end Road, including all Dead-end Roads accessed from that Dead-end Road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

- parcels zoned for less than one acre - 800 feet
- parcels zoned for 1 acre to 4.99 acres - 1,320 feet
- parcels zoned for 5 acres to 19.99 acres - 2,640 feet
- parcels zoned for 20 acres or larger - 5,280 feet

All lengths shall be measured from the edge of the Road surface at the intersection that begins the Road to the end of the Road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.

(b) See 14 CCR § 1273.05 for dead-end road turnaround requirements.

§ 1273.09. Gate Entrances

(a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of thirteen feet, six inches (13' 6").

(b) All gates providing access from a Road to a Driveway shall be located at least thirty (30) feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that Road.

(c) Where a One-way Road with a single traffic lane provides access to a gated entrance, a forty (40) foot turning radius shall be used.

(d) Security gates shall not be installed without approval. Where security gates are installed, they shall have an approved means of emergency operation. Approval shall be by the local authority having jurisdiction. The security gates and the emergency operation shall be maintained operational at all times.

UNOFFICIAL COPY

Article 3 Signing and Building Numbering**§ 1274.00. Intent**

To facilitate locating a fire and to avoid delays in response, all newly constructed or approved Roads and Buildings shall be designated by names or numbers posted on signs clearly visible and legible from the Road. This section shall not restrict the size of letters or numbers appearing on road signs for other purposes.

§ 1274.01. Road Signs.

(a) Newly constructed or approved Roads must be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming within each Local Jurisdiction. This section does not require any entity to rename or renumber existing roads, nor shall a Road providing access only to a single commercial or industrial Occupancy require naming or numbering.

(b) The size of letters, numbers, and symbols for Road signs shall be a minimum four (4) inch letter height, half inch (.5) inch stroke, reflectorized, contrasting with the background color of the sign.

§ 1274.02. Road Sign Installation, Location, and Visibility.

(a) Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet.

(b) Signs required by this article identifying intersecting Roads shall be placed at the intersection of those Roads.

(c) A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions, shall be placed:

(1) at the intersection preceding the traffic access limitation, and

(2) no more than one hundred (100) feet before such traffic access limitation.

(d) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.

§ 1274.03. Addresses for Buildings.

(a) All Buildings shall be issued an address by the Local Jurisdiction which conforms to that jurisdiction's overall address system. Utility and miscellaneous Group U Buildings are not required to have a separate address; however, each Residential Unit within a Building shall be separately identified.

(b) The size of letters, numbers, and symbols for addresses shall conform to the standards in the California Fire Code, California Code of Regulations title 24, part 9.

(c) Addresses for residential Buildings shall be reflectorized.

§ 1274.04. Address Installation, Location, and Visibility.

(a) All buildings shall have a permanently posted address which shall be plainly legible and visible from the Road fronting the property.

(b) Where access is by means of a private Road and the address identification cannot be viewed from the public way, an unobstructed sign or other means shall be used so that the address is visible from the public way.

(c) Address signs along one-way Roads shall be visible from both directions.

(d) Where multiple addresses are required at a single driveway, they shall be mounted on a single sign or post.

UNOFFICIAL COPY

- (e) Where a Road provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest Road intersection providing access to that site, or otherwise posted to provide for unobstructed visibility from that intersection.
- (f) In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter.

Article 4 Emergency Water Standards**§ 1275.00. Intent**

Emergency water for Wildfire protection shall be available, accessible, and maintained in quantities and locations specified in the statute and these regulations in order to attack a Wildfire or defend property from a Wildfire.

§ 1275.01. Application

The provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the Local Jurisdiction.

§ 1275.02. Water Supply.

- (a) When a water supply for structure defense is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when alternative methods of protection are provided and approved by the Local Jurisdiction.
- (b) Water systems equaling or exceeding the California Fire Code, California Code of Regulations title 24, part 9, or, where a municipal-type water supply is unavailable, National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 2017 Edition, hereby incorporated by reference, shall be accepted as meeting the requirements of this article.
- (c) Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man made containment structure, as long as the specified quantity is immediately available.
- (d) Nothing in this article prohibits the combined storage of emergency Wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.
- (e) Where freeze or crash protection is required by Local Jurisdictions, such protection measures shall be provided.

§ 1275.03. Hydrants and Fire Valves.

- (a) The hydrant or fire valve shall be eighteen (18) inches above the finished surface. Its location in relation to the road or driveway and to the building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations title 24, part 9, Chapter 5, and Appendix C.
- (b) The hydrant head shall be a two and half (2 1/2) inch National Hose male thread with cap for pressure and gravity flow systems and four and a half (4 1/2) inch for draft systems.
- (c) Hydrants shall be wet or dry barrel and have suitable freeze or crash protection as required by the local jurisdiction.

§ 1275.04. Signing of Water Sources.

- (a) Each hydrant, fire valve, or access to water shall be identified as follows:
- (1) if located along a driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the driveway address sign and mounted on a fire retardant post, or
 - (2) if located along a road,

UNOFFICIAL COPY

- (i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said hydrant or fire valve, with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the driveway, or
- (ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

§ 1275.04. Signing of Water Sources.

- (a) Each Fire Hydrant or access to water shall be identified as follows:
 - (1) if located along a Driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the Driveway address sign and mounted on a fire retardant post, or
 - (2) if located along a Road,
 - (i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said Fire Hydrant with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the Driveway, or
 - (ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

Article 5 Building Siting, Setbacks, and Fuel Modification**§ 1276.00 Intent**

To reduce the intensity of a Wildfire, reducing the volume and density of flammable vegetation around Development through strategic fuel modification, parcel siting and Building setbacks, and the protection of Undeveloped Ridgelines shall provide for increased safety for emergency fire equipment, including evacuating civilians, and a point of attack or defense from a Wildfire.

§ 1276.01. Building and Parcel Siting and Setbacks

- (a) All parcels shall provide a minimum thirty (30) foot setback for all Buildings from all property lines and/or the center of a Road, except as provided for in subsection (b).
- (b) A reduction in the minimum setback shall be based upon practical reasons, which may include but are not limited to, parcel dimensions or size, topographic limitations, Development density requirements or other Development patterns that promote low-carbon emission outcomes; sensitive habitat; or other site constraints, and shall provide for an alternative method to reduce Structure-to-Structure ignition by incorporating features such as, but not limited to:
 - (1) non-combustible block walls or fences; or
 - (2) non-combustible material extending five (5) feet horizontally from the furthest extent of the Building; or
 - (3) hardscape landscaping; or
 - (4) a reduction of exposed windows on the side of the Structure with a less than thirty (30) foot setback; or
 - (5) the most protective requirements in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A, as required by the Local Jurisdiction.

UNOFFICIAL COPY

§ 1276.02. Ridgelines

- (a) The Local Jurisdiction shall identify Strategic Ridgelines, if any, to reduce fire risk and improve fire protection through an assessment of the following factors:
- (1) Topography;
 - (2) Vegetation;
 - (3) Proximity to any existing or proposed residential, commercial, or industrial land uses;
 - (4) Construction where mass grading may significantly alter the topography resulting in the elimination of Ridgeline fire risks;
 - (5) Ability to support effective fire suppression; and
 - (6) Other factors, if any, deemed relevant by the Local Jurisdiction.
- (b) Preservation of Undeveloped Ridgelines identified as strategically important shall be required pursuant to this section.
- (c) New Buildings on Undeveloped Ridgelines identified as strategically important are prohibited, as described in subsections (c)(1), (c)(2), and (c)(3).
- (1) New Residential Units are prohibited within or at the top of drainages or other topographic features common to Ridgelines that act as chimneys to funnel convective heat from Wildfires.
 - (2) Nothing in this subsection shall be construed to alter the extent to which utility infrastructure, including but not limited to wireless telecommunications facilities, as defined in Government Code section 65850.6, subdivision (d)(2), or Storage Group S or Utility and Miscellaneous Group U Structures, may be constructed on Undeveloped Ridgelines.
 - (3) Local Jurisdictions may approve Buildings on Strategic Ridgelines where Development activities such as mass grading will significantly alter the topography that results in the elimination of Ridgeline fire risks.
- (d) The Local Jurisdiction may implement further specific requirements to preserve Undeveloped Ridgelines.

§ 1276.03. Fuel Breaks

- (a) When Building construction meets the following criteria, the Local Jurisdiction shall determine the need and location for Fuel Breaks in consultation with the Fire Authority:
- (1) the permitting or approval of three (3) or more new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d); or
 - (2) an application for a change of zoning increasing zoning intensity or density; or
 - (3) an application for a change in use permit increasing use intensity or density.
- (b) Fuel Breaks required by the Local Jurisdiction, in consultation with the Fire Authority, shall be located, designed, and maintained in a condition that reduces the potential of damaging radiant and convective heat or ember exposure to Access routes, Buildings, or infrastructure within the Development.
- (c) Fuel Breaks shall have, at a minimum, one point of entry for fire fighters and any Fire Apparatus. The specific number of entry points and entry requirements shall be determined by the Local Jurisdiction, in consultation with the Fire Authority.
- (d) Fuel Breaks may be required at locations such as, but not limited to:
- (1) Directly adjacent to defensible space as defined by 14 CCR § 1299.02 to reduce radiant and convective heat exposure, ember impacts, or support fire suppression tactics;
 - (2) Directly adjacent to Roads to manage radiant and convective heat exposure or ember impacts, increase evacuation safety, or support fire suppression tactics;
 - (3) Directly adjacent to a Hazardous Land Use to limit the spread of fire from such uses, reduce radiant and convective heat exposure, or support fire suppression tactics;

Appendix E: El Dorado Co. Code Section 110.16 Uniform Building Code**Specific Provisions Applicable to the Project that are found in the El Dorado County Code.****Fire Protection System Shop Drawings****Sec. 110.16.030. - International Building Code, Appendix Chapter 1 Section****106.1.1.1—Fire protection system shop drawings.**

Appendix Chapter 1 Section 106.1.1.1 of the International Building Code shall have added:

Plans for buildings more than two stories in height of other than Group R, Division 3 and Group U Occupancies shall indicate how required structural and fire-resistive integrity will be maintained where a penetration will be made for electrical, mechanical, plumbing, and communication conduits, pipes, and similar systems.

The installer shall submit plans showing the proposed installation, indicating the location of the equipment and such accessories as may be required to ensure the proper and safe performance of its function.

(Code 1997, § 15.16.030; Ord. No. 4948, 10-19-2010)

Class A Roof Cover Requirements**Sec. 110.16.110. - International Building Code As Amended, Chapter 15,****Section 1505, Fire classification.**

Section 1505 of the International Building Code is amended to read:

1505.1.2 Roof coverings within the unincorporated area of El Dorado County:

The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure shall be a fire-retardant roof covering that is at least Class A for all residential occupancies and Class B for all commercial, industrial and public assembly buildings.

Where, in any specific case, different sections of applicable codes specify different materials, methods of construction, or other requirements, the most restrictive provisions shall govern.

(Code 1997, § 15.16.110; Ord. No. 4948, 10-19-2010)

Appendix F: El Dorado County Fire Chiefs Association Standards

The El Dorado County Fire Chiefs Association has developed a series of fire protection standards that are designed to assist landowners, developers and builders understand and interpret the fire protection design criteria locally. All of the current fire protection standards can be accessed at the following location:

[Fire Prevention Officers - El Dorado County Fire Chiefs Association \(edchiefs.org\)](http://edchiefs.org).

The following fire protection standards should apply to this tentative parcel map project:

Standard B-001; Addressing of Buildings

Standard B-002; Automatic & Manual Gates on Fire Access Roadways and Driveways

Standard B-003; Emergency Apparatus Access Ways

Standard B-004; No Parking - Fire Lanes

Standard C-001; Installation of Commercial Fire Sprinkler Systems

Standard D-001; Fire Department Connection (FDC)/Control Valve Signage

Standard D-002; Fire Department Connection (FDC) & Control Valve Installation

Standard D-003; Water Supplies for Suburban and Rural Firefighting

Standard G-001; Fire Department Access & Clearances During Construction

Standard H-005; Solar Photovoltaic Standard

Appendix G: RFD Ordinance 2022-01 (Fire Code**RESCUE FIRE DEPARTMENT
ORDINANCE NO. 2022-01**

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE RESCUE FIRE DEPARTMENT AS FOLLOWS:

An ordinance of the Rescue Fire Protection District (RFPD) adopting the 2022 Edition of the *California Fire Code*, incorporating the 2021 Edition of the *International Fire Code*, regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises in the Rescue Fire Department; providing for the issuance of permits and collection of fees therefor; Repealing Ordinance No. 2019-01 of the RFPD and all other ordinances and parts of the ordinances in conflict therewith.

Be it ORDAINED by the Board of Directors of the RFPD:

Section 1: **FINDINGS OF FACTS**

Section 2: **ADOPTION OF CODE WITH EXCLUSIONS**

Section 3: **LOCAL AMENDMENTS**

Section 4: **CONFLICT**

Section 5: **SEVERABILITY**

Section 6: **EFFECTIVE DATE AND PUBLICATION**

SECTION 1: FINDINGS OF FACTS

The Rescue Fire Department makes certain changes (listed below) to the *California Fire Code*, 2022 Edition, pursuant to *Health & Safety Code Sections 13869.7, 17958.5, 17958.7 and 18941.5* during this code adoption process. Such changes are necessary because of local climatic, geological and/or topographical conditions. The RFPD has adopted, pursuant to *Section 18941.5* of the *California Health & Safety Code*, the findings of facts relative to these conditions by Resolution #2022-XX of the RFPD dated XXXX XX, 2022.

SECTION 2: ADOPTION OF CODE WITH EXCLUSIONS

The RFPD adopts the 2022 *California Fire Code, Title 24, Part 9, in its entirety*, including Appendices, incorporating those sections of the *International Fire Code, 2021* edition not adopted by the state, with the exclusions listed below:

Exclusions: 103, 309, 311.5, 311.6, 318, 403.3, 403.5, 403.8, 403.10, 403.11, 404, 406, 903.3.1.2, 904.1.1, 1103.1, 1103.3-1103.4, 1103.6, 1105, Chapter 26, D104.2 (Exception only), D106.1 (Exception only), D107.1 (Exceptions only), Appendix A, Appendix G, Appendix J, Appendix K, Appendix L, Appendix M, Appendix N, Appendix O.

Appendices not adopted can be used for reference in enforcing other sections of the 2022 *California Fire Code*.

SECTION 3: AMENDMENTS TO THE 2022 CALIFORNIA FIRE CODE

The following Sections are hereby amended or added:

Chapter 1

SECTION 101.1 "TITLE" SHALL BE AMENDED AS FOLLOWS:

Section 101.1 TITLE. These regulations shall be known as the Fire Code of RFPD, hereinafter referred to as "this code".

SECTION 105.5 "REQUIRED OPERATIONAL PERMITS" IS AMENDED AS FOLLOWS:

Section 105.5 Required operational permits. The fire code official is authorized to issue operational permits for the operations set forth in Sections 105.5.2 through 105.5.525.

SECTION 105.5.55 "AUTOMOBILE WRECKING YARDS" IS ADDED AS FOLLOWS:

Section 105.5.55 Automobile wrecking yards. *An operational permit is required for the operation of automobile wrecking yards.*

SECTION 105.6 "REQUIRED CONSTRUCTION PERMITS" IS AMENDED AS FOLLOWS:

Section 105.6 required construction permits. The fire code official is authorized to issue construction permits for work as set forth in sections 105.6.1 through 105.6.246.

SECTION 105.6.25 "AUTOMOBILE WRECKING YARDS" IS ADDED AS FOLLOWS:

Section 105.6.25 Automobile wrecking yards. *Construction permits are required for the installation of or modification to automobile wrecking yards.*

SECTION 105.6.26 "TRAFFIC CALMING DEVICES" IS ADDED AS FOLLOWS:

105.6.26 Traffic calming devices. *Construction permits are required for the installation or modification of traffic calming devices.*

SECTION 107.5 "PERMIT, PLAN REVIEW AND INSPECTION FEES" SHALL BE ADDED AS FOLLOWS:

Section 107.5 Permit. *A schedule of fees adopted by the district board of directors for plan review, inspections and the issuance of permits by the district may be found in the most current district fee schedule (Health & Safety Code 17951).*

SECTION 107.5.1 "COST RECOVERY FEES" SHALL BE ADDED AS FOLLOWS:

Section 107.5.1 Cost Recovery Fees. *Fire service fees may be charged to any person, firm, corporation or business that through negligence, violation of the law, or as a result of carelessness, is responsible for the cause of the district to respond to the scene of an incident. A district board may charge a fee to cover the cost of any service which the district provides or the cost of enforcing any regulation for which the fee is charged (Health & Safety Code 13916). The fee shall not exceed the actual cost of suppressing the fire and/or responding to the scene of an incident.*

SECTION 107.7 "ADMINISTRATIVE COSTS" SHALL BE ADDED AS FOLLOWS:

Section 107.7 Administrative Costs. *When a test or inspection is scheduled, and the contractor fails to perform to the satisfaction of the authority having jurisdiction (AHJ), the AHJ may bill the contractor for actual time spent traveling to and from the test/inspection location and the time spent at the test/inspection site as well as administrative costs.*

SECTION 111.5 "APPEAL PROCEDURES AND TIMELINES" SHALL BE ADDED AS FOLLOWS:

Section 111.5 Appeal Procedures and Timelines. *Any person or entity who believes they may be adversely affected by an order, decision, or determination made by the fire code official through a written notice may appeal this matter within 15 calendar days of the postmark on the notice. All such appeals shall be filed in writing with the Secretary of the Governing Board for the district. A timely appeal shall stay further action by the fire code official until the matter is determined by the Appeal Board as outlined in Section 109.2, unless the issue poses an imminent fire or life safety hazard to members of the public. The fire code official shall notify the appellant by certified mail of the date and time of such hearing. The hearing shall be scheduled to take place no sooner than 20 calendar days from the date shown on the certified mail. The appellant shall have the right to appear in person or by agent at the hearing and present oral, written and/or photographic evidence to the Appeal Board.*

SECTION 112.4 "VIOLATION PENALTIES" SHALL BE AMENDED AS FOLLOWS:

Section 112.4 Violation Penalties. *Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a misdemeanor or infraction, at the discretion of the prosecuting attorney or agency, punishable by a fine not more than \$100.00 for a first violation; A fine not exceeding \$500.00 for a second violation of*

the same provision within one year; A fine not exceeding \$1000.00 for each additional violation of the same provision within one year, or by imprisonment not exceeding 180 days, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense. (Health & Safety Code Sections 13145 and 17995).

SECTION 112.4.2 "CITATIONS" SHALL BE ADDED AS FOLLOWS:

Section 112.4.2 Citations. *The Fire Chief, or his/her duly authorized representative, may issue citations for infractions or misdemeanor violations of this code pursuant to Section 13871 of the Health & Safety Code of the State of California and Chapter 5c (commencing with Section 853.6) of Title 3 of Part 2 of the Penal Code of the State of California.*

SECTION 113.4 "FAILURE TO COMPLY" SHALL BE AMENDED AS FOLLOWS:

Section 113.4 Failure to Comply. *Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be punishable by a fine or imprisonment or both as described in Section 112.4 (Health & Safety Code Sections 13145 and 17995).*

Chapter 2

SECTION 202 "CAMPFIRE" SHALL BE ADDED AS FOLLOWS:

CAMPFIRE. *A fire which is used for cooking, personal warmth, lighting, or aesthetic purposes.*

SECTION 202 "DISTRICT" SHALL BE ADDED AS FOLLOWS:

DISTRICT. *The district and all other areas within the exterior boundaries thereof now or hereafter established.*

SECTION 202 "DRIVEWAY" SHALL BE ADDED AS FOLLOWS:

DRIVEWAY. *A vehicular access that serves up to two (2) parcels with no more than two (2) residential units and any number of non-commercial or industrial buildings on each parcel.*

SECTION 202 "EXECUTIVE BODY" SHALL BE ADDED AS FOLLOWS:

EXECUTIVE BODY. *The Board of Directors of the District.*

SECTION 202 "FIRE CHIEF" SHALL BE ADDED AS FOLLOWS:

FIRE CHIEF. *The Chief Executive Fire Officer of the Fire department/district serving the jurisdiction or a duly authorized representative.*

SECTION 202 "FIRE HAZARD" SHALL BE ADDED AS FOLLOWS:

FIRE HAZARD. *Any condition, arrangement, or act which will increase, or may cause an increase of, the hazard or menace of fire to a greater than customarily recognized as normal*

by-persons in the public service of preventing, suppressing or extinguishing fire; or which may obstruct, delay, or hinder, or may become the cause of obstruction, delay or hinderance to the prevention, suppression, or extinguishment of fire.

SECTION 202 "OPEN BURNING" SHALL BE AMENDED AS FOLLOWS:

OPEN BURNING. The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudge-pots and similar devices associated with safety or occupational uses typically considered open flames. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

Open burning shall also include campfires, bonfires, portable outdoor fireplaces, ceremonial fires, and recreational fire as defined in the Fire Code.

Exception:

1. *UL or ASMI listed LPG or natural gas outdoor flame devices, such as gas BBQ's or gas fire pits that comply with the Fire Code.*
2. *For one-or two-family dwellings, fixed or portable outdoor flame devices that meet the following:*
 - a. *Devices shall comply with the Fire Code.*
 - b. *Devices shall be used per manufacturer's specifications.*
 - c. *Minimum 10-foot clearance from device to all flammable material and vegetation.*
 - d. *No burning shall be conducted during high or extreme fire weather conditions (e.g., National Weather Service Red Flag Warnings).*
3. *Campfires on private lands. Where required by the fire code official, a permit shall be issued by the fire code official.*
4. *Ceremonial and/or religious burning with the following safety measures:*
 - a. *Maximum 4-foot x 4-foot burn area.*
 - b. *Minimum 10-foot clearance from edge of burn area to all flammable material and vegetation.*
 - c. *An approved water supply is located within 500-feet of the burn area.*
 - d. *The burn area is located no less than 30-feet from adjoining property lines.*
 - e. *An adult is present with a shovel until the fire is extinguished.*
 - f. *No burning shall be conducted during high or extreme fire weather conditions (e.g., National Weather Service Red Flag Warnings).*

SECTION 202 "TRAINED CROWD MANAGER" SHALL BE ADDED AS FOLLOWS:

TRAINED CROWD MANAGER. *Standby personnel, usually a security guard or usher personnel, who are trained in the proper procedure to exit people from a tent or other place of public assemblage in an orderly and calm fashion in the event of an emergency*

Chapter 3

SECTION 302.1 "DEFINITIONS" SHALL BE AMENDED AS FOLLOWS:

3D PRINTER.

ADDITIVE MANUFACTURING.

BONFIRE.

CAMPFIRE.

HI-BOY.

HIGH-VOLTAGE TRANSMISSION LINE.

OPEN BURNING.

PORTABLE OUTDOOR FIREPLACE.

POWERED INDUSTRIAL TRUCK.

RECREATIONAL FIRE.

SKY LANTERN.

SECTION 307.4.4 "OPEN BURNING RESTRICTIONS" SHALL BE ADDED AS FOLLOWS:

Section 307.4.4 Open Burning Restrictions. *Open burning on all lands within the jurisdiction of the Rescue Fire Department, including the Local Response Area (LRA), is prohibited when the California Department of Forestry and Fire Protection (Cal Fire) issues a burn suspension in the State Responsibility Area (SRA). This prohibition shall be made effective 24-hours following its commencement in the SRA.*

Open burning is also prohibited on all lands within the jurisdiction of Rescue Fire Department at any time the fire code official that atmospheric conditions or other local circumstances make such fires hazardous, including factors such as high winds, low fuel moisture, fire weather, the issuance of red flag warnings, severe threat of wildland fire, or present risk of destruction by wildfire to life, wildlife, property, or natural resources.

Chapter 4

SECTION 401.2.1 "PRE-FIRE PLANS" IS ADDED AS FOLLOWS:

Section 401.2.1 Pre-fire plans. *Where required by the fire code official, a pre-fire plan shall be provided and approved by the fire code official for all new commercial structures.*

Chapter 5

SECTION 503.2.1 "DIMENSIONS" SHALL BE AMENDED AS FOLLOWS:

Section 503.2.1 Dimensions. *Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, as measured from face of curb to face of curb, except for approved security gates in accordance with Section 503.6, and an*

unobstructed vertical clearance of not less than 15 feet. *Driveways shall have an unobstructed width of not less than 12 feet wide.*

SECTION 503.2.5 "DEAD ENDS" SHALL BE AMENDED AS FOLLOWS:

Section 503.2.5 Dead Ends. *Dead-end fire apparatus access roads and driveways in excess of 150 feet (45,720 mm) in length shall be provided with an approved area for turning around fire apparatus.*

SECTION 503.2.6 "BRIDGES AND ELEVATED SURFACES" SHALL BE AMENDED AS FOLLOWS:

Section 503.2.6 Bridges and Elevated Surfaces. *Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17, the current El Dorado County Transportation Division Bridge Standard or Appendix D of the current California Fire Code, whichever is more restrictive. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces that are not designed for such use, approved barriers, approved signs or both shall be installed and maintained where required by the fire code official.*

SECTION 503.3.1 "NO PARKING IN FIRE LANES" SHALL BE ADDED AS FOLLOWS:

Section 503.3.1 No Parking In Fire Lanes. *No person shall stop, park, or leave standing any vehicle, whether attended or unattended, except when necessary to avoid conflict with other traffic or in compliance with the directions of the Fire Chief, or his/her duly authorized representative, Peace Officer or official traffic control device along the edge of any highway, at any curb, or in any location in a publicly or privately owned or operated off-street parking facility, designated as a fire lane by the district with jurisdiction over the area in which the place is located. The designation shall be indicated (1) by a sign posted immediately adjacent to, and visible from, the designated place clearly stating in letters not less than one inch in height that the place is a fire lane, (2) by outlining or painting the place in red and, in contrasting color, marking the place with the words "FIRE LANE", which are clearly visible from a vehicle, or (3) by a red curb or red paint on the edge of the roadway upon which is clearly marked the words "FIRE LANE".*

SECTION 503.3.2 "NO PARKING IN FRONT OF HYDRANTS" SHALL BE ADDED AS FOLLOWS:

Section 503.3.2 No Parking in Front of Hydrants. *No person shall stop, park, or leave standing any vehicle within 15 feet of a fire hydrant except as follows: (a) If the vehicle is attended by a licensed driver who is seated in the front seat and who can immediately move such vehicle in case of necessity, (b) If the vehicle is owned or operated by a fire department and is clearly marked as a fire department vehicle.*

SECTION 503.3.3 "FIRE LANES BASED ON ROAD WIDTH" SHALL BE ADDED AS FOLLOWS:

Section 503.3.3 Fire Lanes Based on Road Width. *Fire lanes shall be based on road width as required in Appendix D as amended by the District.*

SECTION 503.6 "SECURITY GATES" IS AMENDED AS FOLLOWS:

Section 503.6 Security Gates. The installation of security gates across a fire apparatus access road shall be approved by the fire code official *and shall comply with the District gate standard.* Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200.

SECTION 505.1 "ADDRESS IDENTIFICATION" SHALL BE AMENDED AS FOLLOWS:

Section 505.1 Address Identification. *Addresses for new and existing buildings shall comply with the District address standard as approved by the fire code official.* 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 $\frac{1}{2}$ inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. 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.

SECTION 507.5.1 "WHERE REQUIRED" SHALL BE AMENDED AS FOLLOWS:

Section 507.5.1 Where Required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

SECTION 509.3 "FIRE CONTROL ROOM" SHALL BE ADDED AS FOLLOWS:

Section 509.3 Fire Control Room. *Fire sprinkler risers, fire alarm control panels, solar photovoltaic power system rapid shutoff switches, and other fire detection, suppression or similar control elements shall be located inside a single fire control room for the building. The fire control room shall have minimum dimensions of five feet by seven feet in size with a total usable area of not less than 35 square feet. The room shall be located within the building on an outside wall at a location approved by the Fire Code Official and shall be accessible from the exterior. An exterior access door with a clear width of not less than 32 inches and height of not less than 80 inches shall be provided for access into the room. A durable sign shall be affixed to the exterior of the door with the words "FIRE CONTROL ROOM" in letters not less*

than 4 inches in height. A key box complying with Section 506 shall be installed on the exterior side of the fire control room door opening.

The room must be capable of maintaining a minimum temperature of 40 degrees Fahrenheit. A clearance of 12 inches shall be provided from the fire sprinkler risers to any adjacent walls. This room can be shared with other building utilities or fire protection equipment that is not incompatible. An approved cabinet or container shall be provided to store record plans of the fire sprinkler system and other fire protection equipment. This room shall not be used for any other storage.

Exception: One-and two-family dwellings, manufactured homes or similar uses defined as either a Group R-3, R3.1, or R-4 occupancy.

SECTION 510.4.2.3 "STANDBY POWER" SHALL BE AMENDED AS FOLLOWS:

Section 510.4.2.3 Standby power. In-building, two-way emergency responder communication radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the in-building, two-way emergency responder communication coverage system at 100-percent system capacity for a duration of not less than 72 hours.

Chapter 9

SECTION 903.2 "WHERE REQUIRED" SHALL BE AMENDED AS FOLLOWS:

Section 903.2 Where Required. Approved automatic sprinkler systems *in new buildings and structures when constructed or relocated within the jurisdiction shall be provided in the locations* described in Sections 903.2.1 through 903.2.12 and Sections 903.2.14 through 903.2.23.

Exception: *Agricultural buildings not under a special use permit used for commercial purposes.*

SECTION 903.2.1.1 "GROUP A-1" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.1.1 Group A. An automatic sprinkler system shall be provided throughout stories containing Group A-1 occupancies and throughout all stories from the Group A-1 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 3,600 square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multi-theater complex

SECTION 903.2.1.2 "GROUP A-2" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.1.2 Group A-2. An automatic sprinkler system shall be provided throughout stories containing Group A-2 occupancies and throughout all stories from the Group A-2

occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 3,600 square feet;
2. The fire area has an occupant load of 100 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The structure exceeds 3,600 square feet, contains more than one fire area containing a Group A-2 occupancy, and is separated into two or more buildings by fire walls of less than 4-hour fire-resistance rating without openings.

SECTION 903.2.1.3 "GROUP A-3" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.1.3 Group A-3. An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 3,600 square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The structure exceeds 3,600 square feet, contains more than one fire area containing exhibition and display rooms, and is separated into two or more buildings by fire walls of less than 4-hour fire-resistance rating without openings.

SECTION 903.2.1.4 "GROUP A-4" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.1.4 Group A-4. An automatic sprinkler system shall be provided throughout stories containing Group A-4 occupancies and throughout all stories from the Group A-4 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 3,600 square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

SECTION 903.2.3 "GROUP E" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.3 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 3,600 square feet in area.
2. The Group E fire area is located on a floor other than a level of exit discharge serving such occupancies.

Exception: In buildings where every classroom has not fewer than one exterior exit door at ground level, an automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area.

3. The Group E fire area has an occupant load of 300 or more.
4. In rooms or areas with special hazards such as laboratories, vocational shops and other such areas where hazardous materials in quantities not exceeding the maximum allowable quantity are used or stored.
5. Throughout any Group E structure greater than 3,600 square feet in area, which contains more than one fire area, and which is separated into two or more buildings by fire walls of less than 4-hour fire resistance rating without openings.
6. For public school state funded construction projects see Section 903.2.19.
7. For public school campuses, Kindergarten through 12th grade, see Section 903.2.20

SECTION 903.2.4 "GROUP F-1" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.4 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds 3,600 square feet.
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 3,600 square feet.

SECTION 903.2.7 "GROUP M" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.7 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M fire area exceeds 3,600 square feet.
2. A Group M fire area is located more than three stories above grade plane.
3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 3,600 square feet.
5. The structure exceeds 3,600 square feet, contains more than one fire area containing a Group M occupancy, and is separated into two or more buildings by fire walls of less than 4-hour fire resistance rating without openings.

SECTION 903.2.7.2 "GROUP M UPHOLSTERED FURNITURE OR MATTRESSES" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.7.2 Group M Upholstered Furniture or Mattresses. An automatic sprinkler system shall be provided throughout a Group M fire area where the area used for the display and sale of upholstered furniture or mattresses exceeds 3,600 square feet.

SECTION 903.2.8.5 "MANUFACTURED HOMES" SHALL BE ADDED AS FOLLOWS:

Section 903.2.8.5 Manufactured Homes. *An automatic fire sprinkler system shall be required in all new manufactured homes and multi-family manufactured homes intended for use as a one-and two-family dwelling. The design and installation of such systems shall be in accordance with California Code of Regulations, Title 25, §4300.*

Exceptions:

1. *Manufactured homes located within an existing mobile home park complying with California Health and Safety Code, Division 13, Part 2.1 or 2.3.*
2. *Manufactured homes that do not exceed 1,200 square feet in size and serve as an accessory dwelling unit, as defined in Government Code Section 658502; when the existing primary residence on the property is not required to comply with California Residential Code Section R313.2.*
3. *Manufactured homes that do not exceed 320 square feet in size.*

SECTION 903.2.9 "GROUP S-1" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 3,600 square feet.
2. A Group S-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 3,600 square feet.
4. A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds 3,600 square feet.

SECTION 903.2.10 "GROUP S-2" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.10 Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as parking garages where any of the following conditions exist:

1. Where the fire area of the enclosed parking garage, in accordance with Section 406.6 of the California Building Code, exceeds 3,600 square feet.
2. Where the enclosed parking garage, in accordance with Section 406.6 of the California Building Code, is located beneath other groups.

Exception: Enclosed parking garages located beneath Group R-3 occupancies.

3. Where the fire area of the open parking garage, in accordance with Section 406.5 of the California Building Code, exceeds 3,600 square feet.

SECTION 903.2.10.1 "COMMERCIAL PARKING GARAGES" SHALL BE AMENDED AS FOLLOWS:

Section 903.2.10.1 Commercial Parking Garages. An automatic sprinkler system shall be provided throughout buildings used for storage of commercial motor vehicles where the fire area exceeds 3,600 square feet.

SECTION 903.2.22 "GROUP B" SHALL BE ADDED AS FOLLOWS:

Section 903.2.22 Group B. *An automatic sprinkler system shall be provided throughout all buildings containing Group B occupancies where the fire area exceeds 3,600 square feet.*

SECTION 903.2.23 "GROUP F-2" SHALL BE ADDED AS FOLLOWS:

Section 903.2.23 Group F-2. *An automatic sprinkler system shall be provided throughout all buildings containing Group F-2 occupancies where the fire area exceeds 3,600 square feet.*

SECTION 903.6 "WHERE REQUIRED IN EXISTING BUILDINGS AND STRUCTURES" IS AMENDED AS FOLLOWS:

Section 903.6 Where Required In Existing Buildings and Structures. An automatic sprinkler system shall be provided in existing buildings and structures where required in Chapter 11 *and as follows:*

1. When there is a change in occupancy classification that results in an increased life safety or fire risk, as determined by the fire code official, and the structure exceeds 3,600 square feet, an automatic fire sprinkler system shall be installed throughout the building.
2. *In existing buildings 3,600 square feet or greater, other than one and two-family dwelling units, and agricultural buildings not under special use permit for commercial purposes, where the floor area of the building or structure is increased, such building or structure shall be made to conform to Section 903.2.*

Exception: *When the building increase is less than 500 square feet.*

3. *In existing buildings 3,600 square feet or less, other than one-and two-family dwelling units, and agricultural buildings not under special use permit for commercial purposes, where the floor area of the building or structure is increased to a total square footage over 3,600 square feet, such building or structure shall be made to conform to Section 903.2.*

Exception: *When the building increase is less than 500 square feet.*

SECTION 907.2. "WHERE REQUIRED – NEW BUILDINGS AND STRUCTURES" SHALL BE AMENDED AS FOLLOWS:

Section 907.2. Where Required – New Buildings and Structures. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.30 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Not fewer than one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers or automatic fire alarm systems, a single fire alarm box shall be installed at a location approved by the enforcing agency.

Exceptions:

1. The manual fire alarm box is not required for fire alarm control units systems dedicated to elevator recall control, supervisory service and fire sprinkler monitoring.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system, impairment event. Where provided, the manual fire alarm box shall not be located in an area that is open to the public.
3. The manual fire alarm box is not required to be installed when approved by the fire code official.
4. *A fire alarm system is not required in one and two-family dwellings, agricultural buildings, and other occupancies classified as Group U not under special use permit and/or not used for commercial purposes (e.g. retail sales, food service, and/or special events).*
5. *Buildings with a floor area less than 500 square feet may be exempt, as determined by the fire code official based on building construction material and features, location, occupancy type, and distance to exposures.*

SECTION 907.2.1.4 "GROUP A UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.1.4 Group A Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group A buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.2.3 "GROUP B UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.2.3 Group B Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group B buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.3.11 "GROUP E UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.3.11 Group E Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group E buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.4.1 "GROUP F UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.4.1 Group F Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group F buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.5.2 "GROUP H UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.5.2 Group H Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group H buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.6.6 "GROUP I UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.6.6 Group I Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group I buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.7.2 "GROUP M UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.7.2 Group M Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group M buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.8.4 "GROUP R-1 UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.8.4 Group R-1 Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group R-1 buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.9.4 "GROUP R-2, R-2.1, R-2.2 UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.9.4 Group R-2, R-2.1, R-2.2 Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group R-2, R-2.1, R-2.2 buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.10.1 "GROUP S UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

Section 907.2.10.1 Group S Under 3,600 Square Feet. *An approved fire alarm system shall be installed in all group S buildings with a floor area less than 3,600 square feet.*

907.2.30 "TYPE I HOOD INSTALLATIONS" SHALL BE ADDED AS FOLLOWS:

907.2.30 "Type I Hood Installations. *The requirement of installation, or replacement, of a Type I Hood System shall require a fire alarm/sprinkler monitoring system to be installed, or for the hood system to be connected to an existing fire alarm/sprinkler monitoring system for that building.*

907.6.5 "MONITORING" SHALL BE AMENDED AS FOLLOWS:

907.6.5 Monitoring. Fire alarm systems required by this chapter or by the California Building Code shall be monitored by an *approved, UL certified, Type A Full Service central, proprietary or remote station service, which gives audible and visual signals at a constantly attended location. All sprinklered buildings shall be monitored.*

Exceptions:

1. *One- and two-family dwellings (R-3 Occupancies and other occupancies classified as "U").*

2. *Agricultural buildings not under special use permit and/or not used for commercial purposes (e.g., retail sales, food service, and/or special events).*

SECTION 907.6.2.1 "SECONDARY POWER SUPPLY" SHALL BE ADDED AS FOLLOWS:

SECTION 907.6.2.1 SECONDARY POWER SUPPLY. *Where required by the fire code official, in accordance with NFPA 72, the secondary power supply providing a minimum 24-hour power capacity under quiescent load (system operating in a non-alarm condition) shall be amended to a minimum 72-hour power capacity.*

Exception: *The existence of an emergency back-up power supply that meets or exceeds the requirements of California Fire Code Chapter 12.*

SECTION 907.9 "WHERE REQUIRED IN EXISTING BUILDINGS" SHALL BE AMENDED AS FOLLOWS:

SECTION 907.9 Where Required. *An approved fire alarm system shall be provided in existing buildings and structures where required in Chapter 11 and in existing buildings with a floor area less than 3,600 square feet without an approved automatic sprinkler system, other than one- or two-family dwelling units, agricultural building not under special use permit for commercial purposes where a fire alarm detection system does not exist and the floor area of the building or structure is increased*

Exception: *When the building increase is less than 500 square feet.*

Chapter 12

SECTION 1203.1.3 "INSTALLATION" SHALL BE AMENDED AS FOLLOWS:

Section 1203.1.3 Installation. *Emergency power systems and standby power systems shall be installed in accordance with the California Building Code, the California Electrical Code, NFPA 110 and NFPA 111. All buildings, other than one- and two-family dwelling units, and agricultural buildings not used for commercial purposes, with standby power, shall have a shunt trip device that disconnects all power sources to the building, approved by the fire code official. Existing installations shall be maintained in accordance with the original approval.*

Chapter 33

SECTION 3311.3 "PREMISE IDENTIFICATION" SHALL BE ADDED AS FOLLOWS:

Section 3311.3 Premise Identification. *Prior to and during construction, an approved address sign shall be provided at each fire and emergency vehicle access road entry into the project.*

SECTION 3313.1 "WHEN REQUIRED" SHALL BE AMENDED AS FOLLOWS:

Section 3313.1 When Required. *An approved water supply for fire protection, either temporary or permanent, shall be installed and maintained in continuous operation as soon as combustible building materials arrive on site, the commencement of vertical combustible*

construction and on installation of a standpipe system in buildings under construction, in accordance with Sections 3313.2 through 3313.5.

Exception: The fire code official is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.

Chapter 50

SECTION 5001.7 "LIABILITY FOR DAMAGES" SHALL BE ADDED AS FOLLOWS:

Section 5001.7 Liability for Damages. *Any damages or cost resulting from the negligence, violation of the law, careless handling, spill or discharge of any hazardous materials shall constitute debt against any such person, firm or corporation causing such spill or discharge. This debt is collectible by the Fire Chief, or his/her duly authorized representative, in the same manner as in the case of an obligation under contract, expressed or implied.*

Chapter 56

SECTION 5601.2 "PERMIT REQUIRED" SHALL BE AMENDED AS FOLLOWS:

Section 5601.2 Permit Required. Permits shall be required as set forth in Section 105.5 and regulated in accordance with this section. *Where fireworks permits are required, they shall be issued by the Fire Chief, or his/her duly authorized representative, and the El Dorado County Board of Supervisors.*

Chapter 57

SECTION 5704.2.9.6.1 "LOCATIONS WHERE ABOVE-GROUND TANKS ARE PROHIBITED" SHALL BE AMENDED AS FOLLOWS:

SECTION 5704.2.9.6.1 Locations Where Above-Ground Tanks are Prohibited. Storage of Class I and Class II flammable liquids in above-ground tanks outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of Class I and Class II flammable liquids in above-ground tanks outside of buildings is prohibited unless approved by the fire code official.*

SECTION 5706.2.4.4 "LOCATIONS WHERE ABOVE-GROUND TANKS ARE PROHIBITED" SHALL BE AMENDED AS FOLLOWS:

SECTION 5706.2.4.4 Locations Where Above-Ground Tanks are Prohibited. The storage of Class I and Class II liquids in above-ground tanks is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of Class I and Class II liquids in above-ground tanks is prohibited unless approved by the fire code official.*

Chapter 58

SECTION 5806.2 "LIMITATIONS" SHALL BE AMENDED AS FOLLOWS:

SECTION 5806.2 Limitations. Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited unless approved by the fire code official.*

Chapter 61

SECTION 6104.2 "MAXIMUM CAPACITY WITHIN ESTABLISHED LIMITS" SHALL BE AMENDED AS FOLLOWS:

SECTION 6104.2 Maximum Capacity within Established Limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons. *The storage of liquefied petroleum gas in excess of an aggregate of 2,000-gallon water capacity when located at least one-half (1/2) mile from property zoned or designated for residential use and at least one-half (1/2) mile from existing residential development with a density greater than one (1) dwelling unit per acre and at least one-half (1/2) mile from any hotel or motel is allowed when approved by the fire code official, and a special/conditional use permit is issued by the County of El Dorado.*

Dispensing within established limits. Within the limits established by law restricting the dispensing of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons. The dispensing of liquefied petroleum gas in excess of an aggregate of 2,000-gallon water capacity when located at least one-half (1/2) mile from property zoned or designated for residential use and at least one-half (1/2) mile from any hotel or motel is allowed when approved by the fire code official and a special/conditional use permit is issued by the County of El Dorado.

Chapter 80

SECTION 80, NFPA 1-22, CHAPTER 22 "AUTOMOTIVE WRECKING YARDS" IS ADOPTED, AMENDED SECTIONS AS FOLLOWS:

Revise Section 22.3 as follows:

22.3 Fire department access roads shall be in accordance with the California Fire Code, Section 503 and Appendix D.

Add new Section 22.10 as follows:

22.10 Stored vehicles, boats, recreational vehicles, parts, and equipment shall not be stored within 30 feet of adjacent property lines.

SECTION 80, NFPA, 13D-22 – “STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS IN ONE-AND TWO FAMILY DWELLINGS AND MANUFACTURED HOMES” IS AMENDED AS FOLLOWS: 903.3.1.3, 903.3.5.1.1

NFPA 13D, Amended Sections as follows:

Add new Section 4.6 as follows:

4.6 Residential fire sprinkler systems installed in all new one-and two-family dwellings shall utilize a “Passive Purge” system design unless otherwise approved by the fire code official.

Exception: *Manufactured home installed, tested and approved by the California Department of Housing and Community Development.*

Revise Section 5.1.1.2 as follows:

5.1.1.2 *A supply of at least one of each type and temperature sprinkler used within the premises shall be maintained on the property at an approved location. Spare sprinklers shall be kept in a mounted and accessible cabinet.*

Revise Section 7.6 as follows:

7.6 *A local audio/visual device activated upon water flow shall be provided on all fire sprinkler systems in homes at an approved location on the exterior of the dwelling.*

Revise Section 11.2.1.1 as follows:

11.2.1.1 *Where a fire department pumper connection is not provided, the system shall be hydrostatically tested at a minimum pressure of 150 pounds per square inch gauge for no less than a 30-minute duration without evidence of leakage. Such test shall be witnessed by the fire code official.*

Appendix B – Fire Flow Requirements for Buildings

TABLE B105.1(1) “REQUIRED FIRE FLOW FOR ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES” SHALL BE AMENDED AS FOLLOWS:

TABLE B105.1(1) REQUIRED FIRE FLOW FOR ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES

FIRE-FLOW CALCULATION AREA (square feet)	AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
0 – 3,600	No automatic sprinkler system	1,000	1

3,601 and greater	No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2) at the required fire-flow rate
MAJOR SUBDIVISIONS (5 PARCELS OR GREATER)			
0 – 3,600	Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code	1,000	1
3,601 and greater	Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code	1/2 value of Table B105.1(2) (min. 1000 GPM)	2
OTHER RESIDENTIAL DEVELOPMENT			
0 – 3,600	Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code	500	1
3,601 and greater	Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code	1/2 value of Table B105.1(2) (min. 750 GPM)	1

TABLE B105.2 "REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES" SHALL BE AMENDED AS FOLLOWS:

TABLE B105.2 REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES

AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2)
Section 903.3.1.1 of the CA Fire Code	25% of the value in Table B105.1(2) ^b	Duration in Table B105.1(2) at the reduced flow rate

b. The reduced fire flow shall not be less than 1,500 gpm

Appendix D – Fire Apparatus Access Roads

SECTION D103.1 “ACCESS ROAD WIDTH WITH A HYDRANT” SHALL BE AMENDED AS FOLLOWS:

Section D103.1 Access Road Width with a Hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

Exception: *Driveways*

SECTION D103.2 “GRADE” SHALL BE AMENDED AS FOLLOWS:

SECTION D103.2 Grade. Fire apparatus access roads *and driveways* shall not exceed 15.9% in grade unless approved by the fire code official or by the El Dorado County amended California Public Resource Code Title 14 / Design and Improvement Standards Manual.

SECTION D103.3 “TURNING RADIUS” SHALL BE AMENDED AS FOLLOWS:

SECTION D103.3 Turning Radius. The minimum turning radius shall be determined by the fire code official; *and shall not include curb and gutter.*

SECTION D103.5 “FIRE APPARATUS ACCESS ROAD GATES” SHALL BE AMENDED AS FOLLOWS:

SECTION D103.5 Fire Apparatus Access Road Gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. Where a single gate is provided, the gate width shall be not less than 20 feet (6096 mm). Where a fire apparatus road consists of a divided roadway, the gate width shall be not less than 15 feet (3658 mm).
2. Gates shall be of the horizontal swing, horizontal slide, vertical lift or vertical pivot type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Methods of locking shall be submitted for approval by the fire code official.
7. Electric gate operators, where provided, shall be listed in accordance with UL 325.
8. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

SECTION D103.6.1 “ROADS 20 TO 29 FEET IN WIDTH” SHALL BE AMENDED AS FOLLOWS:

SECTION D103.6.1 Roads 20 to 29 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on both side of fire apparatus access roads that are 20 to 29 feet wide (6096 to 8534.4 mm).

SECTION D103.6.2 "ROADS MORE THAN 29 FEET IN WIDTH" SHALL BE AMENDED AS FOLLOWS:

SECTION D103.6.2 Roads more than 29 feet in Width. Fire lane signs as specified in Section D103.6 shall be posted on one side of fire apparatus access roads more than 29 feet wide (8534.4 mm) and less than 36 feet wide (10972.8 mm).

SECTION D104.4 "CIRCUMFERENTIAL FIRE APPARATUS ACCESS ROADS" SHALL BE ADDED AS FOLLOWS:

SECTION D104.4 Circumferential Fire Apparatus Access Roads. *When required by the fire code official, a fire apparatus access road shall be constructed to encompass the entirety of a structure and shall provide a continuous means of emergency vehicle access.*

SECTION 4: CONFLICT

That Ordinance No. 2019-01 of the RFPD, and all other ordinances or parts of ordinances herewith are hereby repealed.

SECTION 5: SEVERABILITY

If any Ordinance, article, subsection or subdivision thereof, provision, sentence, clause or phrase of this code, or any application thereof, is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the remaining provisions of this code, which can be given effect without the invalid portions and, therefore, such invalid portions are declared to be severable. The RFPD hereby declares that it would have enacted this Ordinance and each of its articles, sections, subsections, or subdivisions thereof, provisions, sentences, clauses or phrases irrespective of the fact that one or more of them is declared invalid.

SECTION 6: EFFECTIVE DATE AND PUBLICATION

This Ordinance shall take effect thirty (30) days after its adoption. RFPD Board Secretary is directed to publish this ordinance in a newspaper of general circulation in the District. In lieu of publication of the full text of the ordinance, a summary of the ordinance may be published by the by the Board Secretary within fifteen (15) days after its passage and a certified copy shall be posted in the office of the RFPD pursuant to *Government Code Section 36933(c) (1)*.

The above Ordinance was introduced at a meeting of the Board of Directors of the RFPD on September 14, 2022, and it was then read for the first time. A public hearing was set for the Ordinance to be read for the second time on October 12, 2022 and approved by the following vote:

PASSED AND ADOPTED by the Board of Directors of the Rescue Fire Department this, _____ day of _____, 2022.

AYES:

NOES:

ABSENT:

ABSTAIN:

XXXX, Board President

ATTEST:

Jessica Braddock, Board Secretary

Appendix H: Characteristics of Fire Smart Vegetation

All plants will burn under the right conditions, regardless of how they are classified (e.g. “Fire Smart,” “fire resistive,” “fire safe,” or “Firewise,”). However, plants burn at different intensities and rates of consumption. Fire Smart plants burn at a relatively low intensity, slow rates of spread and with short flame lengths. The following are characteristics⁴⁰ of Fire Smart vegetation:

- Growth with little or no accumulation of dead vegetation (either on the ground or standing upright).
- Non-resinous plants (willow, poplar, or tulip trees).
- Low volume of total vegetation (for example, a grass area as opposed to a forest or shrub-covered land).
- Plants with high live fuel moisture (plants that contain a large amount of water in comparison to their dry weight).
- Drought-tolerant plants (deeply rooted plants with thick, heavy leaves).
- Stands without ladder fuels (plants without small, fine branches and limbs between the ground and the canopy of overtopping shrubs and trees).
- Plants requiring little maintenance (slow-growing plants that, when maintained, require little care).
- Plants with woody stems and branches that require prolonged heating to ignite.

⁴⁰ See *Home Landscaping for Fire*, University of California Division of Agriculture and Natural Resources; [Fire Resistant Plants - UCANR Fire Network](#)

Highly Flammable Trees & Vegetation

It is advised that these trees and vegetation be removed from the defensible space area around structures.

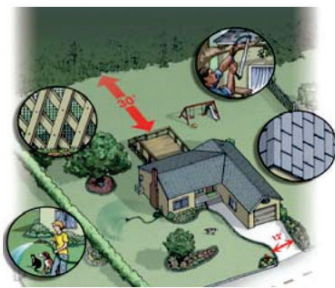
Trees:

Grasses, Shrubs, Ground Cover

- Acacia
- Arborvitae California Bay
- Arizona Cypress
- Bald Cypress
- Blue Gum
- Cedar
- Cryptomeria
- Cypress
- Eucalyptus
- Pine
- Hemlock
- Italian Cypress
- Juniper
- Larch
- Leyland Cypress
- Manna Gum
- Palm (when left untrimmed)
- Palm Pine
- Pepper Tree
- Fir
- Red Cedar
- Spruce
- Sugar Gum
- Tamarisk
- Wax Myrtle Cabbage Palm
- Yew



- Algerian Ivy
- American Holly
- Bamboo
- Black Sage
- Boxwood
- Brooms
- California buckwheat
- California sagebrush
- Chamise or greasewood
- Deer Grasses
- Dry annual Grasses
- Fountain Grasses
- Gallberry Holly
- Hopseed Bush
- Juniper
- Laurel sumac
- Coyote Brush
- Manzanita
- Melaleuca
- Pampas Grass
- Pine straw
- Podocarpus
- Red Shanks
- Rosemary
- Salal
- Saw Palmetto
- Scotch broom
- Scrub oak
- Spanish broom
- Sugar bush
- Toyon
- Wax Myrtle
- Yaupon Holly



*These plants are among those known for the amount of dead fuel that accumulates in them, and high oil, high resin, or low moisture content of their leaves and branches

**All plants are flammable if not pruned periodically and the risk attached to any one plant can be greatly diminished with maintenance.

Appendix I: Ready – Set – Go Wildfire Evacuation Program

The geography, weather patterns, and number of Wildland Urban Interface communities in California make it a state particularly threatened by devastating wildfire. To help educate property owners and residents in areas most at risk, CAL FIRE has developed a communications program called “Ready, Set, Go!” that breaks down the actions needed to be ready for wildfire.

Ready, Set, Go! Program





Get prepared for wildfire before it strikes by following Ready, Set, Go!

- Be Ready: Create and maintain defensible space and harden your home against flying embers.
- Get Set: Prepare your family and home ahead of time for the possibility of having to evacuate.
- Be Ready to GO!: Take the evacuation steps necessary to give your family and home the best chance of surviving a wildfire.

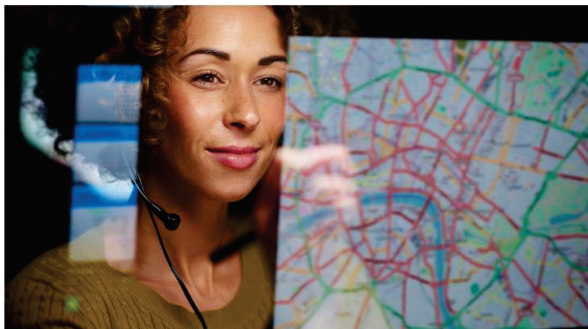
Go to this link for additional information on the Ready - Set - Go program: [What is the Ready, Set, Go! Program? \(wildlandfirersg.org\)](http://wildlandfirersg.org).

Appendix J: El Dorado County Emergency Alert Notifications



**El Dorado County
EMERGENCY
ALERTS** 

The El Dorado County Sheriff's Office of Emergency Services has implemented an alert and warning system designed to engage with the community during critical events such as wildfires, hazardous material spills, or urgent law enforcement operations. This comprehensive system deploys diverse communication methods to reach out to both residents and businesses whenever there's a potential health or safety risk. Register and stay connected.



STAY INFORMED & SAFE!

How Can We Warn You if We Can't Reach You?
El Dorado County's Emergency Alerts service uses phone calls, cell alerts, texts, emails, and the Smart911 App to update you during emergencies.

No Need to Re-register if you were on CodeRED!
Your CodeRED info will move to the new El Dorado County Emergency Alerts system. But, new registrations help ensure everyone gets timely emergency notifications.

**SIGN UP!
EL DORADO COUNTY
EMERGENCY ALERTS!**



>>> <https://ready.edso.org>



Our Emergency Alert System is here to keep you informed! Scan the QR code or go to the website and get connected!

** REMAIN UPDATED
DURING EMERGENCIES**

Stay Safe with El Dorado Emergency Alerts. Your Free and Direct Mass Notification System for Critical Information and Instructions, serving residents and workers in El Dorado County.

** ALERTS
WHAT THEY COVER**

- Fires
- Earthquakes
- Weather Alerts
- Environmental Alerts
- Crime incidents
- Guidance amid a disaster

 <p>Contact Us: Placerville: 530.621.5895</p>	 <p>Send Us an Email: emergencyinfo@edso.org</p>	 <p>Visit Us Online: https://ready.edso.org</p>
---	--	--




El Dorado County EVACUATION ZONES & ROUTES

YOUR KEY TO SAFETY & READINESS

Access instant public safety instructions without the need for signup or login. Stay well-informed at every stage of a disaster. Discover your evacuation zone through Perimeter, a public safety map showcasing emergency information provided by the El Dorado County Sheriff's Office of Emergency Services. Visit perimetermap.com to receive real-time updates on evacuation orders, road closures, resource locations, and other critical details.




PERIMETER IS NOT AN ALERT & WARNING SYSTEM

For Public safety notifications, sign up for RAVE at ready.edso.org.

REAL-TIME SAFETY VIEWS WITH INSTANT PUBLIC INSTRUCTIONS!



1 GO TO perimetermap.com OR SCAN THE QR CODE

2 ENABLE YOUR LOCATION OR ENTER YOUR ADDRESS INTO THE SEARCH BAR

3 CLICK ON THE ZONE AT YOUR LOCATION FOR THE EVACUATION STATUS



Contact Us:
Placerville: 530.621.5895



Send Us an Email:
emergencyinfo@edso.org



Visit Us Online:
<https://ready.edso.org>

Appendix K: FIREWISE USA®

The National Fire Protection Association (NFPA) Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an “In Good Standing Status” may identify itself as being a Firewise® Site.

The Firewise USA® program is administered by NFPA® and is co-sponsored by the USDA Forest Service and the National Association of State Foresters. While the NFPA® administers this program, individuals and communities participate on a voluntary basis. The NFPA® disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly, or indirectly resulting from participation in the Firewise USA® program. The NFPA® also makes no guaranty or warranty as to the accuracy or completeness of program guidance.

Go to this link for additional information on the FIREWISE USA program: [NFPA - Firewise USA®](#).

Appendix L: RFD Fire Protection Standard P-001 (Residential Fire Setback Requirements)

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

RESIDENTIAL BUILDING SETBACKS	Standard: #P-001
Created: 4/28/2026	Revised:

1.0 PURPOSE

California Wildland Urban Interface Code (CWUIC) Section 608 states that all parcels shall provide a minimum 30-foot minimum setback for all parcels from property lines and the center of a road, except as provided for in Section 608.2.1 [CCR T14 §1276.01(a)].

The purpose of this standard is to assist developers, builders, homeowners, and Fire Prevention staff members with the approved alternative methods allowed by Rescue Fire Protection District (RFPD) when practical reasons such as parcel dimensions or size, topographic limitations, development density requirements or other site constraints increase the risk of structure-to-structure ignition as a result of a setback reduction.

2.0 SCOPE

- 2.1 This standard applies to new residential buildings described in this section that are located in all Fire Hazard Severity Zones in State Responsibility Areas (SRA), or Local Responsibility Area (LRA) Very High and High Fire Hazard Severity Zone, or designated Wildland-Urban Interface (WUI) area, that is planned within the jurisdictional boundaries of RFPD.
- 2.2 This standard shall apply to the construction of the following building types:
 - 2.2.1 One-and-two Family Residential Dwellings
 - 2.2.2 Modular Homes
 - 2.2.3 HUD-Code Manufactured Homes Built After July 1994
 - 2.2.4 Multi-family Residential Dwellings
- 2.3 This standard shall not apply to the following building types:
 - 2.3.1 Non-residential buildings and structures
 - 2.3.2 Non-residential manufactured homes
 - 2.3.3 Mobile Homes and HUD-Code Manufactured Homes built on or before July 1994
 - 2.3.4 Mixed-Use Commercial / Residential Buildings

3.0 DEFINITIONS

- 3.1 **Building:** Any structure used or intended for supporting or sheltering any use or occupancy, except those classified as Utility or Miscellaneous Group U.
- 3.2 **California Wildland-Urban Interface Code (CWUIC):** Refers to the provisions addressing fire spread, accessibility, defensible space, water supply, and more for buildings constructed near wildland areas as described in California Code of Regulations Title 24, Part 7.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

- 3.3 Defensible Space:** The buffer that landowners are required to create in their property between a "Building or Structure" and the plants, brush, and trees or other items surrounding the "Building or Structure" that could ignite in the event of a fire. [CCR Title 14 §1299.02[a]]
- 3.4 Noncombustible Zone:** A non-combustible buffer around structures and decks. Combustibles including, but not limited to, vegetation, trees including overhanging branches, grass/turf, wood/rubber mulch, wood/vinyl fencing, other stored items, etc. are not permitted in this zone.
- 3.5 Restrictive Covenant:** A document signed by the property owner or legal agent including all construction restrictions applicable to a parcel. This Restrictive Covenant shall be signed in the presence of a licensed notary and recorded with the El Dorado County Recorder-Clerk's Office.
- 3.6 Structure:** That which is built or constructed, or any piece of work artificially built up or composed of parts joined together in some definite manner.

4.0 GENERAL

- 4.1** All new residential buildings, regardless of zone or area, described in Subsection 2.2, shall comply with the provisions listed in Subsections **4.5.1**, **4.5.10**, **4.6**, and **4.7** of this Standard where the setback on any side of the building is less than 30 feet.
- 4.2** All new residential buildings located within an SRA Moderate Fire Hazard Severity Zone, or designated WUI area, shall comply with the CWUIC and Subsection 4.6.1.
- 4.3** All new residential buildings located within an SRA or LRA High Fire Hazard Severity Zone, or designated WUI area, shall comply with the provisions described in Subsection **4.5** of this Standard on the entire length of the side of the building located where the setback is less than 30 feet.
- 4.4** All new residential buildings located within an SRA or LRA Very High Fire Hazard Severity Zone shall comply with the provisions described in Subsection **4.5** in all areas of the building when one or more setbacks are less than 30 feet.

4.5 Ignition-Resistant Construction Requirements**4.5.1 Roof Assembly**

Roofs shall have a roof assembly as described in CWUIC Section 504.2 that complies with a *Class A fire classification* when tested in accordance with ASTM E108 or UL 790.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

4.5.2 Eaves and Soffits

Eaves shall be constructed in accordance with CWUIC Section 504.3 and the following:

- Eaves shall be enclosed (soffited) with noncombustible material (e.g., fiber-cement, stucco, or metal).
- Facias are required to be non-combustible. This can be met by using non-combustible materials (e.g. fiber cement, Hardie board, metal, etc.) or by being covered with a non-combustible material like stucco.

4.5.3 Gutters and Downspouts

Gutters and downspouts shall be constructed in accordance with CWUIC Section 504.4 and the following:

- Gutters shall be covered with an approved noncombustible material to prevent the accumulation of leaves and debris in the gutter.

4.5.4 Exterior Wall Covering

Exterior walls of buildings and structures shall be constructed in accordance with CWUIC Section 504.5 and the following:

- All exterior walls shall have at least 6-inches of noncombustible material (e.g., exposed concrete foundation, fiber cement, brick or stone veneer, stucco, metal flashing) applied vertically on the base of the wall measured from the ground at grade and the nearest horizontal surface (e.g., decks and patios).
- All exterior wall coverings shall be made of noncombustible material (e.g., metal, fiber-cement, masonry veneer, stucco, brick, concrete).
- Where provided, all shutters (decorative and operable) shall have all exposed surfaces constructed of noncombustible material.

4.5.5 Underfloor and Projection (e.g., underneath cantilever, home on piers)

Buildings or structures shall have underfloor areas constructed in accordance with CWUIC Section 504.6 and the following:

- The underfloor and building projections, other than decks, shall be constructed with one of the following methods.
 - Shall have noncombustible material coverings; or
 - Be enclosed to the ground with noncombustible material wall coverings.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

4.5.6 Attached Patios, Decks, and Overhang Structures

Any attached patio, deck, stair, or overhead structure shall comply with CWUIC Section 504.7 and the following:

- All deck components, including posts, joists, railings, stairs, and walking surfaces, shall be constructed entirely of noncombustible materials.
- Overhead structures, where provided, shall be completely noncombustible and shall meet the same material requirements as the building.
- Outdoor kitchens, bars, and built-ins, where provided, shall be constructed entirely of noncombustible materials.

4.5.7 Exterior Glazing (Windows, Skylights, and Glazed Openings within Doors)

Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall comply with CWUIC Section 504.8 and the following:

- All exterior windows, skylights, and glazed openings within doors shall meet one of the following methods
 - Multipaned glass with at least two tempered panes.
 - Glass with a fire-protection rating of not less than 20 minutes, when tested in accordance with NFPA 257 or UL 9.
 - Glass block (windows only).
- Exception:** Skylights may be constructed with one outer tempered pane and one inner laminated pane.
- Operable skylights, regardless of glass configuration, shall be protected with a noncombustible mesh screen where mesh openings shall not exceed 1/8-inch in diameter.

4.5.8 Exterior Doors

Exterior doors (including garage doors) shall comply with CWUIC Section 504.9 and all of the following:

- Exterior doors shall comply with one of the methods described below.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

- Noncombustible construction.
 - Solid-core wood not less than 1¼ inches thick (44 mm).
 - Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252, UL 10B, or UL 10C.
 - Doors made of combustible material (e.g. non-solid core wood doors) are permissible provided a noncombustible exterior storm door is installed as the outermost door
- The exterior door frame shall be constructed with a noncombustible threshold.
 - Where provided, windows within doors and glazed doors shall be constructed in accordance with Subsection 4.5.7 of this Standard.

4.5.9 Vents

Ventilation openings, including for enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafters, underfloor ventilation, foundations, crawl spaces or any other opening intended to permit ventilation shall comply with CWUIC Section 504.10 and the following:

- Dryer and central vacuum air vents shall have installed a functional louver or flap made of noncombustible materials (e.g., metal) in lieu of mesh.
- Turbine vents (e.g., whirlybird vents) are prohibited.

Exception: Plumbing vents are excluded from this requirement.

4.5.10 Detached Accessory Dwelling Units and Accessory Structures

Accessory buildings and miscellaneous structures shall comply with CWUIC Section 504.11 and all of the following:

- All Structures [e.g., Overhead Structures (e.g., Pergolas, Carports, Gazebos) Sheds, Garages, Greenhouses, Playsets, etc.] with a footprint greater than or equal to 15 square feet and within 30 feet of the building and attachments, where provided, shall meet all the following requirements:
 - Structures shall be at least 10 feet from the building and attachments.
 - Structures shall meet the same wildfire resilience requirements for the building, such as roof covering, gutters and downspouts, vents, 6-inch vertical noncombustible wall covering clearance, decks, and the 0-5 Foot Noncombustible Zone surrounding them.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

- Space multiple structures at least 10 feet apart from each other. Each structure's 0–5 Foot Noncombustible Zone under and around the structure shall not overlap the 0–5 Foot Noncombustible Zone required for the building, decks, or other structures within 30 feet.
- Shall have no more than 3 total ADUs and accessory structures within 30 feet.
- Additionally, open detached carports and garages, where provided, shall not store combustible items.

4.5.11 Other Items**4.5.11.1 Hot Tubs and Saunas**

Where hot tubs and saunas are provided, they shall comply with all of the following:

- Shall be located at least 10 feet from the building's exterior walls and from other large combustibles, and not under a combustible overhead structure (e.g., covered porch, pergola, or gazebo).
- When installed on a combustible surface (e.g., wood or composite deck), shall have noncombustible material under the hot tub and sauna, extending to 2 feet beyond all sides.
- When installed on a noncombustible surface or patio (e.g., concrete patio), the 0–5 Foot Noncombustible Zone shall be maintained around the hot tub or sauna.

4.5.11.2 Liquid Propane Gas Storage and Fuel Tanks

Where Liquid Propane Gas Storage Tanks and Fuel Tanks are provided, they shall comply with CFC Chapter 61 and all of the following:

- Shall be at least 30 feet from the building, or
 - Shall be at least 10 feet from the building and
- Shall have 10 feet of noncombustible clearance to bare mineral soil under and around the tank, including removal of vegetation, groundcover, fencing, and all combustible items. Noncombustible hardscape materials (e.g., gravel, pavers, river rocks, decomposed granite, steppingstones, and concrete) are permitted.
 - Shall extend clearance an additional 10 feet around their

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

exterior. The additional 10 feet of clearance includes cutting annual grasses down to less than four inches in height; removing plants, shrubs, bushes, and small trees; and removing dead plants, shrubs, bushes, trees, limbs, branches, logs, and stumps.

Exception: Healthy, mature trees are permitted if limbed up to maintain at least 6 feet of clearance above the tank.

4.6 Defensible Space Requirements

Planting of vegetation for new landscaping shall be selected to reduce vegetation in proximity to a structure and shall comply with CWUIC Section 603 and the following.

4.6.1 Noncombustible Zone

A "Noncombustible Zone" shall be established around the perimeter of the building. The "Noncombustible Zone" is measured horizontally from the edge of the building's exterior walls and, if present, the outermost posts of a combustible deck or overhead structure, extending outward to 5 feet. This noncombustible area also extends vertically to the sky and shall meet all of the following requirements:

- All vegetation (e.g., grass, weeds, flowers, succulents, cacti, plants, shrubs, bushes, and vegetative debris) within 5 feet is prohibited.
- All trees, limbs, branches, and vines that are within and that overhang the Noncombustible zone shall be removed.
- All combustible groundcover materials (e.g., wood and rubber mulch, artificial turf, and exposed weed cloth) is prohibited.
- Noncombustible hardscape materials (e.g., gravel, pavers, river rocks, decomposed granite, steppingstones, and concrete) are permitted.

4.6.2 Shrub Spacing

Shrubs shall comply with CWUIC Section 603.4.1 and the following:

- Shrubs, bushes, and plants taller than 2 feet shall not be placed under trees.
- Individual shrubs or clustered groups ("islands") may be used, provided each cluster has total foliage less than 10 feet in horizontal diameter and is treated as a single shrub.
- Shrubs, bushes, and plants, or shrub groupings shall have horizontal spacing from other vegetation of 2 times the height of the tallest plant up to a maximum spacing requirement of 10 feet.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

- Privacy hedges and rows of bushes shall be located a minimum of 10 feet from the building's exterior walls.

4.6.3 Tree Spacing

Trees shall comply with CWUIC Section 603.4.2 and the following:

- Tree limbs and branches shall be pruned to a minimum height of 6 vertical feet above the ground or one-third the height of the tree if the tree is under 18 feet tall.
- All tree branches at least 10 feet away from chimney and stovepipe outlets.
- Privacy rows of trees shall be located a minimum of 10 feet from the building's exterior walls.

4.6.4 Wood Storage Piles

The storage of firewood and combustible materials shall comply with CWUIC Section 607 and the following:

- Wood piles shall be stored at least 30 feet away from the building unless the wood is stored in an accessory structure. See Subsection 4.4.10 for additional requirements for accessory structures.
- Fire-retardant tarps are prohibited as an acceptable alternative.

4.7 Fencing and Retaining Wall Requirements

Fencing materials, posts, gates, and retaining walls shall comply with the following:

- Shall be made of noncombustible materials within 5 feet of a building.
- Back-to-back (parallel) combustible fencing (meaning separate fences that are combustible and closer than 5 feet apart) are not permitted.

Exception: if one or both back-to-back (parallel) fences are constructed with noncombustible materials (e.g., concrete or metal).

5.0 PLAN SUBMITTAL

- 5.1** Projects seeking to construct a building within the required 30-foot fire-safe setback shall submit the following:

5.1.1 Setback Exemption Request Letter (see example A)

Applies to structures encroaching the required setback only. This request letter states the conditions (i.e., site topography) driving the request for exemption.

RESCUE FIRE DEPARTMENT FIRE PREVENTION STANDARDS

5.1.2 Setback Compliance Plan (see example B)

Applies to structures encroaching the required fire safe setback only. This plan shall illustrate the location of all structures located on the parcel, location of property lines, and location of required setbacks. This plan shall also illustrate the fire protection features to be installed (i.e., decks, soffits, windows, doors, skylights, vents, etc.), inclusive of the manufacturer's specifications, and the specific setback conditions required based upon structure location.

5.1.3 Restrictive Covenant notarized and recorded with the El Dorado County Recorder-Clerk's Office (see Example C)

All requirements identified in Item 2 of the General section above shall be included within the Restrictive Covenant document. Once recorded, the applicant is then required to submit a copy of the recorded Restrictive Covenant (including the document number that the County provides on the document) to RFPD as part of the official record.

- 5.2 Permit approval to construct a building located in the fire-safe setback will not be granted without a Restrictive Covenant being recorded with the County of El Dorado and this information being provided to RFPD.

6.0 AUTHORITY CITED

- 6.1 California Wildland-Urban Interface Code (CWUIC)
- 6.2 California Building Code (CBC).
- 6.3 California Code of Regulations, Title 14, Fire Safe Regulations
- 6.4 Institute of Business and Home Safety *Wildfire Prepared Home/Home Plus* Technical Standard (December 2025)

Recording requesting by:



When recorded mail a copy to:

Rescue Fire Protection District
P.O. Box 201
Rescue, CA 95672

Recorder's Use Only

RESTRICTIVE COVENANT

FIRE-SAFE SETBACK CONDITIONS

NOTICE IS HEREBY given that a restrictive covenant requiring fire-safe conditions is imposed upon that certain parcel designated as **APN#** _____ & **LOT#** _____ of the _____ **Subdivision**, as filed in the official records in the Office of the County Recorder of the County of El Dorado, State of California, and as legally described in **Exhibit A attached hereto**.

This restriction is imposed as a set of conditions to grant a variance to the required 30-foot fire-safe setback requirements of CCR Title 14 Fire Safe Regulations, the California Wildland Urban Interface Code (CWUIC), and Rescue Fire Protection District (RFPD) Standard P-001 – Residential Setback for Structure Defensible Space in the State Responsibility Area (SRA) and Local Responsibility Area (LRA) **High Fire Hazard Severity Zone (HFHSZ)**. For a structure that falls within the 30-foot fire safe set back zone, the structure shall comply with the following restriction conditions:

Entire Structure:

1. **Five (5) feet of non-combustible material horizontally around the entire structure; to include fencing materials, posts, gates, and retaining walls around the entirety of the building regardless of the location of the set back.**
2. **Roof shall have a roof assembly as described in CWUIC Section 504.2 that complies with a Class A fire classification (ASTM E108 or UL 790).**
3. **Eaves shall be enclosed (soffited) with noncombustible materials and comply with CWUIC Section 504.3 and RFPD P-001 Subsection 4.5.2 .**
4. **Gutters and Downspouts shall be constructed of noncombustible materials. Gutters shall be covered with an approved noncombustible material to prevent accumulation of leaves and debris in the gutter and comply with CWUIC Section 504.4 and RFPD P-001 Subsection 4.5.3.**
5. **Exterior walls shall be constructed with noncombustible materials (e.g., stucco, fiber-cement, stone, or brick) and comply with CWUIC Section 504.5 and RFPD P-001 Subsection 4.5.4.**

Address:

LOT:

APN:

- 6. Underfloor and Projections (e.g., underneath cantilever, home on piers) shall be constructed with noncombustible material and comply with CWUIC Section 504.6 and RFPD P-001 Subsection 4.5.5 .
- 7. Attached patios, decks, or overhang structures shall be constructed with noncombustible materials and comply with CWUIC 504.7 and RFPD P-001 Subsection 4.5.6.
- 8. Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall comply with CWUIC Section 504.8 and RFPD P-001 Subsection 4.5.7.
- 9. Exterior doors (including garage doors) shall comply with CWUIC Section 504.9 and RFPD P-001 Subsection 4.5.8 and RFPD P-001 Subsection 4.5.8.
- 10. Ventilation openings, including for enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafters, underfloor ventilation, foundations, crawl spaces or any other opening intended to permit ventilation shall comply with CWUIC Section 504.10 and RFPD P-001 Subsection 4.5.9.

Exception: Plumbing vents are excluded from this requirement

- 11. Accessory building and miscellaneous structures shall comply with CWUIC Section 504.11 and RFPD P-001 Subsection 4.5.10.
- 12. Hot tubs and saunas shall comply with RFPD P-001 Subsection 4.5.11.1.
- 13. Liquid propane gas storage tank(s) and fuel tank(s) shall comply with California Fire Code Chapter 61 and RFPD P-001 Subsection 4.5.11.2.

Said restriction shall be binding upon the heirs, assigns, and successor in the interest of the grantors, and shall remain in effect until rescinded by El Dorado County. The purpose of this Restrictive Covenant is to give constructive notice of this development limitation.

For Individual or multiple property owners:

(Property Owner - Signature)	(Property Owner - Print Name)	(Date)
(Property Owner - Signature)	(Property Owner - Print Name)	(Date)

For property held by trust, Corporation, or LLC:

(Name of Trust, Corporation, LLC)		
(Signatory Signature)	(Signatory Name and Title)	(Date)

Address:

LOT:

APN:

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of

On _____ before me, _____, Notary Public
(insert name and title of the officer)

personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

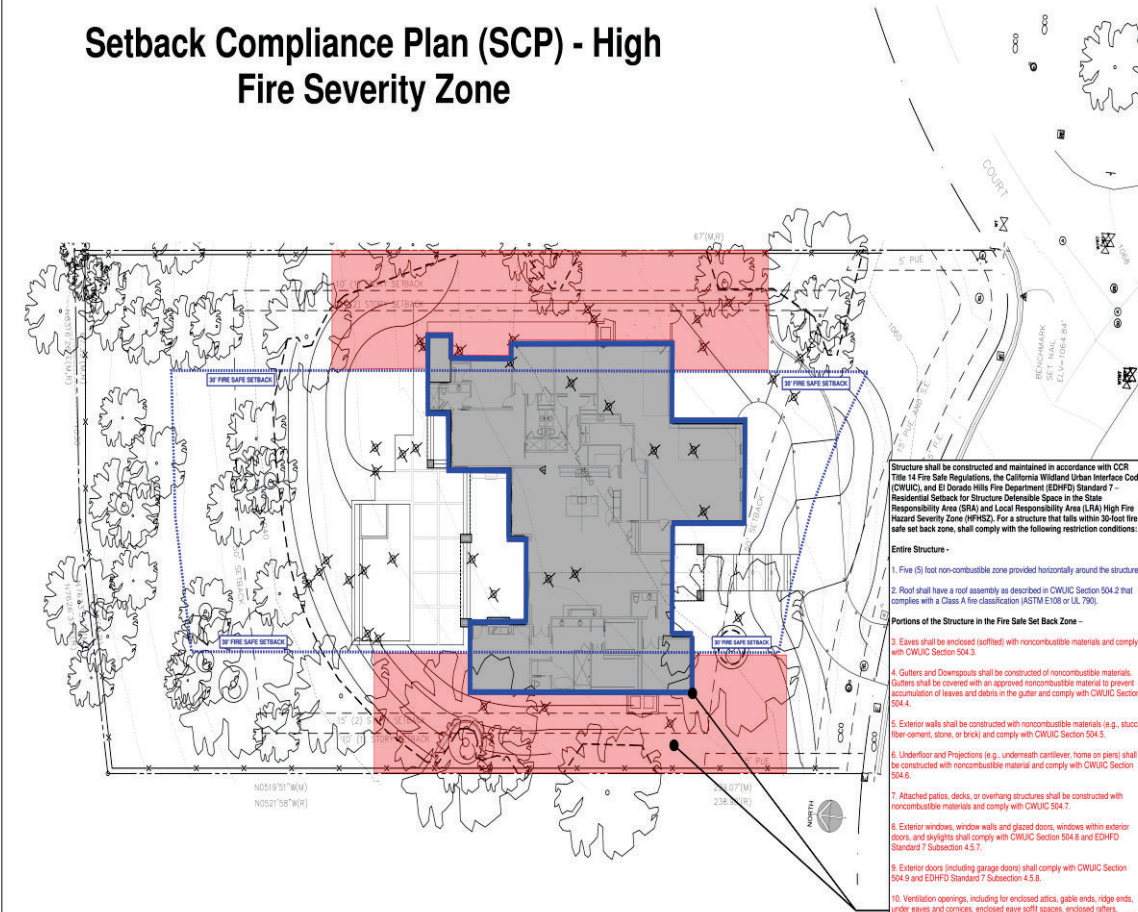
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

EXAMPLE B-2

Setback Compliance Plan (SCP) - High Fire Severity Zone



1234 SAMPLE STREET
EL DORADO HILLS, CA 95672

GENERAL NOTES:

1. CONTRACTOR TO PROVIDE SETBACK PER ALL PERMITS.
2. CONTRACTOR TO PROVIDE SETBACK PER ALL PERMITS.
3. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.
4. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.
5. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.
6. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.
7. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.
8. CONTRACTOR TO OBTAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO VERIFY THE CORRECTNESS OF THE SETBACK PER ALL PERMITS.

SITE COVERAGE

- 5% MIN. COVER
- 10% MIN. COVER
- 15% MIN. COVER
- 20% MIN. COVER
- 25% MIN. COVER
- 30% MIN. COVER
- 35% MIN. COVER
- 40% MIN. COVER
- 45% MIN. COVER
- 50% MIN. COVER
- 55% MIN. COVER
- 60% MIN. COVER
- 65% MIN. COVER
- 70% MIN. COVER
- 75% MIN. COVER
- 80% MIN. COVER
- 85% MIN. COVER
- 90% MIN. COVER
- 95% MIN. COVER
- 100% MIN. COVER

LEGEND

- 1. 1/2" = 1' SCALE
- 2. 1/4" = 1' SCALE
- 3. 1/8" = 1' SCALE
- 4. 1/16" = 1' SCALE
- 5. 1/32" = 1' SCALE
- 6. 1/64" = 1' SCALE
- 7. 1/128" = 1' SCALE
- 8. 1/256" = 1' SCALE
- 9. 1/512" = 1' SCALE
- 10. 1/1024" = 1' SCALE
- 11. 1/2048" = 1' SCALE
- 12. 1/4096" = 1' SCALE
- 13. 1/8192" = 1' SCALE
- 14. 1/16384" = 1' SCALE
- 15. 1/32768" = 1' SCALE
- 16. 1/65536" = 1' SCALE
- 17. 1/131072" = 1' SCALE
- 18. 1/262144" = 1' SCALE
- 19. 1/524288" = 1' SCALE
- 20. 1/1048576" = 1' SCALE

Structure shall be constructed and maintained in accordance with CCR Title 14 Fire Safe Regulations, the California Wildland Urban Interface Code (CWUIC), and El Dorado Hills Fire Department (EDHFD) Standard 7 - Residential Setback for Structure Defensible Space in the State Responsibility Area (SRA) and Local Responsibility Area (LRA) High Fire Hazard Severity Zone (HFHSZ). For a structure that falls within 30-foot fire safe set back zone, shall comply with the following restriction conditions:

- Entire Structure -**
1. Five (5) foot non-combustible zone provided horizontally around the structure.
 2. Roof shall have a roof assembly as described in CWUIC Section 504.2 that complies with a Class A fire classification (ASTM E136 or UL 790).
- Portions of the Structure in the Fire Safe Set Back Zone -**
3. Eaves shall be enclosed (soffit) with noncombustible materials and comply with CWUIC Section 504.3.
 4. Gutters and Downspouts shall be constructed of noncombustible materials. Gutters shall be covered with an approved noncombustible material to prevent accumulation of leaves and debris in the gutter and comply with CWUIC Section 504.4.
 5. Exterior walls shall be constructed with noncombustible materials (e.g., stucco, fiber-cement, stone, or brick) and comply with CWUIC Section 504.5.
 6. Underfloor and Projections (e.g., underneath cantilever, home on piers) shall be constructed with noncombustible material and comply with CWUIC Section 504.6.
 7. Attached patios, decks, or overhang structures shall be constructed with noncombustible materials and comply with CWUIC Section 504.7.
 8. Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall comply with CWUIC Section 504.8 and EDHFD Standard 7 Subsection 4.5.7.
 9. Exterior doors (including garage doors) shall comply with CWUIC Section 504.9 and EDHFD Standard 7 Subsection 4.5.8.
 10. Ventilation openings, including for enclosed attics, gable ends, ridge ends, under eaves and canopies, enclosed eave soffit spaces, enclosed soffits, underfloor ventilation, foundations, crawl spaces or any other opening intended to permit ventilation shall comply with CWUIC Section 504.10.
Exception: Plumbing vents are excluded from this requirement.
 11. Accessory building and miscellaneous structures shall comply with CWUIC Section 504.11 and EDHFD Standard 7 Subsection 4.5.10.
 12. Hot tubs and saunas shall comply with EDHFD Standard 7 Subsection 4.5.11.1.
 13. Liquid propane gas storage tank(s) and fuel tank(s) shall comply with California Fire Code Chapter 81 and EDHFD Standard Subsection 4.5.11.2.

REVISIONS:

- 1. [Symbol] [Description]
- 2. [Symbol] [Description]
- 3. [Symbol] [Description]
- 4. [Symbol] [Description]
- 5. [Symbol] [Description]
- 6. [Symbol] [Description]
- 7. [Symbol] [Description]
- 8. [Symbol] [Description]
- 9. [Symbol] [Description]
- 10. [Symbol] [Description]
- 11. [Symbol] [Description]
- 12. [Symbol] [Description]
- 13. [Symbol] [Description]
- 14. [Symbol] [Description]
- 15. [Symbol] [Description]
- 16. [Symbol] [Description]
- 17. [Symbol] [Description]
- 18. [Symbol] [Description]
- 19. [Symbol] [Description]
- 20. [Symbol] [Description]

SCALE: 1" = 10'-0"
DATE: JULY 20, 2022
JOB: 22003
SHEET: A1.2

Appendix M: About the Author

This Fire Safe Plan was prepared in 2026 by Phillips Consulting Services of Georgetown, CA. The author, Ronald A. Phillips, has over 40 years of experience in both fire safety and emergency preparedness. Mr. Phillips served in a variety of positions within the California Fire Service including the position of Fire Chief for the City of Folsom between 2010 - 2016. He has a Bachelor of Science degree in Fire Administration along with several state and national program certificates in specialties such as the emergency management, fire prevention, arson & fire investigation, and the incident command system.

Phillips Consulting Services aids both public and private partners in the following areas of expertise:

- Δ POST Incident Analysis & After-Action Reviews
- Δ Homeland Security Exercises / Improvement Plans
- Δ Emergency Management Planning & Documents
- Δ Community Fire & Pilot Hills Master Planning
- Δ Special Event Planning
- Δ Firewise™ Community Assessments & Plans
- Δ WUI Site Assessments
- Δ Pre-Incident Planning for First Responders
- Δ Fire Code Inspections
- Δ Emergency Evacuation Planning & Training

WILDFIRE 
PREPARED®
— NEIGHBORHOOD —

TECHNICAL
STANDARD

VERSION 2025

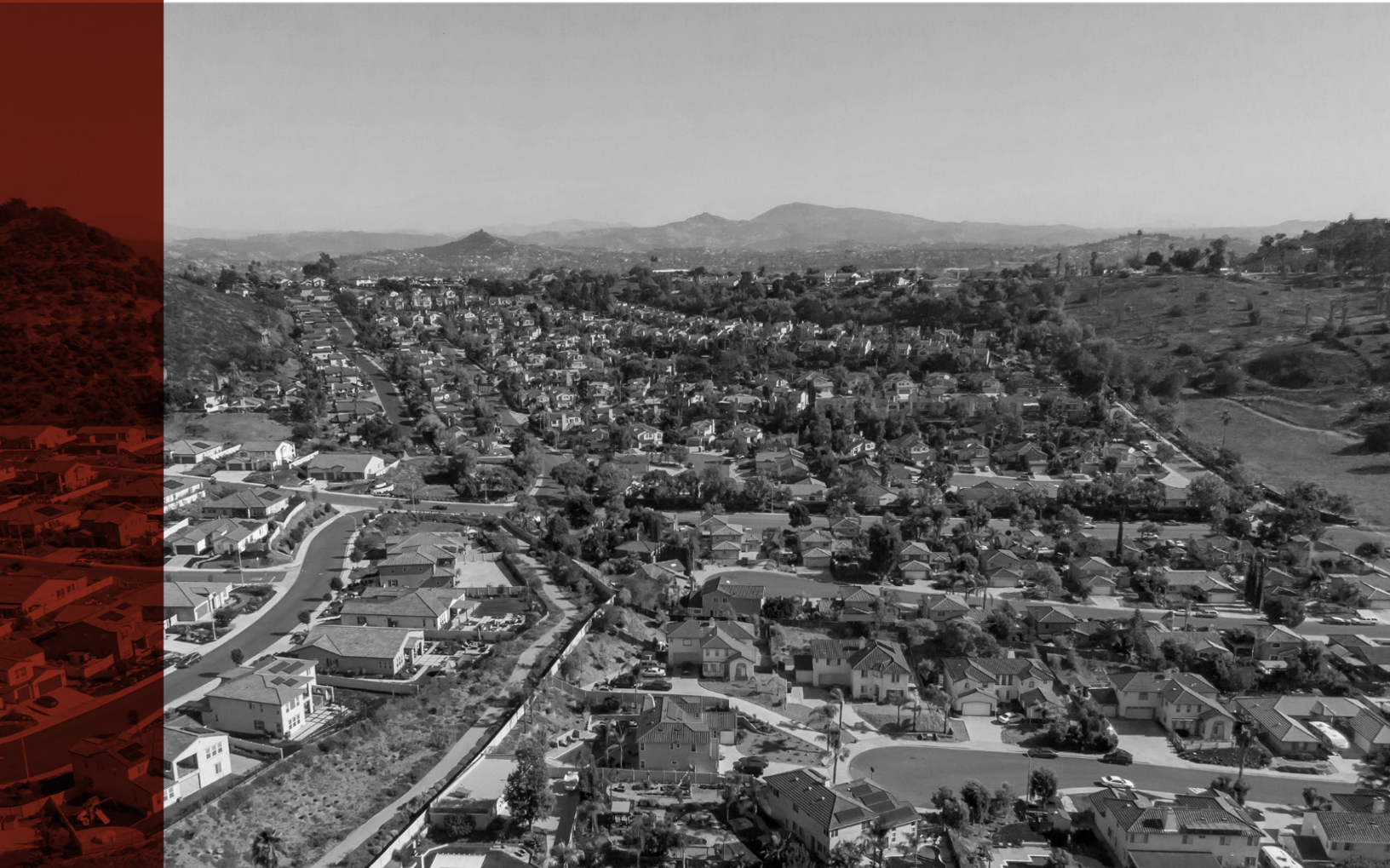


TABLE OF CONTENTS	Pg
FOREWORD	4
PREFACE	5
CHAPTER 1. Administration, applicability, and limitations	6
Section	
1.1 Applicability	6
1.2 Limitations	7
CHAPTER 2. Definitions and user guide	9
Section	
2.1 Definitions	9
2.2 User guide	13
CHAPTER 3. Processes	15
Section	
3.1 <i>Structure separation</i>	15
3.2 <i>External fuel assessment</i>	15
3.3 Calculating the <i>neighborhood flame zone</i>	17
3.4 Calculating the <i>neighborhood ember zone</i>	20
3.5 <i>Connective fuels assessment</i>	23
CHAPTER 4. <i>Neighborhood</i> mitigation requirements	27
Section	
4.1 Roof covering	27
4.2 <i>Connective fuels</i>	27
4.3 <i>Neighborhood flame zone structures</i>	27
4.4 <i>Neighborhood ember zone structures</i>	29
CHAPTER 5. References	31
APPENDICES	
Appendix A. Minimum data requirements, additional data, recommendations, and data schema	33
Section	
A1 Formats	34
A2 <i>Neighborhood</i> applicability and governance	34
A3 Fuel assessment data requirements	35
A4 <i>Parcel</i> level data requirements	44
A5 <i>Structure cluster and connective fuel</i> data requirements	62

A6 Imagery requirements	63
A7 <i>Neighborhood flame zone and Neighborhood ember zone</i> mitigation compliance	63
A8 Appendix-specific definitions	68
Appendix B. Commentary	69
Section	
B1 Administrative commentary	70
B2 Roof provisions	73
B3 <i>Structure separation</i>	76
B4 <i>Connective fuels</i>	77
B5 <i>Neighborhood flame zone</i>	81
B6 <i>Neighborhood ember zone</i>	94
B7 Appendix specific references	99
Appendix C. Practitioner guide	104
C1 Standard summary	105
C2 Critical variables	107
C3 Process diagrams	114

FOREWORD

Roy Wright, President & CEO of the Insurance Institute for Business & Home Safety

Mother Nature can intrude into communities bringing all manner of disasters, each with its own unique challenges.

Wildfires—unlike wind, flood, or hail—intensify when they encounter our built environment. While adding hurricane clips and straps to a home’s structure can reduce its vulnerability to a high wind event, the construction quality of a home against wind has only small impacts on the next-door neighbor and does not affect the strength of the hurricane itself. However, the wildfire risk of adjacent homes not only correlates to its exposure but can also amplify the vulnerability. When one home ignites and then sets the next structure on fire, it triggers a cascade of destruction.

This significant wildfire risk did not develop overnight. We are addressing a multi-generational issue that has been evolving for over 75 years in neighborhoods adjacent to lands where fire has been part of their ecosystems for millennia.

Yet we are neither helpless nor hopeless in the face of wildfire’s fierce effects.

Our understanding of wildfire science, especially its interaction with the built environment, is advancing rapidly. The equation requires adaptation at both the parcel and community scale. Effective strategies to reduce wildfire risk for individual properties are proving their value. Now, we are tackling the next piece of the wildfire risk puzzle: addressing the neighborhood risks that drive large-scale conflagrations.

Each neighborhood is unique, even those developed by volume builders. They have different surrounding fuels, layouts, and connective fuels. To address these realities, **we need a mitigation system that can adapt to these characteristics while providing protections to reduce the probability of a conflagration that leads down the path to catastrophe.**

We can envision a scenario where the neighborhood, with its passive defense features, acts as a fuelbreak rather than a fuel source.

The Wildfire Prepared Neighborhood Standard by IBHS moves toward a community-scale, performance-based design rather than prescriptive elements.

Adapting to wildfire is not easy. **These requirements of the standard will be tough for new neighborhoods and require extraordinary efforts for existing neighborhoods. However, intentional choices, targeted redesigns, and communal commitments offer the clearest path to wildfire survivability and enduring home insurability.**

Join us in preparing your neighborhood for wildfire. Together, we can create survivable, more resilient communities.

PREFACE

Wildfires, more than any other weather-related peril, become intrinsically connected to the built environment upon encounter. The built environment can serve as a fuel source, influence fire behavior, and govern fire spread. The progression of fire through the built environment highlights how each *structure* and its probability of ignition are influenced by its surroundings. In *neighborhoods* within the *wildland-urban interface*, where buildings may be separated by only feet or tens of feet, the survivability of a *structure* is highly influenced by its *neighbors*.

To address this critical need, the Insurance Institute for Business & Home Safety (*IBHS*) developed the *IBHS Wildfire Prepared Neighborhood Standard*. This technical standard aims to meaningfully reduce the probability of a built-environment conflagration in the *neighborhoods* where it is applied.

The standard focuses on the following core principles:

- Reducing the probability of initial ignitions along the perimeter of the *neighborhood* from an approaching wildfire, where direct flame and radiant heat can first impinge on homes.
- Protect the *neighborhood* from embers.
- If ignitions occur, reduce the rate of fire spread.
- Enable the entire *neighborhood* to act as a passive system to defend against wildfire in all directions and to not serve as a volatile fuel source.

In developing this technical standard, a performance-based design approach was utilized, recognizing that all *neighborhoods* are different. Factors such as surrounding fuels, layout, size, shape, and the arrangement of *structures* and spaces between them can influence fire spread and fire behavior. The *IBHS Wildfire Prepared Neighborhood Standard* integrates the current state of knowledge on how wildfire interacts with the built environment. It combines insights from post-event analyses, dynamical modeling, and experimental testing. The adaptive and objective process provided here determines the most beneficial mitigation strategies for each specific *neighborhood*, aligning with the core principles of the standard. The standard is also designed to incorporate new scientific knowledge and data sources while maintaining an objective approach and accounting quickly and efficiently for the uniqueness of each *neighborhood*.

This technical standard document is intended for use by builders, practitioners, code officials, engineers, developers, community planners, and fire officials for wildfire mitigation in both new developments and retrofits of existing *neighborhoods*. The standard consists of five main chapters covering applicability, definitions specific to this standard, a user guide, objective assessment processes, mitigation requirements, and associated references. Three appendices accompany the standard: *Appendix A* provides the data requirements and recommendations necessary to apply the standard. *Appendix B* focuses on scientific commentary on the methodology behind the standard and *Appendix C* is an additional practitioner guide including process diagrams for using the standard. Italicized words within the document indicate terms with standard-specific definitions, which are found in *Chapter 2*.

The *IBHS Wildfire Prepared Neighborhood Technical Working Group* is acknowledged for their contributions towards developing this standard:

Ian Giammanco, PhD

Steve Hawks

Faraz Hedayati, PhD

Xareni Sanchez Monroy, PhD

Murray Morrison, PhD

William Pogorzelski

Milad Shabaniyan, PhD

Evan Sluder

IBHS would also like to thank several external stakeholders that reviewed draft versions of this standard and assisted in testing technical processes.

CHAPTER 1. Administration, applicability, and limitations

This section provides the prequalification requirements and application procedures for the *IBHS Wildfire Prepared Neighborhood Standard*. The standard mitigation requirements at the *neighborhood* community spatial scale the characteristics of surrounding fuels and of the defined *neighborhood* itself. It is designed to meaningfully reduce the probability of *conflagration* within the defined *neighborhood* through reducing the probability of initial ignitions where direct flame contact and radiant heat may impact perimeter *structures* from *external fuel* sources and to reduce the probability of ember-driven ignitions from *external fuels* and fuels internal to the neighborhood.

1.1 Applicability

The *IBHS Wildfire Prepared Neighborhood Standard* shall be administered for an area defined by a specific, single, and closed polygon boundary. The provisions set forth in this standard apply to the dwelling types specified in *Section 1.1.1* within the defined boundary. All dwelling units within the defined boundary must be one of the dwelling types defined in *Section 1.1.1*.

The *IBHS Wildfire Prepared Neighborhood Standard* can be applied to a minimum of a single “*cluster*” of *qualified dwelling units* and where 90% or more *structures* have a minimum distance to the nearest surrounding structure of greater than 10 feet within the defined boundary.

The *IBHS Wildfire Prepared Neighborhood Standard’s* mitigation requirements are not applicable if 90% or more of the defined neighborhood has a minimum *structure separation* distance of greater than 100 ft. The threat of *conflagration* is diminished, individual parcel level mitigation actions govern ignition probabilities, and dependencies on neighboring *structures* are reduced. This criterion follows the foundational Cohen (2000, 2008) *wildland-urban interface* fire conceptual model and the *Wildfire Mitigation Framework* described in Maranghides et al. (2022).

1.1.1 Qualified dwelling types

Single-family detached home: A freestanding residential building occupied by one family, limited to three stories above grade. This also includes detached single-family factory-built modular homes on a permanent foundation that are designed, built, and sited to meet all local building code requirements. It also includes *accessory dwelling unit(s)* (ADU), *efficiency* co-located with other qualified dwelling types.

Two-family dwelling units (duplex): A freestanding residential building occupied by two families, limited to three stories above grade. Each individual unit must have the same number of stories within the overall structure, limited to three stories above grade. **NOTE:** The entire building, including the dwelling units, must be evaluated under the appropriate requirements and the entire building must meet all requirements specified in the *IBHS Wildfire Prepared Neighborhood Standard*.

Townhouse: A single-family dwelling unit is constructed in a group of three or more attached units in which each unit extends from foundation to roof, has a yard or public way on not less than two sides, and limited to three stories above grade. Mixed use (commercial and residential) buildings are not applicable. **NOTE:** The entire townhouse building, which includes all townhouse units composing the building, must be evaluated under the *IBHS Wildfire Prepared Neighborhood Technical Standard’s* requirements and the entire *structure* must meet all requirements.

1.2 Limitations

1.2.1 Building codes

The requirements specified in the *IBHS Wildfire Prepared Neighborhood Technical Standard* currently exceed typical *Wildland-Urban Interface* model building codes (2024 International Wildland-Urban Interface Code – IWUIC, 2022 California Building Code Chapter 7A, 2022 NFPA 1140) through the requirement of a fully *0–5 Foot Noncombustible Zone* in both *neighborhood flame zone* and *neighborhood ember zone* requirements. The *IBHS Wildfire Prepared Neighborhood Standard* is designed to be implemented as a voluntary mitigation standard.

1.2.2 Conflagration

The standard is not intended to prevent large wildfires or eliminate conflagrations in the built-environment. It does seek to mitigate the impact of wildfires and meaningfully reduce the probability of built environment conflagration in neighborhoods where it is applied by establishing minimum requirements for structures, defensible space, and fuel management at a *neighborhood* spatial scale.

1.2.3 Connective fuel management

This standard provides minimum neighborhood requirements for management of fuels (both vegetative and built-environment elements) between structures. It does not seek to characterize vegetative fuels or species that may exhibit reduced combustibility at both the parcel and neighborhood scales.

1.2.4 External fuels

The standard currently assumes, through its processes and subsequent mitigation requirements, that fire can impinge on the neighborhood from all directions and that the worst-case fuels ignite. Currently, structural fuels within what could be a nearby neighborhood that has mitigation elements or another neighborhood which meets this standard are evaluated to the same criteria as if there were no mitigation present. If ignited, these fuels would impart the same flame/radiant heat and ember exposure as an un-mitigated neighborhood.

1.2.5 Fire Response

Advancements in technology, firefighting equipment capabilities, firefighter staffing levels, and training have increased the overall effectiveness of emergency response, structure defense, and wildfire suppression. Data suggests that 90% to 95% of all structures damaged during wildfire are defended, primarily by fire suppression resources. However, when a wildfire enters a vulnerable community under drought and high wind conditions, fire suppression resources cannot be expected to defend every individual structure threatened by embers, flames, and radiant heat. This illustrates the need for homes and communities to have a system of passive mitigations that can significantly aid in increasing the effectiveness of the fire suppression response under extreme conditions. This standard is designed to be applied as a passive mitigation system; therefore, it does not include provisions or requirements for fire service response.

1.2.6 Hazard Mapping

This standard does not provide mapping of *wildland-urban interface* areas, identify the fire hazard potential of locations under consideration, nor provide a specific wildfire risk assessment metric.

1.2.7 Location

The *IBHS Wildfire Prepared Neighborhood Technical Standard* is designed to apply to *neighborhoods* and communities with high to medium structure density, with most *structure separation* distances between 10 to 100 feet. Maranghides et al. (2022) provides a useful

definition of the *wildland-urban interface*, *WUI* Types 1-7, that incorporate structure separation distances and if the community is considered wildland “interface” or “intermixed.” *WUI* types 1-5, characterized by *structure separation* distances from 6 to 100 feet and typical building densities of less than two *structures* per acre up to eight *structures* per acre, in interface and intermixed areas reflect the *neighborhoods* for which this standard is intended. It is not designed to be used as a construction standard in areas that span the entire built environment and/or large tracts of wildland areas or in dense urban corridors. (For more details see *Appendix B, Section B1.1*)

1.2.8 Maintenance

Buildings, *structures*, landscape materials, vegetation, defensible space or other devices or safeguards required by this standard shall be maintained in conformance to the standard edition under which it is installed.

1.2.9 Structure separation

Experimental research indicates that when *structure separation* is 10 feet or less, fire spread between two structures is highly likely. Therefore, the *IBHS Prepared Neighborhood Standard* contains applicability requirements related to *structure separation* distances. There are neighborhoods/communities that the standard does not apply to, given their small *structure separation* distances. Additional details and scientific reasoning are provided in *Appendix B*.

1.2.10 Topography

Topography is not considered within the *IBHS Wildfire Prepared Neighborhood Standard* in the determination of the *neighborhood flame zone* calculation within *Section 3.3*.

1.2.11 Units of measure

Within the *IBHS Wildfire Prepared Neighborhood Standard*, English units of measure are generally stated and shall be the units used and stated for any mitigation requirement. However, for processes described in *Chapter 3* and within *Appendix B*, metric units are required for several of those calculations and are therefore presented as such.

1.2.12 Weather

This standard is intended to address wildfire and its impact on the built environment under weather conditions and fuel moisture characteristics typically observed during *conflagration* events. For specific calculations relative to mitigation requirements, an open terrain exposure, peak 3-second gust wind speed at 10 meters (33 ft) height of 70 mph is applied.

CHAPTER 2. Definitions & user guide

2.1 Definitions

0–5 Foot Noncombustible Zone (also referred to as Immediate Zone, Zone 0, or Ember-Resistant Zone). The area which surrounds a structure extending from the base of any exterior wall radially outward along the ground 5 feet and vertically to the sky. In this standard, this shall be referred to as the 0–5 Foot Noncombustible Zone.

Accessory dwelling unit (ADU). An attached or detached residential dwelling unit that provides complete independent living facilities for one or more persons and is located on a lot with a proposed or existing primary residence. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the *single-family* or *multifamily dwelling* is or will be situated (CA Government Code (GOV) 66313). The total floor area for a detached *accessory dwelling unit* shall not exceed 1,200 ft² (GOV 66314). A local agency shall not establish by ordinance any of the following: 1) A minimum square footage requirement for either an attached or detached accessory dwelling unit that prohibits an efficiency unit, 2) A maximum square footage requirement for either an attached or detached accessory dwelling unit that is less than either 850 ft² or 1,000 ft² for an *accessory dwelling unit* that provides more than one bedroom (GOV 66321).

Accessory structure. A detached building or *structure* used to shelter or support any material, equipment, chattel, or occupancy other than a habitable building (i.e., non-dwelling unit). Any detached *structure*, that is accessory and incidental to a *primary dwelling unit* located on the same *parcel* or lot that has a surface area coverage or footprint of greater than or equal to 15 ft² and less than 200 ft². A structure less than 15 ft² is not considered an *accessory structure* for *structure separation* applicability statistics, *structure separation* in the *neighborhood flame zone*, and *cluster* assessments but is considered in the *connective fuel* assessment.

Built environment fuel element. Built environment fuel elements are any combustible material, item, *accessory structure*, etc. An *accessory structure* is considered a *built environment fuel element*. Examples include but are not limited to fences, playhouses, sheds, pergolas, gazebos, detached decks, *accessory structures*, etc.

Cluster. Set of *structures* that are separated from other *structures* in the community by one of the following:

- 1) The following physical *noncombustible* barriers: any paved, maintained (city, town, county) road, any non-paved but gravel or bare soil roads, or natural barriers that are noncombustible such as creeks, rivers, lakes, ponds etc. with a minimum width of 20 feet.
- 2) 100 feet or more from other *structures* inside the defined *neighborhood* boundary, or
- 3) Separated from other *structures* inside the defined *neighborhood* by a combination of barriers or physical distance.

See *section 3.5.1*

Conflagration. Specific to the usage of this term within this standard, an especially large and destructive fire that produces uncontrolled structure-to-structure fire spread and mass *structure* losses.

Connective fuels. Any *fuel element* or group of fuel elements that aid in fire spread between structures.

Connective fuel flag. Assigned to a *cluster* where 10% or more of homes within a *cluster* have more than one *connected fuel pathway* to any neighboring structure.

Connective fuel flagged cluster. An identified *cluster* of *structures* where more than 10% of *structures* have more than one elevation with a *connective fuel pathway* to a neighboring *structure*.

Connective fuel pathway. Series of *fuel elements* or single *fuel elements* that connect two or more neighboring *structures* with no breaks greater than two times the width of the fuel element. If a break in a *fuel element/s* greater than two times the width of the *fuel element* is present, the pathway is considered broken. Any combustible fence which connects to two or more *structures* shall be considered a *connected fuel pathway* independent of other additional *fuel elements*. The presence of *noncombustible* fencing as an element of a *0–5 Foot Noncombustible Zone* shall be considered to have broken the specific *connective fuel pathway* associated with the fence; however other *fuel elements* present shall also be considered in identifying other paths.

Crown fire. Fire that burns canopy forest fuels like foliage, branches, and tall shrubs. Crown fires burn fuels above surface fuels.

Defensible space. An area either natural or man-made where material capable of allowing a fire to spread unchecked has been treated, cleared or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur (IWUI 2024).

Dwelling unit, efficiency. *Structure* where all permanent provisions for living, sleeping, eating and cooking are contained in a single room.

Neighborhood ember zone (NEz). The area of the defined *neighborhood* determined by the process described in Section 3.4 which has a likelihood of ember exposure.

External fuels. Any *fuel element* or *fuel model type* identified using at a minimum the *LANDFIRE* dataset which is identified within a 4.25-mile buffer beyond the defined *neighborhood* boundary.

External fuel sector. 45° azimuthal sector extending radially outward from the *neighborhood centroid* to a maximum distance of 4.25 miles.

Firebrand. Combustible fragments of material from a fire source with the capacity to ignite other materials. For the purposes of the *IBHS Wildfire Prepared Neighborhood Standard*, **firebrand** and **ember** terminologies will be used interchangeably, despite technical nuance as described by Manzello and Suzuki (2022).

Firebreak. *Parcels* of land, linear in shape, where all combustible fuels are totally removed down to mineral soil through a combination of physical treatments (thinning, mechanical clearing, prescribed burning, slashing, mastication, mowing, plowing) or pavement such as roads, highways etc. In the case of a boulevard or any divided highway, if the area which is not paved (typically in the center) has no identified *connective fuel nodes*, the entire width of the boulevard and/or divided highway shall be considered a *firebreak*. If this condition is not met and *fuel elements* are present, the roadway width closest to the defined *neighborhood* boundary shall be considered the *firebreak*.

Fire-resistance-rated construction. The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or *structure* and the spread of fire to or from buildings or *structures*. Where this standard requires 1-hour fire-resistance-rated construction, the fire-resistance rating of building elements, components or assemblies shall be determined in accordance with the test procedures set forth in ASTM E119 or UL 263.

Exceptions:

- 1) The fire-resistance rating of *structure* elements, components or assemblies based on the

designs prescribed in Section 721 of the International Building Code.

- 2) The fire-resistance rating of structure elements, components or assemblies based on the calculation procedures in accordance with Section 722 of the International Building Code.

Flame fuel assessment zone. Buffer zone that extends 0.25 miles (approximately 300 meters) radially outward from the boundary of the defined *neighborhood*. This area is used to determine fuels that are relevant for the flame fuel assessment process.

Fuel element. Any combustible item such as but not limited to plants, materials (e.g., children's playhouses, racks of firewood, plastic storage bins, etc.), combustible ground cover (i.e., mulch), *structures*, trees, shrubs, sheds, fences, etc. Fuel elements also include any defined vegetative fuel element but do not include grass/vegetation with a height or depth less than 4 inches above the ground. Tree fuel elements, due to their height and canopy have specific requirements. Trees are distinguished as vegetative *fuel element* with a trunk of 4 inches in diameter or greater when measured at a height of 4.5 feet above the ground.

Fuelbreak. Fuelbreaks are *parcels* of land, linear or in blocks, on which the vegetation, debris and detritus have been reduced and/or modified that could control or diminish the risk of the spread of fire crossing the strip or block of land.

Fire behavior fuel model type (also fuel model type). A set of inputs to define a fuel bed for a specific fire behavior model.

IBHS. Insurance Institute for Business & Home Safety.

IBHS Wildfire Prepared Home Standard. The latest version of the *IBHS Wildfire Prepared Home Technical Standard*. (<https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>)

Internal neighborhood sector. 45° azimuthal sector extending radially outward from the *neighborhood centroid* of the defined *neighborhood* to its perimeter and constructed using from the same radial lines used to construct the *external fuel sectors*.

LANDFIRE. Landscape Fire and Resource Management Planning Tools is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations. *LANDFIRE* began due to an increased concern about the number, severity, and size of wildland fires and the need for consistent national biological/ecological inventory data. *LANDFIRE* identifies areas across the nation potentially susceptible to wildland fire to support community and firefighter protection. *LANDFIRE* has evolved and expanded to include other applications such as habitat research and disturbance maps.

Neighborhood. For the purposes of the *IBHS Wildfire Prepared Neighborhood Standard*, a *neighborhood* is defined as a *cluster* or multiple *clusters* of residential *structures* enclosed by a continuous defined polygon boundary.

Neighborhood centroid. For the purposes of this standard, the position of the center of the defined *neighborhood* can be determined by summing the eastern and western-most longitudes along the perimeter of the *neighborhood* and dividing the result by two to calculate the x-coordinate and then summing the northern and southernmost latitudes along the perimeter of the defined *neighborhood* and dividing the result by two to obtain the y-coordinate.

Noncombustible or Noncombustible element. Made from material of which no part will ignite and burn when subjected to fire. Any material passing ASTM E136 shall be considered noncombustible.

Neighborhood flame zone (NFz). An area of the defined *neighborhood* which has a high likelihood of direct flame and radiant heat exposure from *external fuel* sources. This area is located inward from the perimeter of the defined *neighborhood*. The *neighborhood flame zone* is determined using *Equation 3.3* and through the process described in *Section 3.3*.

Parcel. A piece or unit of land, defined by a series of measured straight or curved lines that connect to form a polygon. There are some implications for land ownership. Commonly also called a tract.

Primary dwelling unit. The largest *structure* on a given *parcel* has at least one or more habitable rooms which are designed to be occupied by one family with facilities for living, sleeping, cooking, eating, and sanitation.

Roof assembly. A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof covering, roof deck and may include a vapor retarder, thermal barrier, insulation, or similar substrate.

Roof covering. The material applied to the roof deck to provide weather resistance, achieve fire classification, or enhance appearance.

Roof system. A roof system consists of a roof covering and other interacting roofing components and may include vapor retarder, thermal barrier, insulation or other similar substrate. The system does not include the roof deck unless it is part of a single component serving as the roof covering and the roof deck.

Structure. Any non-commercial building fully enclosed on more than two sides, larger than 200 ft² or any *dwelling unit* on a *parcel*. Examples include but are not limited to single family homes, detached garages, recreational vehicle shelters (fully enclosed), *accessory dwelling units*, etc.

Structure separation distance (also referred to as structure separation or SSD). The shortest straight-line distance between a structure's footprint boundary and the footprint boundary of another *structure* that does not cross the following obstacles: any paved, maintained (city, town, county) road, any non-paved but gravel or bare soil roads, or natural barriers that are noncombustible such as creeks, rivers, lakes, ponds etc. with a minimum width of 20 feet.

Vegetative fuel element. A contiguous area bound by a polygon of vegetation consisting of a tree or group of trees, shrubs (bushes), grass/ground cover with a height or depth greater than 4 inches above ground, and/or any other vegetation taller than 4 inches. Trees with canopies less than 10 feet of spacing to the nearest tree canopy shall be considered a single *vegetative fuel element*.

Wildland-Urban Interface (WUI). Across scientific literature there are varying definitions of the *wildland-urban interface*. For the purposes of the *IBHS Wildfire Prepared Neighborhood Standard*, the definition from Johnston et al. (2011) and USDA (2001) is provided. The *WUI* is defined as the geographical area where human development, including structures and other infrastructure, meets or intermixes with undeveloped wildlands. Communities in such areas may be grouped into one of three categories: interface, intermix or occluded (where developed areas surround an area of wildlands that is typically smaller than 1,000 acres) depending on the density of development, coverage of wildland fuels, and population density (Davis 1989).

2.2 User guide

The *IBHS Wildfire Prepared Neighborhood Standard* features both a process to determine mitigation requirements and the requirements themselves that are necessary to address the core principles this standard was built on (see *Chapter 1*). It also has strict applicability requirements. *Chapter 3* provides the process details to determine the mitigation requirements for areas which may have: 1) extreme ember, flame and radiant heat exposure from *external fuels* (e.g., *neighborhood flame zone*), 2) areas which are likely to experience ember attack (e.g., *neighborhood ember zone*) and 3) the *connective fuels* across the *neighborhood*. For detailed information related to the scientific and engineering reasoning used to develop this standard and its processes, please see *Appendix B*.

2.2.1 Applicability

Construction Types: This standard applies to typical single-family, duplex, and townhome construction types.

Structure spacing: This standard can be applied to a defined *neighborhood* when 90% or more of the *structures* are separated by greater than 10 feet and less than 100 feet. The process for *structure separation* assessments is described in *Chapter 3, Section 3.1*.

2.2.2 Understanding *neighborhood* requirements

Roof Covering

All *structures* within the defined *neighborhood* must have a Class A roof covering. In addition, no wood roof covering products of any kind are allowed. *Chapter 4, Section 4.1*

The defined *neighborhood* is divided into two primary zones, each with specific mitigation requirements. The processes described in *Chapter 3* are best executed within a geographic information system (GIS) platform.

Neighborhood flame zone

The *neighborhood flame zone* is the area typically located from the boundary of the *neighborhood* inward for up to approximately 450 feet (distances are dependent on fuel characteristics) which has the highest likelihood of experiencing the most severe fire exposure resulting from *external fuels*.

The *neighborhood flame zone* is determined using the processes described in *Chapter 3*. It accounts for *external fuels* within 0.25 miles of the *neighborhood* boundary. For each sector, a “worst-case” distance into the *neighborhood* is determined using the processes described in *Chapter 3, Sections 3.1* and *3.2*. The *structure* requirements for this zone are provided in *Chapter 4, Section 4.3*. It is possible that *external fuels* and/or *fuelbreak/firebreak* features can result in the *neighborhood flame zone* not being needed.

Connective fuel pathways in the *neighborhood flame zone*: For *structures* located inside the *neighborhood flame zone*, there can be no *connective fuel pathway* to any neighboring *structures*.

Neighborhood ember zone

The *neighborhood ember zone* is the area, typically the remainder of the *neighborhood* not within the *neighborhood flame zone* which has a high likelihood of experiencing ember attack from *external fuels* and/or *structures* within the *neighborhood* should fire enter. It is determined by the processes described in *Chapter 3, Section 3.4* and

considers *external fuels* within 4.25 miles of the defined *neighborhood*. It is possible the *neighborhood ember zone* will not cover the entire *neighborhood*; this is contingent on *neighborhood* size and fuel characteristics. The requirements for *structures* in this zone are provided in *Chapter 4, Section 4.4*.

Connective fuels in the *neighborhood ember zone* and remainder of the *neighborhood*: *Connective fuels* are evaluated across *clusters* of *structures* as described in *Chapter 3, Section 3.5.1*. The *connective fuel* requirements for the full *neighborhood* are provided in *Chapter 4, Section 4.2*.

2.2.3 New *neighborhood* construction recommendations

The 100% application of *IBHS Wildfire Prepared Home Plus* construction across a new *neighborhood* development, provided the *structure separation* applicability criteria is met, will generally meet the requirements of this standard except in special cases related to *ADUs*, *auxiliary structures*, and *connective fuel pathways*.

For a decision-tree graphical depiction of the *IBHS Wildfire Prepared Neighborhood* processes and requirements, see *Appendix C*.

CHAPTER 3. Processes

3.1 Structure separation assessment

For any defined *neighborhood*, the distribution of the shortest separation distance from each *structure* to any neighboring *structures* shall be determined. To calculate the minimum *structure separation distance*, distribution datasets such as the Microsoft Building Footprint database or similar shall be considered sufficient for use. The *IBHS Wildfire Prepared Neighborhood* standard shall be considered applicable if 90% or more of the *structures* contained within the *neighborhood* boundary have a minimum *structure separation* distance greater than 10 feet and less than or equal to 100 feet.

To calculate the *neighborhood structure separation* statistics, count the number of *structures* for which the smallest *structure separation* measurement is equal to or less than 10 feet and divide that number by the total number of *structures* in the defined *neighborhood*.

The next step in the process is to calculate the full designated *neighborhood structure separation* statistics, count the number of *structures* that have a measurement equal to or less than 10 feet and divide this by the total number of *structures* in the defined *neighborhood*. The standard is considered applicable if this value is 10% or less as stated in *Chapter 1*. The *structure separation* procedure is also used within *Chapter 3, Section 3.5* for determining *clusters* and the *connective fuel* assessment.

3.2 External fuel assessment

External fuels surrounding a community drive the exposure risk for any community. To determine the *neighborhood flame zone* and *neighborhood ember zone* widths, *external fuels* and their associated *fire behavior fuel type models* surrounding the defined *neighborhood* are identified.

External fuels assessment shall include the area 4.25 miles (6.84 km) radially outward from the specified *neighborhood* exterior boundary in all directions around the assessed *neighborhood*. The *LANDFIRE* fuel type models described in Scott and Burgan (2005) shall be the minimum required dataset for the *external fuel* assessments. Other datasets can be used, provided their resolution is equivalent or finer in spatial resolution than the *LANDFIRE* 30 meter grid spacing and such that fuel types/classifications can be condensed into the 40 fuel models described by Scott and Burgan (2005). Those can be found in *Appendix A, Table A3.2*.

The *centroid* of the defined neighborhood will be determined to set external fuel assessment sectors. From the *neighborhood centroid*, eight 45° azimuthal fuel sectors will be determined. Fuels will be assessed for each using a 0.25-mile buffer extending outward in each sector from the *neighborhood* boundary for determining the *neighborhood flame zone* and a buffer of 4.25 miles outward in each sector will be used in assessing *external fuel* characteristics to determine the *neighborhood flame zone* (*Figure 3.1*) and *neighborhood ember zone* (*Figure 3.2, Figure 3.3*).

Within each *external fuel sector* of the *flame fuel assessment zone*, the flame intensity shall be determined for any *fuel type model* classification that is present (Scott and Burgan 2005; *Appendix A*) as shown in *Figure 3.1*.

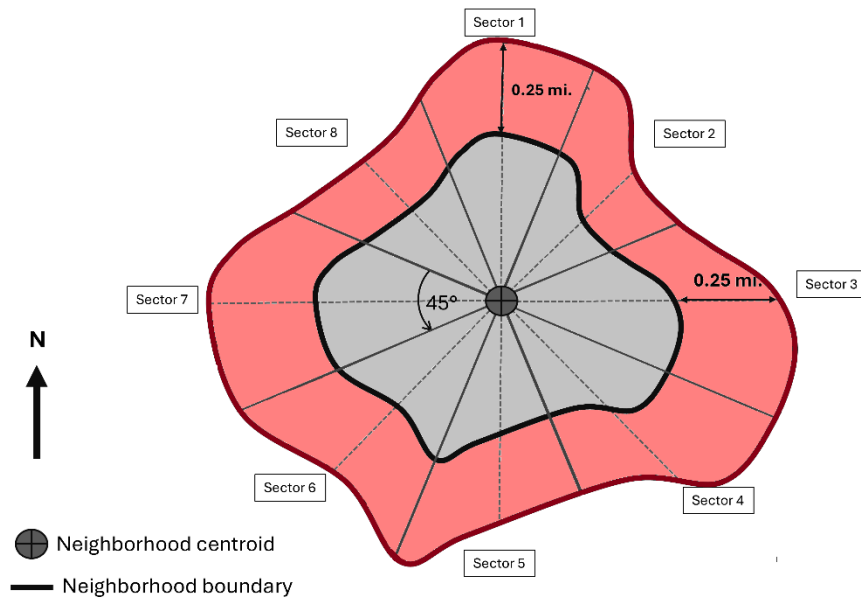


Figure 3.1. Idealized schematic illustrating how external fuel sectors are determined. The area shaded in gray represents the interior of the neighborhood. The red shaded areas represent the 0.25-mile buffer / flame fuel assessment zone that is used to determine the neighborhood flame zone (Equation 4-1). The neighborhood ember zone is not depicted but is shown in Figure 3.2 below. The schematic is not to scale and intended for illustrative purposes only.

Within each external fuel sector, the ember transport distance shall be determined for any fuel type model that represents 10% or greater of the fuel types present within the external fuel sector as shown in Figure 3.2 and Figure 3.3.

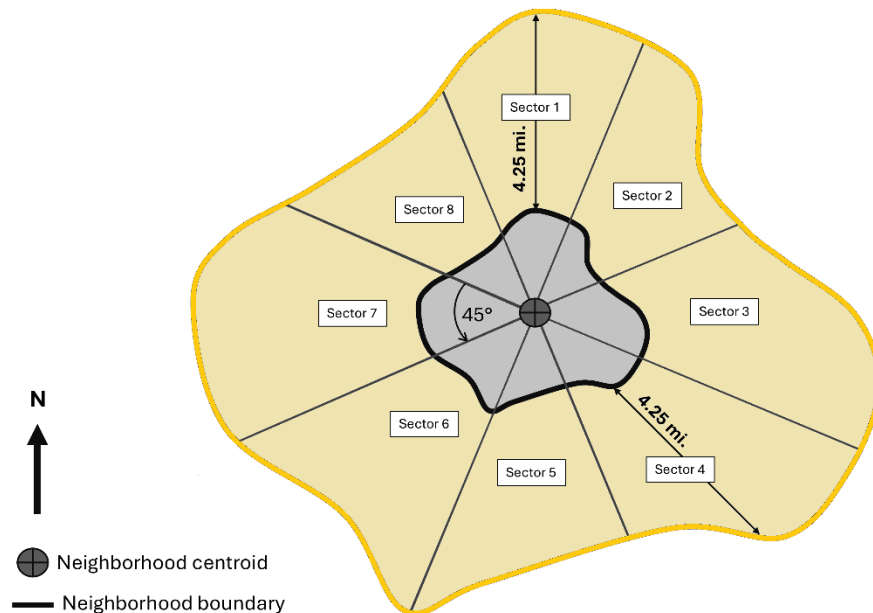


Figure 3.2. Idealized schematic illustrating how external fuel sectors are determined. The area shaded in gray represents the interior of the neighborhood. The beige shaded areas represent the 4.25-mile buffer region where external fuels will be evaluated for use in the neighborhood ember zone. The flame fuel assessment zone is not depicted but is shown in Figure 3.1 above. The schematic is not to scale and intended for illustrative purposes only.

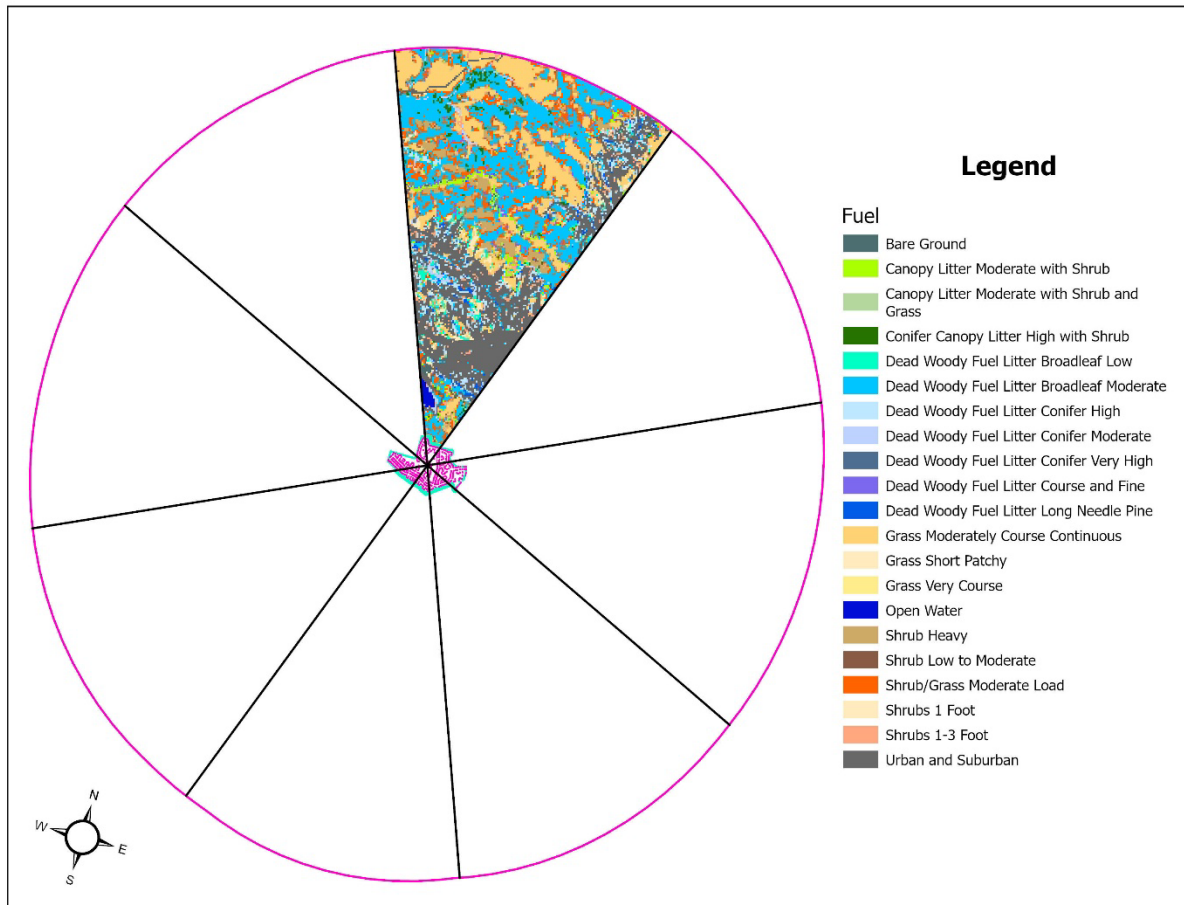


Figure 3.3. Example LANDFIRE fuel model type example for a specific external fuel sector.

3.3 Calculating the *neighborhood flame zone*

The *neighborhood flame zone* calculation method assesses the potential for direct flame contact and heat transfer from fuels adjacent to the defined *neighborhood* under common fire weather conditions observed during *conflagration* events. The calculation of the *neighborhood flame zone* is determined by:

- 1) Identify all *fuel model types* present in each of the eight *fuel assessment sectors* using the 0.25-mile buffer distance.
- 2) Determine for each sector the percentage tree coverage. If 10% or more is covered, then a canopy provision is applied in determining the *neighborhood flame zone*. This is to account for the potential for *crown fire* which could increase exposure.
- 3) Use *Table 3.2* and *Table 3.3* (for structural fuels) to determine the distance inward from the *neighborhood* boundary for each *fuel model type* present. The longest distance for any identified *fuel model type* shall be used to determine the boundary of the *neighborhood flame zone* for each sector (FZ, shown in *Equation 3-1*). If the canopy provision in step 2 is not met, then use *Column 2* of *Table 3.2* or *Table 3.3* (for structural fuels). If the canopy provision is met, then use *Column 4* of *Table 3.2* or *Table 3.3* to set FZ.
- 4) Determine if a *fuelbreak* or *firebreak* is present and its width within the 0.25 mi *flame fuel assessment* buffer in each sector which will be applied to the final *neighborhood flame zone*

calculation (*Equation 3-1*). The *fuelbreak, firebreak* must be 20 feet or wider and span the width of the individual sector within the 0.25 mi buffer. If these conditions are met, the width of the *fuelbreak* or *firebreak* shall be accounted in the final *neighborhood flame zone* calculation for a given sector by:

$$\text{Neighborhood flame zone width (NFz)} = \text{FZ} - \text{fuel/fire break width} \quad \text{Equation 3-1}$$

If the *neighborhood flame zone* width is less than or equal to zero for all sectors, there is no *neighborhood flame zone* for the sector.

The final *neighborhood flame zone* shall be determined by the following procedure: use the same radial lines emanating from the *neighborhood* sector developed in the external fuel process to create 8 interior neighborhood sectors. Each sector is bound by two consecutive radial lines and the section of the neighborhood perimeter connecting those lines. Each of these *interior sectors* corresponds to the one of the 8 *exterior fuel sectors* (*Figure 3.4*). For a given *interior sector*, identify the corresponding *NFz* width and create a buffer around the perimeter portion of its bounds equal to that width. Then determine the intersection of that buffer and the corresponding interior sector, effectively clipping the buffer by the *interior sector's* bounds. Repeat this with each of the eight *interior sectors*, creating the appropriate *NFz* for each sector.

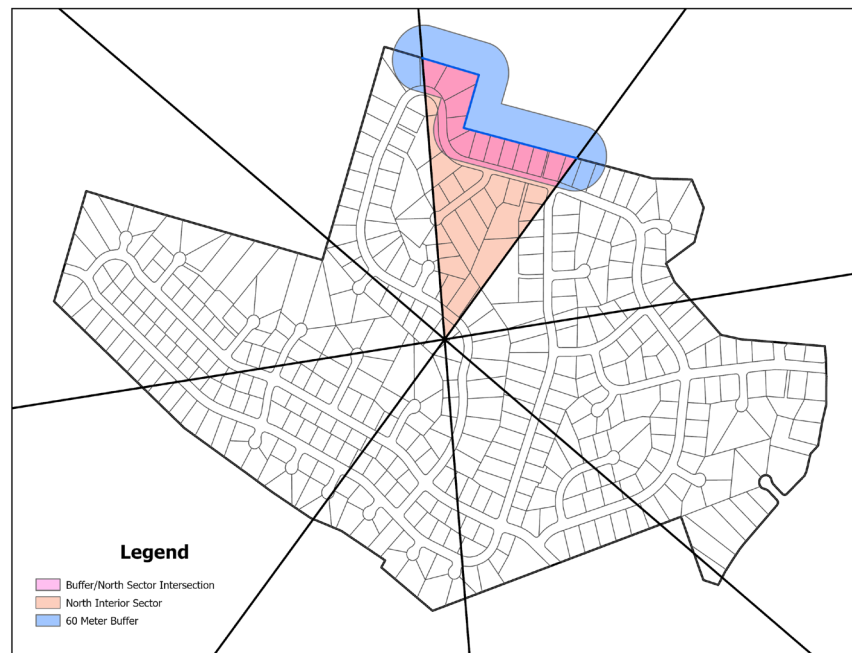


Figure 3.4. In this idealized example, the northern sector has an *NFz* of 60 m (197 ft) and so a buffer of 60 m is drawn around that portion of the neighborhood perimeter that binds the northern sector. This buffer is then clipped by the bounds of the northern sector. In this example, the final determined *NFz* boundary for the northern sector is shown in pink. Any parcel that falls on or within this boundary is considered part of the neighborhood flame zone.

Table 3.1. Neighborhood flame zone distances by fuel model type and if the canopy fuel threshold was met. Distances are provided in units of both meters and feet.

<i>Fire behavior fuel model type identifier</i>	Column 1 (m)	Column 2 (ft)	Column 3 Column 1 + Canopy fuel provision (m)	Column 4 Column 2 + Canopy fuel provision (ft)
GR1	3	10	73	240
GR2	6	20	76	249
GR3	8	26	78	256
GR4	12	39	82	269
GR5	23	75	93	305
GR6	37	121	107	351
GR7	45	148	115	377
GR8	55	180	125	410
GR9	68	223	138	453
GS1	8	26	78	256
GS2	13	43	83	272
GS3	22	72	92	302
GS4	60	197	130	427
SB1	15	49	85	279
SB2	31	102	101	331
SB3	44	144	114	374
SB4	46	151	116	381
SH1	8	26	78	256
SH2	33	108	103	338
SH3	10	33	80	262
SH4	19	62	89	292
SH5	32	105	102	335
SH6	30	98	100	328
SH7	44	144	114	374
SH8	47	154	117	384
SH9	67	220	137	449
TL1	3	10	73	240
TL2	5	16	75	246
TL3	5	16	75	246
TL4	6	20	76	249
TL5	9	30	79	259
TL6	13	43	83	272
TL7	9	30	79	259
TL8	19	62	89	292
TL9	29	95	99	325
TU1	9	30	79	259
TU2	11	36	81	266

Fire behavior fuel model type identifier	Column 1 (m)	Column 2 (ft)	Column 3 Column 1 + Canopy fuel provision (m)	Column 4 Column 2 + Canopy fuel provision (ft)
TU3	22	72	92	302
TU4	39	128	109	358
TU5	51	167	121	397

Table 3.2. Neighborhood flame zone distance for any structural fuels identified in the flame fuel assessment zone with 10% or more coverage in each sector. Distances are provided in units of both meters and feet.

Fire behavior fuel model type identifier	Column 1 (m)	Column 2 (ft)	Column 3 Column 1 (m)+ Canopy fuel provision (m)	Column 4 Column 2 + Canopy fuel provision (ft)
NB1	21.7	71	91.7	301

Once the *neighborhood flame zone* is determined, the minimum structure separation distance for structures in this zone is determined for use in the *neighborhood ember zone* calculation using the same procedure as described for the full *neighborhood structure separation* assessment.

3.4 Calculating neighborhood ember zone

3.4.1 Ember loft

For the *IBHS Wildfire Prepared Neighborhood*, the Himoto and Iwami (2021) model for firebrand (ember) transport is used for its simplicity and because it provides conservative estimates for maximum ember transport distances.

For each *external fuel* sector, fuel model types with 10% or greater spatial coverage (i.e., 10% or more *LANDFIRE* grid boxes) in each sector are evaluated for ember transport considering the variables shown in *Figure 3.5*. The *fuel model types* obtained from the external fuel assessment (*Section 3.2.1*) are condensed into the three categories shown in *Table 3.4*. The Himoto and Iwami (2021) model uses a log-normal distribution to represent the statistical distribution of ember transport. A cumulative density function is obtained by integrating the log-normal probability density function. For the *IBHS Wildfire Prepared Neighborhood Standard*, the 80th percentile transport distance for a 10 meter open terrain exposure, peak 3-second gust wind speed of 70 miles per hour is used to calculate transport distances.

Adapted from Himoto and Iwami (2021)

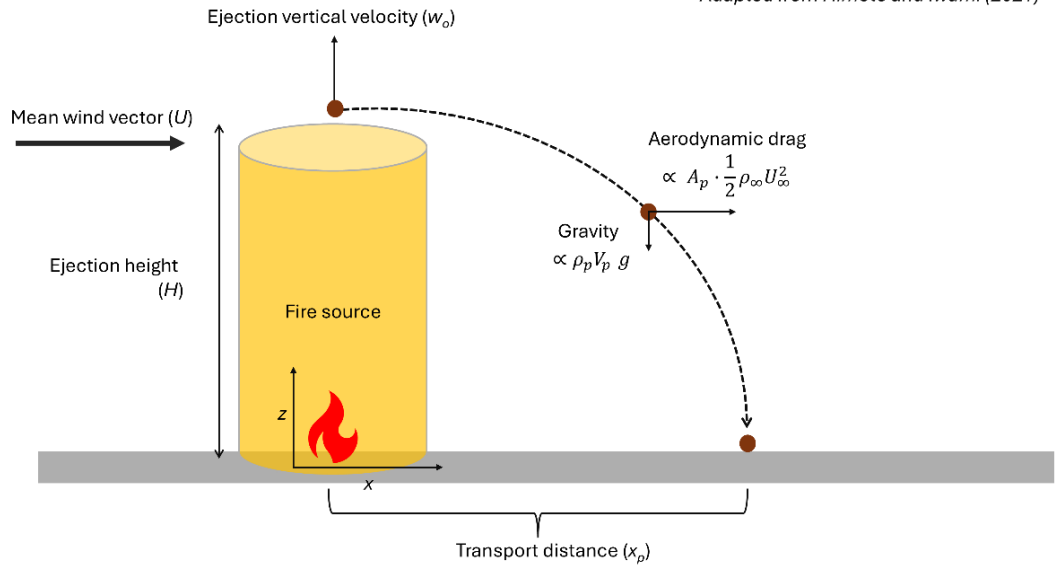


Figure 3.5 Conceptual diagram of the inputs to the Himoto and Iwami (2021) ember transport model (adapted from Himoto and Iwami 2021).

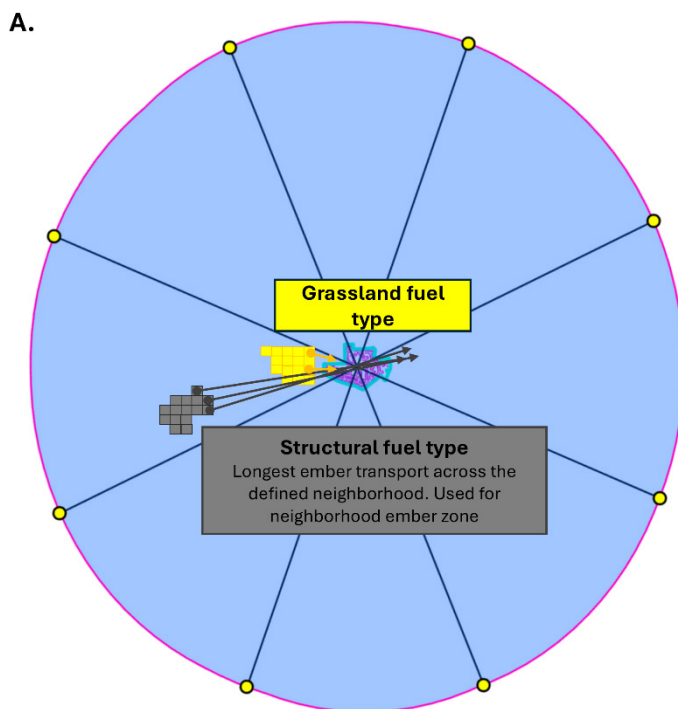
Table 3.4 Ember transport distances using the Himoto and Iwami (2021) model. For determining the neighborhood ember zone, the distances for a 70-mph wind shall be used and are provided in this table. See Appendix A, Table A3.2 for the full list of fuel model types.

Fuel type	Column 1 Transport distance at 70 mph winds	Column 2 Total vector length if neighborhood flame zone structure separation conditions are present that require additional ember transport distance.
Grassland/Fine Fuels LANDFIRE fuel model types: GR1-GR9 GS1-GS4	3783 ft (0.72 mi)	25791 ft (4.88 mi)
Trees and Shrubs LANDFIRE fuel model types: SH1-SH9 TU1-TU5 TL1-TL9 SB1-SB4	15158 ft (2.8 mi)	37166 ft (7.03 mi)
Structural fuels LANDFIRE fuel model types NB1	22,008 ft (4.2 mi)	44,016 ft (8.4 mi)

3.4.2 Ember transport vectors and determining the *neighborhood ember zone*

Within each sector ember, transport vectors are directed toward the *neighborhood centroid* from the grid point for any *fuel model type* with 10% or more coverage in each sector. The vector length for each *fuel model type* is determined by using *Column 1* or *Column 2* of *Table 3.4*. *Column 1* is used for all sectors to determine ember transport vector lengths if 90% or more *structures* inside the *neighborhood flame zone* are separated by 30 feet or more. If not, *Column 2* is used for ember transport vector lengths. An example is shown in *Figure 3.6A*.

If any ember transport vector crosses more than one of the defined boundaries of the *neighborhood* and the length of that vector within the *neighborhood* boundary is greater than the width of the *neighborhood flame zone* in that sector, the entire *neighborhood*, excluding the *neighborhood flame zone* when present, shall be considered in the *neighborhood ember zone*. If all vectors do not meet this condition, then the *neighborhood ember zone* shall be drawn as a polygon connecting the endpoints of the eight ember transport vectors that extend the furthest inward from the defined *neighborhood* boundary. If this boundary falls across a specific *parcel* boundary, that *parcel* shall be considered part of the *neighborhood ember zone*. An example is provided in *Figure 3.6B*.



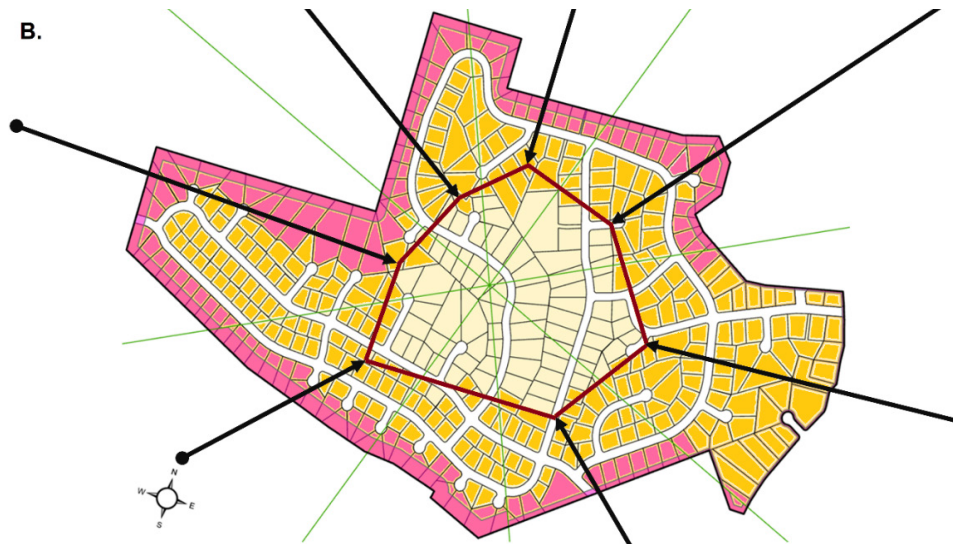


Figure 3.6. An idealized diagram of (A) ember transport vectors which cross the defined neighborhood and (B) where no vector crosses the neighborhood. In (A), the structural fuel ember transport vector produces the longest vector across the neighborhood despite being further away than the grassland fuels. Since the structural fuel transport distance is the worst-case scenario, it is used for the NEz determination. For (B) the neighborhood ember zone is defined by the area between the neighborhood flame zone (if present) or the defined neighborhood boundary (if no neighborhood flame zone is present) and the vector end points (black arrows). In the example shown in (B), the parcels included in the NFz are shaded orange, while the physical boundary is determined by the ember transport vector end points denoted by the red line. Parcels which fall into the neighborhood flame zone are shaded pink.

3.5 Connective fuels

The *connective fuel* characteristics of a defined *neighborhood* are determined by evaluating potential fire pathways through *clusters of structures*. The *clusters* are defined using break points which would alter the path of fire and where each *structure's* ignition potential would not be immediately influenced by other nearby *structures*. It is in these areas where *connective fuels* create the pathways for fire to easily move through direct flame contact and/or radiant heat exposure. For details on the *connective fuels* philosophy employed in this standard, see *Appendix B, section B4.2*.

Connective fuel pathways are evaluated within the defined *neighborhood* using the following process:

3.5.1 Cluster identification process

A *cluster* is one or more *structures* within a *neighborhood* separated in all directions from other *structures* within the *neighborhood* by one or more obstacles to structure-to-structure fire transmission.

- 1) any paved, maintained (city, town, county) road, any un-paved gravel or bare soil road, natural barriers that are noncombustible such as creeks, rivers, lakes, ponds etc. with a minimum width of 20 feet, or
- 2) 100 feet (approximately 30 m) or more from all other structures inside the defined neighborhood boundary.

The following process is best executed within a geographic information systems (GIS) platform and accompanying aerial imagery.

Identifying *clusters* for the *connective fuel node* evaluation: identify collections of *structures* that are completely bound by the barriers described in 1 and 2 above. Determining the extent of a given *cluster* is an iterative process that follows:

A) Start with a single *structure* and identify all other *structures* for which a measurement of 100 feet or less can be made without crossing one of the obstacles identified above and group them with the initial *structure*.

B) For each of the additional *structures* identified in step A, identify any other *structures* for which a measurement of 100 feet or less can be made without crossing one of the obstacles identified above and add these to the *cluster*. Continue expanding this process outward until no other additional *structures* can be added to the group of structures without crossing one of the obstacles cited above. The group of *structures* defined to its maximum extent shall be considered a unique *cluster* of *structures*. Each identified *cluster* shall be given a unique integer identifier. It is recommended for data schema purposes (see *Appendix A*), those *structures* within each *cluster* should be assigned to their specific *cluster* identifier.

The first *cluster* may or may not include all the *structures* within the defined *neighborhood*. If it does not include all the *structures* in the *neighborhood*, select another *structure* within the *neighborhood* not yet assigned to a *cluster* and repeat this process. Continue until every *structure* in the *neighborhood* has been assigned to a *cluster*. Note that it is possible for *structures* to be completely separated from all other *structures* in a *neighborhood* by one or more of the obstacles cited above, which means *neighborhoods* may contain *clusters* as small as one unit or *structure*. *Figure 3.7* provides an example of identified *clusters* for a test *neighborhood*.

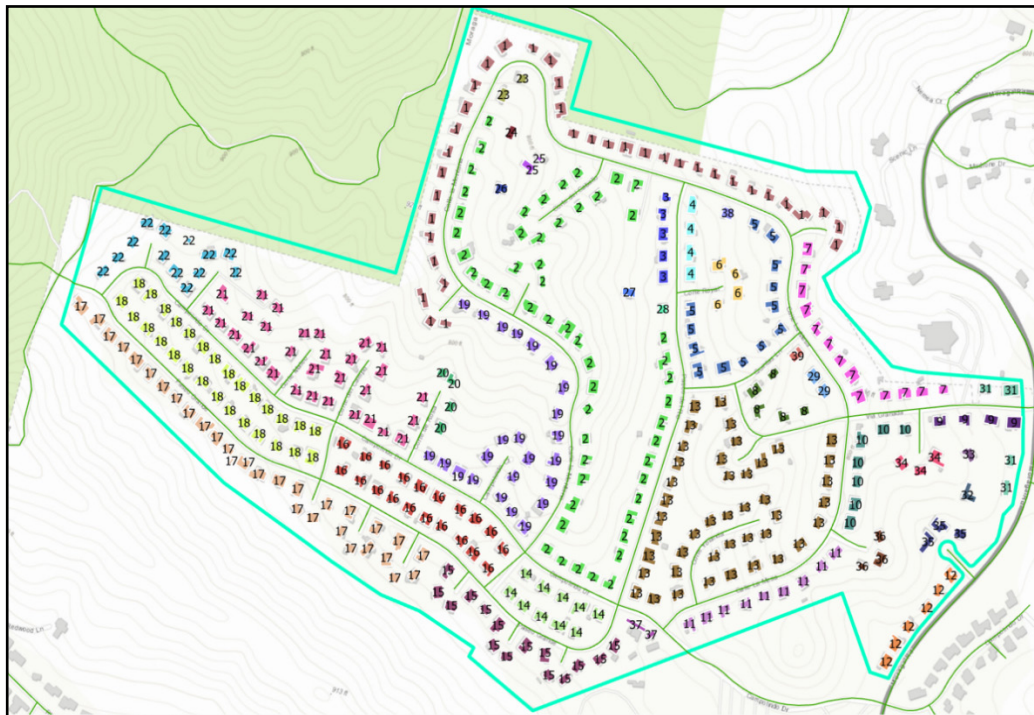


Figure 3.7. Example of a completed cluster analysis. Each identified cluster is indicated by an integer identifier and specific color.

3.5.2 Connective fuel pathway identification and evaluation

To determine whether an identified *cluster of structures* is compliant or flagged for *connective fuel pathways*, each individual *structure* within an identified *cluster* will be evaluated for *connective fuel pathways* to neighboring *structures*. *Connective fuel pathways* are identified through spatial analysis of *fuel elements* and whether adequate spacing is present such that the *connective fuel pathway* is broken.

All *fuel elements* will be identified across the defined *neighborhood*. *Fuel elements* shall be bound by a polygon that represents their surface area coverage.

For tree *fuel elements* with a trunk of 4 inches in diameter or greater when measured at a height of 4.5 feet above the ground the tree, per requirements stated in the *IBHS Wildfire Prepared Home Standard*. Other vegetative *fuel elements* including bushes, shrubs, and other vegetation shall also be treated by the definitions and requirements stated in the *IBHS Wildfire Prepared Home Standard*.

For *built environment fuels* that are not considered *structures* their surface area shall be used in the connective fuel assessment.

For fences or other *built-environment fuels* which extend vertically and the vertical surface area of which is two times or larger than their surface footprint, the *connective fuel pathway* shall be considered a straight line along the fence or other feature. This type of *fuel pathway* is considered broken by a compliant *0–5 Foot Noncombustible Zone* and/or ensuring that any fencing or similar *fuel element* that is parallel to a structure and within 5 feet is noncombustible. Combustible fences shall be considered a complete *connective fuel pathway* regardless of the overlap or proximity of other *fuel elements*. However, the use of a *0–5 Foot Noncombustible Zone* which includes the use of *noncombustible* fence materials in the 5-foot area extending outward from any *structure* results in a break of the *connective fuel pathway* associated with just the fence. In this case, the fence shall not be considered a *connective fuel pathway*.

Connected fuel pathways shall be evaluated for individual *structures* within each denoted *cluster*. The identified *fuel elements* are used to determine if a *connective fuel pathway* exists to each elevation (i.e., front, rear, right, left) of a *structure* to a neighboring *structure*. The *connective fuel pathway* is considered connected to the *structure* if a series of *fuel elements* or a *single element* connects the evaluated *structure* to one or more neighboring *structures* with no identified breaks greater than two times the height of the *fuel element* (excluding fences, see fence provisions below) along the fuel pathway. *Fuelbreaks and firebreaks*, as defined, shall be considered to have broken a *connective fuel pathway*. If along the *connected fuel pathway*, a break in *fuel elements* greater than two times the height of the *fuel element/s* is present, the pathway is also considered broken. For each *structure* the number of *connected fuel pathways* is found and used in the analysis of *connective fuels* for the *neighborhood flame zone* and the identified *clusters*. For each *cluster*, a *connective fuel flag* is assigned if more than 10% of *structures* have more than one *connective fuel pathway*.

After all *clusters* have been evaluated, the total number of *structures* within those *clusters* that have been assigned a *connective fuel flag* shall be calculated. If the total number of *structures* within flagged *clusters* represents 10% or less of the total *structures* within the entire defined *neighborhood* then the *neighborhood* shall be considered compliant with the *IBHS Wildfire Prepared Neighborhood Standard for connective fuels*. If the total number of *structures* within

clusters with connective fuel flags is greater than 10% of the total structures, the *neighborhood* shall be considered non-compliant for *connective fuels*.

CHAPTER 4. Neighborhood mitigation requirements

4.1 Roof covering

Within the defined *neighborhood*, regardless of *external fuel* characteristics or *structure separation* distributions, all *structures* shall have a Class A rated *roof covering* (see *Appendix B, Section B2* for additional scientific reasoning). Wood shakes and shingles or fire-retardant-treated, fire-resistant pressure-treated or any other wood *roof covering* within any *roof assembly* or *roof system* are prohibited regardless of *roof covering* fire classification.

4.2 Connective fuels

The defined *neighborhood* shall be segmented into *clusters* using the process described in *Chapter 3 Section 3.5.1*. Each *cluster* shall be given a numeric integer identifier.

4.2.1 Connective fuels in the neighborhood flame zone. All *structures* within the boundaries of the *neighborhood flame zone* shall have no *connective fuel pathways* to any neighboring *structures*.

4.2.2 Connective fuels across the defined neighborhood. If 10% or more of *structures* within each determined *cluster* have more than one side/elevation with a *connected fuel pathway* to any neighboring *structure*, the *cluster* is assigned a *connective fuel “flag”* for exceeding the *connective fuel pathway* tolerance. If the number of flagged *clusters* produces a total of greater than 10% of the total *structures* in the defined *neighborhood*, the *neighborhood* must remediate the *connective fuels*. The *IBHS Wildfire Prepared Neighborhood Standard* does not provide prescriptive *connective fuels* remediation requirements or guidance. Remediation shall meet the *neighborhood* requirement through any means determined by the defined *neighborhood*.

If the number of *connective fuels flagged clusters* is zero and all *structures* within the *neighborhood flame zone* have zero *connective fuel pathways*, then no *connective fuels* remediation is required, and the defined *neighborhood* shall be considered compliant.

If the total number of *structures* located in *connective fuel flagged clusters* is 10% or less than the total number of *structures* in the defined *neighborhood*, and all *structures* within the *neighborhood flame zone* have zero *connective fuel pathways*, no *connective fuels* remediation is required, and the defined *neighborhood* shall be considered compliant.

The *neighborhood ember zone* dimensions shall be determined using the processes described in *Chapter 3, Section 3.4* and *Equation 3-1*.

4.3 Neighborhood flame zone structures

The *neighborhood flame zone* width (in feet) shall be calculated to determine *structures* at risk from direct flame/radiant heat contact from surrounding *external fuels* for each *external fuel sector* considering the presence of *fuelbreaks* and *firebreaks* that are within the 0.25-mile *flame fuel assessment* buffer and meet the conditions described in *Chapter 3, Section 3.3*.

The *neighborhood flame zone* shall be determined using the processes defined in *Chapter 3, Section 3.3* and by applying *Equation 4-1*. If the *neighborhood flame zone (NFz)* is present in any sector, any *structures* and/or *parcels* within the defined *neighborhood* boundary and the determined *neighborhood flame zone*

shall meet the minimum mitigation requirements prescribed within the latest available *IBHS Wildfire Prepared Home Standard* for a “Plus” level of mitigation (henceforth referred to as *IBHS WFPH Plus*). These minimum requirements provide ignition protection from high radiant heat, direct flame contact, and ember exposure. If any part of a *parcel* falls within the *neighborhood flame zone*, any *structure* on that *parcel* shall be considered part of the *neighborhood flame zone* and must meet the specific requirements for this zone.

If there is no designated *neighborhood flame zone* for a specific sector, mitigation requirements move to ember protection and the *neighborhood ember zone* requirements.

Table 4.3 Neighborhood flame zone (NFz) construction requirements correspond to those requirements specified by the 2025 IBHS WFPH Plus requirements. Other select codes and standards provisions are provided for reference.

Structural component	Construction requirements	2025 IBHS WFPH Plus ¹	2024 IWUIC IR1 ²	2022 CBC ³	2018 NFPA 1140 ⁴
Roof	Class A roof covering	✓	X	~	~
Gutters, Gutter Protection, and Downspouts	Noncombustible gutters, gutter protection, and downspouts	✓	✓	~	✓
Protection of Eaves	1. Noncombustible materials, or 2. 1-hour fire-resistance-rated construction, or 3. 2-inch nominal dimension lumber	✓	✓	✓	✓
Vents	1. Corrosion-resistant vents conforming with ASTM E2886 (flame- and ember-resistant), or 2. Noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch in diameter (ember-resistant)	✓	✓	✓	✓
Exterior Wall Covering	Noncombustible building material	✓	~	~	~
6-inch Noncombustible Vertical Clearance	Applied vertically on the exterior base of the wall measured from the grade and the nearest horizontal surface (e.g., decks and patios)	✓	✓	~	✓
Exterior Glass	1. Multipaned glass with at least two tempered panes, or 2. 20-minute fire-resistance rating when tested in accordance with NFPA 257, or 3. Glass blocks (windows only), and 4. Operable skylights protected by a noncombustible 1/8-inch mesh screen	✓	✓	✓	✓
Exterior Doors	The exterior doors shall be constructed with a noncombustible threshold and 1. Noncombustible construction, or 2. Solid-core wood not less than 1 ¾-inches thick, or 3. 20-minute fire-resistance rating when tested according to NFPA 252, or 4. Doors made of combustible material are permissible provided a noncombustible exterior storm door is installed as the outermost door	✓	✓	~	✓
Underfloor Area Construction	Fully enclosed to the ground with noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch in diameter.	✓	~	~	~

Structural component	Construction requirements	2025 IBHS WFPH Plus ¹	2024 IWUIC IR1 ²	2022 CBC ³	2018 NFPA 1140 ⁴
	Exception: Complete enclosure shall not be required where underfloor areas are elevated more than 4 feet above the ground. In such a case, a minimum of 6-inches of noncombustible material or metal flashing shall be extended vertically from grade on the exterior of columns and supporting walls.				
Appendages and Projections (Decks)	Noncombustible building material	✓	~	~	~
Fences and Retaining Walls	Noncombustible fence and retaining walls within 5 feet of primary dwelling unit and attachments. No combustible parallel fences.	✓	X	X	X
Detached Accessory Structures and ADUs	All detached ADUs and accessory structures with a footprint greater than or equal to 15 square feet shall be located a minimum of 30 feet away from the primary dwelling unit and attachments	✓	~	~	~

1. IBHS Wildfire Prepared Home Standard, Plus level [<https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>]
2. 2024 International Wildland-Urban Interface Code, Ignition Resistant Construction Class 1
3. 2022 California Building Code, Title 24, Part 2 (Volumes 1 & 2) with July 2024 Supplement updated
4. 2018 NFPA 1144, Standard for Reducing Structure Ignition Hazard from Wildland Fire

Green (✓) – Construction requirements referenced as one of the acceptable methods in this standard or by another code

Gray (~) – Construction requirements partially addressed by the code

Orange (X) – Construction requirements not referenced by the code

4.4 Neighborhood ember zone structures

The *neighborhood ember zone* width (in feet) shall be calculated to determine *structures* at risk from ember exposure from surrounding *external fuels* for each *external fuel* sector as well as possible ignitions in other areas of the defined *neighborhood*. The *neighborhood ember zone* dimensions shall be determined using the processes described in *Chapter 3, Section 3.4* (see *process step 4*).

Any *structures* and/or *parcels* within the defined neighborhood boundary or, when present inside the *neighborhood flame zone* boundary, and the determined *neighborhood ember zone* shall meet the minimum mitigation requirements prescribed within the latest available *IBHS Wildfire Prepared Home Standard* “Base” level (hereafter referred to as *IBHS WFPH Base*). These minimum requirements provide ignition protection from ember attack exposure. If any part of a *parcel* falls within the *neighborhood ember zone*, any *structure* on the *parcel* shall be considered part of the *neighborhood ember zone* and is required to meet the specified requirements for this zone.

If *structures* are present within the defined boundaries of the defined *neighborhood* and are not included in the *flame and/or neighborhood ember zones*, there are no additional mitigation requirements except for meeting roof cover material requirements and *connective fuel pathway* requirements.

Table 4.4. Neighborhood ember zone construction requirements correspond to those requirements specified by the 2025 IBHS WFPH Base. Other current codes and standards and how their provisions relate are provided for reference.

Structural component	Construction requirements	2025 IBHS WFPH Base ¹	2024 IWUIC IR3 ²	2022 CBC ³	2018 NFPA 1140 ⁴
Roof	Class A roof covering	✓	X	~	~
Gutters and Downspouts	Noncombustible gutters and downspouts	✓	✓	~	✓
Vents	1. Corrosion-resistant vents conforming with ASTM E2886, or 2. Noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch in diameter	✓	X	✓	✓
6-inch Noncombustible Vertical Clearance	Applied vertically on the exterior base of the wall measured from the grade and the nearest horizontal surface (e.g., decks)	✓	X	~	✓
Underfloor Area Construction	Fully enclosed to the ground with noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch in diameter. Exception: Complete enclosure shall not be required where underfloor areas are elevated more than 4 feet above the ground. In such a case, a minimum of 6-inches of noncombustible material or metal flashing shall be extended vertically from grade on the exterior of columns and supporting walls.	✓	X	~	~
Fences and Retaining Walls	Noncombustible fence and retaining walls within 5 feet of <i>primary dwelling unit</i> and attachments.	✓	X	X	X
Detached Accessory Structures and ADUs	Shall have no more than 3 detached <i>accessory structures</i> and <i>ADUs</i> with a footprint greater than or equal to 15 square feet located between 10-30 feet of the <i>primary dwelling unit</i> and attachments.	✓	~	~	~

1. IBHS Wildfire Prepared Home Standard, Base level [<https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>]
2. 2024 International Wildland-Urban Interface Code, Ignition Resistant Construction Class 3
3. 2022 California Building Code, Title 24, Part 2 (Volumes 1 & 2) with July 2024 Supplement updated
4. 2018 NFPA 1144, Standard for Reducing Structure Ignition Hazard from Wildland Fire

Green (✓) – Construction requirements referenced as one of the acceptable methods in this standard or by another code

Gray (~) – Construction requirements partially addressed by the code

Orange (X) – Construction requirements not referenced by the code

CHAPTER 5. References for Chapters 1-4.

Andrews, P. L., and C.D. Bevins. (2003). BehavePlus fire modeling system, version 2.0: User's guide [Computer software]. USDA Forest Service, Rocky Mountain Research Station.

<https://www.firelab.org/project/behaveplus>.

ASTM E119—20: Standard Test Methods for Fire Tests of Building Construction and Materials, *ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959*.

ASTM E136—22: Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C, *ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959*.

Baum, Howard R., and B. J. McCaffrey, (1989). Fire induced flow field-theory and experiment. *Fire Safety Science*, **2**, 129-148.

Cohen, J. D. (2000). Preventing disaster: home ignitability in the wildland-urban interface. *Journal of Forestry*, 98(3), 15-21.

Cohen, J.D. (2008). The wildland urban interface fire problem: A consequence of the fire exclusion paradigm. *Forest Hist. Today*, 20-26.

Davis J.B. (1989). Demography: A Tool for Understanding the Wildland-Urban Interface Fire Problems. *Proceedings of the Symposium on Fire and Watershed Management*, General Technical Report PSW109, ed. Berg N.H., 38–42.

Himoto, K., and T. Iwami (2021). Generalization framework for varying characteristics of the firebrand generation and transport from structural fire source. *Fire safety journal* **125**, 103418.

International Code Council (2024). *2024 International Building Code*. Falls Church, VA: International Code Council.

International Code Council (2024). *2024 International Wildland-Urban Interface Code*. Falls Church, VA: International Code Council.

Insurance Institute for Business & Home Safety (2024). IBHS Wildfire Prepared Home Technical Standard. *Insurance Institute for Business & Home Safety*, Richburg, SC, 9 pp. <https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>.

Johnston L., Blanchi R., Jappiot M. (2019). Wildland-Urban Interface. In: Manzello S.L. (ed) *Encyclopedia of Wildland-Urban Interface (WUI) Fires*. Springer, Cham. https://doi.org/10.1007/978-3-319-51727-8_130-1.

Manzello, S.L. and S. Suzuki, (2022). The world is burning: What exactly are firebrands and why should anyone care?, *Frontiers in Mechanical Engineering*, **8**, 1-18. <https://doi.org/10.3389/fmech.2022.1072214>.

Maranghides, A., E.D. Link, S. Hawks, J. McDougald, S.L. Quarles, D.J. Gorham and S. Nazare. (2022). WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology, *National Institute of Standards and Technology*, NIST Technical Note 2205, 77 pp. <https://doi.org/10.6028/NIST.TN.2205>.

National Fire Protection Association (2018). *NFPA 1144 standard for reducing structure ignition hazards from wildland fire*. NFPA Standards council, Quincy MA.

Rothermel, R.C., (1972). A mathematical model for predicting fire spread in wildland fuels. Rocky Mountain Research Station. *United States Department of Agriculture*. Res. Pap. INT-115, 40 pp.

Scott, J. H., and R. E. Burgan (2005). Standard fire behavior fuel models: A comprehensive set for use with Rothermel's surface fire spread model. *USDA Forest Service*, General Tech. Rep. RMRS-GTR-153, 72 pp. <https://doi.org/10.2737/RMRS-GTR-153>.

Stratton, R. (2004). FlamMap: Fire mapping and analysis system (version 5.0) [Computer software]. *USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory*. <https://www.firelab.org/project/flammap>.

UL 263—2011: Fire Tests of Building Construction and Materials—with Revisions through August 2021, *UL LLC, 333 Pfingsten Road, Northbrook, IL 60062-2096*.

US Department of Agriculture, US Department of Interior (2001). Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are at High Risk from Wildfire. *Federal Register* **66**(3), 751-777. <https://www.federalregister.gov/d/01-52>.

APPENDIX A
Minimum data requirements, additional data and
recommendations, data schema

The following appendix includes the minimum data requirements to determine compliance with the *IBHS Wildfire Prepared Neighborhood Standard* as well as recommendations for both additional data and data schema.

A1 Formats

A1.1 Date

The date shall be entered as a string using the form YYYY-MM-DD.

A2 Neighborhood applicability and governance

A2.1 Neighborhood design and applicability requirements

Table A2.1 provides the minimum required data fields and variables for determining the applicability of the *IBHS Wildfire Prepared Neighborhood Standard*. Within the data schema, roof compliance with the Class A requirement is considered part of the neighborhood compliance variables.

Variable	Variable name	Type	Description	Options
Roof	Neighborhood_roof_compliance	string	Are 100% of roofs Class A across the entire defined <i>neighborhood</i> ?	Binary 0=True/Yes/Compliant 1=No/Noncompliant
Construction type	Construction_type	string	Are all <i>structure</i> types within the defined <i>neighborhood</i> boundary compliant by those listed in Chapter 1?	Binary 0=True/Yes/Compliant 1=No/Noncompliant
Structures	Total_structures	integer	Total number of <i>structures</i> identified in the defined <i>neighborhood</i>	integer
Parcels	Total_parcels	integer	Total number of <i>parcels</i> in the defined <i>neighborhood</i>	integer
Structure separation	Structure_separation	string	Are 90% or more of <i>structures</i> separated by a minimum distance greater than 10 feet to the closest neighboring <i>structure</i> ?	Binary 0=True/Yes/Compliant 1=No/Noncompliant
Mean structure separation	Structure_separation_mean	float	Mean <i>structure</i> separation for the defined <i>neighborhood</i>	Float
Median structure separation	Structure_separation_median	float	Median <i>structure</i> separation distance for the defined <i>neighborhood</i>	Float
Standard deviation of structure separation	Structure_separation_stdev	float	Standard deviation of the distribution of <i>structure</i> separation distances for the defined <i>neighborhood</i>	Float

A2.1 Covenants, Conditions & Restrictions (CC&R)

Any *Covenants, Conditions and Restrictions* documents that are active and enforced are recommended to be submitted as a .pdf document if provided.

A2.2 FIREWISE

Neighborhoods, communities, etc. which hold an NFPA *FIREWISE USA* recognition are encouraged to provide proof of their recognition to accompany any *neighborhood* specific data in instances when the standard is being applied towards mitigation assessments or any designation program.

A3 Fuel assessment data requirements

A3.1 External fuels

Fuels surrounding the defined neighborhood govern the mitigation requirements for the *neighborhood flame zone* and the *neighborhood ember zone*. The *external fuel* type models listed in *Table A3.2* (Scott and Burgan 2005) are used in fuel models to identify fire and ember behavior and are derived from those included in the *LANDFIRE* dataset. *External fuel* type models/classifications which have 10% or greater coverage by surface area in each *external fuel* assessment sector shall be identified using the variable structure defined in *Table A3.1*. Additional supplemental data can be used to identify fuels and/or to augment the time lag between *LANDFIRE* updates where land-use surrounding the defined *neighborhood* may have changes if the spatial resolution is finer than that used by *LANDFIRE* (30 m by 30 m grid) and can be integrated under the 40 different fuel model types from Scott and Burgan (2005). *Tables A3.2, A3.3* provide the data structure for the identified fuel type models for each sector that are used within *Chapter 3*, to determine the *neighborhood flame zone* and *neighborhood ember zone* distances for each sector. See *Figures 3.1* and *3.2* for sector identification provisions.

Table A3.1. The following table provides the data variable structure for external fuel model types for all detected (depicted as the N-number of fuel types) fuels with 10% or more coverage in each 45° north-relative external fuel assessment sector for 4.25 miles radially outward from the defined neighborhood boundary.

Variable	Variable name	Type	Description	Options
Sector 1	Fuel_type_[1...N]_sector1	string	Fuel type present in sector 1	See fuel type options below in Table A3.3
Sector 2	Fuel_type_[1...N]_sector2	string	Fuel type present in sector 2	See fuel type options below in Table A3.3
Sector 3	Fuel_type_[1...N]_sector3	string	Fuel type present in sector 3	See fuel type options below in Table A3.3
Sector 4	Fuel_type_[1...N]_sector4	string	Fuel type present in sector 4	See fuel type options below in Table A3.3
Sector 5	Fuel_type_[1...N]_sector5	string	Fuel type present in sector 5	See fuel type options below in Table A3.3
Sector 6	Fuel_type_[1...N]_sector6	string	Fuel type present in sector 6	See fuel type options below in Table A3.3

Variable	Variable name	Type	Description	Options
Sector 7	Fuel_type_[1...N]_sector7	string	Fuel type present in sector 7	See fuel type options below in Table A3.3
Sector 8	Fuel_type_[1...N]_sector8	string	Fuel type present in sector 8	See fuel type options below in Table A3.3

Table A3.2. This table provides the data variable structure for the flame model types which represent the worst-case flame intensity and ember transport distances and are used in calculating the neighborhood flame zone and neighborhood ember zone (Chapter 3, Sections 3.3 and 3.4).

Variable	Variable name	Type	Description	Options
Neighborhood flame zone				
Neighborhood flame zone fuel model type for sector 1	FRz_fueltype_sector1	string	Worst case fuel type for neighborhood flame zone in sector 1	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 2	FRz_fueltype_sector2	string	Worst case fuel type for neighborhood flame zone in sector 2	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 3	FRz_fueltype_sector3	string	Worst case fuel type for neighborhood flame zone in sector 3	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 4	FRz_fueltype_sector4	string	Worst case fuel type for neighborhood flame zone in sector 4	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 5	FRz_fueltype_sector5	string	Worst case fuel type for neighborhood flame zone in sector 5	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 6	FRz_fueltype_sector6	string	Worst case fuel type for neighborhood flame zone in sector 6	See fuel model types in Table A3.3
Neighborhood flame zone fuel model type for sector 7	FRz_fueltype_sector7	string	Worst case fuel type for neighborhood flame zone in sector 7	See fuel model types in Table A3.3

Variable	Variable name	Type	Description	Options
<i>Neighborhood flame zone fuel model type</i> for sector 8	FRz_fueltype_sector8	string	Worst case fuel type for <i>neighborhood flame zone</i> in sector 8	See fuel model types in Table A3.3
Neighborhood ember zone				
<i>Neighborhood ember zone fuel model type</i> for sector 1	ERz_fueltype_sector1	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 1	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 2	ERz_fueltype_sector2	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 2	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 3	ERz_fueltype_sector3	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 3	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 4	ERz_fueltype_sector4	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 4	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 5	ERz_fueltype_sector5	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 5	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 6	ERz_fueltype_sector6	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 6	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 7	ERz_fueltype_sector7	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 7	See fuel model types in Table A3.3
<i>Neighborhood ember zone fuel model type</i> for sector 8	ERz_fueltype_sector8	string	Worst case fuel type for <i>neighborhood ember zone</i> in sector 8	See fuel model types in Table A3.3

Table A3.3. This table provides the LANDFIRE fuel type models used in Chapters 3 and 4 in determining neighborhood flame zone and neighborhood ember zone and for use in the variables described in Table A3.1. Adapted from Scott and Burgan (2005). Rows shaded in light brown represent fuels in arid to semiarid climates with rainfall deficient summer months and extinction moisture content of 15%. Those rows shaded in light green represent subhumid to humid climates with extinction moisture contents of 30%–40%.

Class	Type ID	Description
1. Grass		
	GR1	Short or patchy or heavily grazed grass
	GR2	Moderately coarse continuous grass with average height 1 feet
	GR3	Very coarse grass with average height 2 feet
	GR4	Moderately coarse continuous grass with average height 2 feet
	GR5	Dense, coarse grass with mean height 1-2 feet
	GR6	Dryland grass with average height 1-2 feet
	GR7	Moderately coarse continuous grass with average height 3 feet
	GR8	Heavy, coarse continuous grass with average height 3-5 feet
	GR9	Very heavy, coarse, continuous grass with average height 5-8 feet
2. Grass & Shrub Mix (Up to 50% shrub coverage)		
	GS1	Shrubs height about 1-foot, low grass load
	GS2	Shrubs height about 1 to 3 feet, moderate grass load
	GS3	Moderate grass/shrub load, average grass/shrub height less than 2 feet
	GS4	Heavy grass/shrub load, average height greater than 2 feet
3. Shrubs coverage 50% or greater; grass sparse or less		
	SH1	Low shrub fuel load, fuelbed depth about 1-foot; some grass may be present
	SH2	Moderate fuel load (higher than SH1), average height about 1-foot, no grass fuel present
	SH3	Moderate shrub load, possibly with pine overstory or herbaceous fuel, fuel bed depth 2 to 3 feet
	SH4	Low to moderate shrub and litter load, possibly with pine overstory, fuel bed depth about 3 feet
	SH5	Heavy shrub load, average height 4 - 6 feet
	SH6	Dense shrubs, little or no herb fuel, average height about 2 feet
	SH7	Very heavy shrub load, average height 4 - 6 feet
	SH8	Dense shrubs, little or no herb fuel, average height about 3 feet
	SH9	Dense, finely branched shrubs with significant fine dead fuel, average height about 4 - 6 feet; some herbaceous fuel may be present

Class	Type ID	Description	
4. Grass or shrubs mixed with litter from forest canopy			
	TU1	Fuelbed is low load of grass and/or shrub with litter	
	TU2	Fuelbed is moderate litter load with shrub component	
	TU3	Fuelbed is moderate litter load with grass and shrub components	
	TU4	Fuelbed is short conifer trees with grass or moss understory	
	TU5	Fuelbed is high load conifer litter with shrub understory	
5. Dead & down woody fuel beneath forest canopy			
		Recently burned but able to carry wildland fire	
	TL1	Light to moderate load, fuels 1 to 2 inches deep	
		Fuelbed not recently burned	
	TL2	Broadleaf, hardwood litter, low load and compact	
	TL3	Moderate load conifer litter and does not include coarse fuels	
	TL4	Moderate load, includes small diameter downed logs. Includes both fine and coarse fuels	
	TL5	High load conifer litter; light slash or mortality fuel. Does not include coarse fuels	
	TL6	Moderate load, less compact broadleaf, hardwood litter	
	TL7	Heavy load includes larger diameter downed logs includes both fine and coarse fuels. Not composed of broadleaf or long-needle pine litter	
	TL8	Moderate load of long-needle pine litter. Compactness may include small amount of herbaceous load	
	TL9	Very high load, fluffy composed of broadleaf, hardwood litter	
	6. Activity fuel or debris from wind damage		
			Fuelbed is activity fuel
SB1		Fine fuel load is 10 - 20 tons/acre, weighted toward fuels 1 - 3 inches diameter class, depth is less than 1-foot	
SB2		Fine fuel load is 7 - 12 tons/acre, evenly distributed across 0 - 0.25, 0.25 - 1, and 1 - 3 inches diameter classes, depth is about 1 foot	
SB3		Fine fuel load is 7 to 12 tons/acre, weighted toward 0 - 0.25-inch diameter class, depth is more than 1-foot	
		Fuelbed is blowdown	
SB2		Blowdown is scattered, with many trees still standing	
SB3		Blowdown is moderate, trees compacted to near the ground	
SB4	Blowdown is total, fuelbed not compacted, foliage still attached		
7. Built environment or fire resistant agricultural (maintained)		<i>Note: The "NB" LANDFIRE fuel classes are considered unable to carry wildland fire. However, built environment fuels (NB1) are considered and used in both ember transport and flame intensity processes. They are considered combustible and are treated as such.</i>	

Class	Type ID	Description
	NB1	Urban or suburban development
	NB2	Snow/ice
	NB3	Maintained agricultural field
	NB8	Open water
	NB9	Bare ground/soil

A3.3 Flame & neighborhood ember zones required data fields

Table A3.4 provides the minimum required data fields/variables for the *neighborhood flame zone* and *neighborhood ember zone* distances for each *external fuel sector*.

Table A3.4. Variable structure for the final flame resistance and neighborhood ember zone distances for each sector. The values for each variable listed in this table shall be calculated using the processes described in Chapter 3, Section 3.3 (*neighborhood flame zone*), Equation 4-1 (for *FR_z*), and Section 3.4 (*neighborhood ember zone*). Values can be rounded to the nearest foot.

Variable	Variable name	Type	Description	Options
Neighborhood flame zone				
<i>Neighborhood flame zone</i> distance sector 1	Fz_distance_sector1	integer	<i>neighborhood flame zone</i> distance for sector 1	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 2	Fz_distance_sector2	integer	<i>neighborhood flame zone</i> distance for sector 2	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 3	Fz_distance_sector3	integer	<i>neighborhood flame zone</i> distance for sector 3	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 4	Fz_distance_sector4	integer	<i>neighborhood flame zone</i> distance for sector 4	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 5	Fz_distance_sector5	integer	<i>neighborhood flame zone</i> distance for sector 5	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 6	Fz_distance_sector6	integer	<i>neighborhood flame zone</i> distance for sector 6	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> distance for sector 7	Fz_distance_sector7	integer	<i>neighborhood flame zone</i> distance for sector 7	Value in feet. 0 if there is no <i>neighborhood flame zone</i>

Variable	Variable name	Type	Description	Options
<i>Neighborhood flame zone</i> distance for sector 8	Fz_distance_sector8	integer	<i>neighborhood flame zone</i> distance for sector 8	Value in feet. 0 if there is no <i>neighborhood flame zone</i>
<i>Neighborhood flame zone</i> structure separation	Fz_structure_separation	string	Are 10% or more structures in the <i>neighborhood flame zone</i> separated by less than 30 feet?	Binary 0 = Yes/True/Additional ember transport distance added to <i>Ez</i> 1= No/False
Neighborhood ember zone				
<i>Neighborhood ember zone</i> distance for sector 1	Ez_distance_sector1	integer	<i>neighborhood ember zone</i> distance for sector 1	Value in feet
<i>Neighborhood ember zone</i> distance for sector 2	Ez_distance_sector2	integer	<i>neighborhood ember zone</i> distance for sector 2	Value in feet
<i>Neighborhood ember zone</i> distance for sector 3	Ez_distance_sector3	integer	<i>neighborhood ember zone</i> distance for sector 3	Value in feet
<i>Neighborhood ember zone</i> distance for sector 4	Ez_distance_sector4	integer	<i>neighborhood ember zone</i> distance for sector 4	Value in feet
<i>Neighborhood ember zone</i> distance for sector 5	Ez_distance_sector5	integer	<i>neighborhood ember zone</i> distance for sector 5	Value in feet
<i>Neighborhood ember zone</i> distance for sector 6	Ez_distance_sector6	integer	<i>neighborhood ember zone</i> distance for sector 6	Value in feet
<i>Neighborhood ember zone</i> distance for sector 7	Ez_distance_sector7	integer	<i>neighborhood ember zone</i> distance for sector 7	Value in feet
<i>Neighborhood ember zone</i> distance for sector 8	Ez_distance_sector8	integer	<i>neighborhood ember zone</i> distance for sector 8	Value in feet

A3.4 Additional data fields

A3.2.1 Fuel Treatment activities

The following do not require data fields but are available for entry and logging should the user of the *IBHS Wildfire Prepared Neighborhood Standard* wish to include these data. These focus on treatments within three miles of the defined *neighborhood* boundary within the previous three years.

IBHS Wildfire Prepared Neighborhood
Technical Standard
Version 2025

Table A3.5. The following shall be completed for any fuel treatment data entry.

Name	Type	Description	Options
Treatment_ID	String or integer	A unique integer identifier for the treatment within a project (for that organization), usually a number or an alpha-numeric code, rather than a full name. Preferred that it does not include text that identifies which organization, in case that must be kept private	
Treatment_name	string	Project or fuel treatment name	
County	string	County name where treatment was completed	
Neighborhood	string	Neighborhood name/identifier	
Neighborhood_ID		Account identifier	Identifier if applying for, or have an active <i>IBHS</i> designation
Primary_objective	string	The primary goal of the treatment (see options).	Ex: Broadcast Burn, Fuel Reduction, Fuelbreak, Roadway Clearance
Secondary_objective	string	The secondary goal of the treatment (see options). Optional field.	Ex: Broadcast Burn, Fuel Reduction, Fuelbreak, Roadway Clearance
Tertiary_objective	string	The tertiary goal of the treatment (see options). Optional field.	Ex: Broadcast Burn, Fuel Reduction, Fuelbreak, Roadway Clearance
Retreatment_date	date	Approximate estimated date at which the treatment will need to be performed again	
Treatment_status	string	Treatment status	Ex: Planned, Active, Complete
Treatment_start_date	date	Date the treatment started, usually the date of the first activity	
Treatment_end_date	date	Date all treatment activities were completed.	
Treatment_area	integer	Area of treatment in acres (nearest integer)	
Ownership_group	string	Agency or organization	Federal, State, Local, Private, Other, HOA, Firewise, etc.
Activity_description	string	The practice used to achieve management objectives.	
Broad_vegetation_type	string	Identify the primary broad vegetation type for the activity area	Forest, Woodland, Shrubland, Grass, etc.

Table A3.6 Objective descriptions

Objective	Objective definition
Biomass utilization	Work conducted in an area where the secondary or tertiary objective is to utilize woody biomass for wood products, and/or generate energy through combustion or gasification, and/or utilize woody biomass to help develop markets for beneficial uses of the material
Burned area restoration	Work conducted in a recently burned area intended to promote recovery and ecological stability
Carbon storage	Work conducted to improve carbon storage or carbon stability in forests, shrubs and grasslands
Climate adaptation	Work conducted to increase the ability of an ecosystem to be resilient to or resist climate change. Resilience is the ability to recover from a climate change-related event, while resistance is the ability to withstand that event unchanged

Objective	Objective definition
Cultural burn	Application of fire to the environment predominantly to achieve cultural objectives
Ecological restoration	Work conducted to re-establish the composition, structure, pattern, integrity, and ecological processes necessary to facilitate terrestrial and Wildfire & Landscape Resilience Interagency Tracking System – August 2023 aquatic ecosystem sustainability, resilience, and health under current and future conditions
Fire prevention	Activities were conducted to help educate the public about Fire Prevention. Includes CWPP, public education events, placement of prevention signs, and community meetings related to fire prevention
Forest pest control	Work conducted to control the spread of active forest pest and diseases, typically used during active infestations such as Sudden Oak Death and Gold Spotted Oak Borer outbreaks
Forestland stewardship	Work conducted to encourage private and public investments in forestlands and resources within the state to ensure adequate future high quality timber supplies, related employment, and other economic benefits, and to protect, maintain, and enhance the forest resource for the benefit of present and future generations
Fuelbreak	Work conducted to modify flammable vegetation to create defensible space to reduce fire spread to structures and/or natural resources, and to provide a safer location to fight the fire. Fuelbreaks are strategically placed along a ridge, valley bottom, access road, or around a subdivision
Habitat restoration	Work conducted to improve or protect wildlife habitat
Land protection	Protection of natural and working lands against conversion to other land cover types, such as developed or cropland, that would result in the loss of natural vegetation. Often through the establishment of easements, acquisitions, fee title, or other activities
Mountain meadow restoration	Work conducted to restore mountain meadow lands
Non-timber products	Work conducted to collect, propagate, or preserve non-timber products, including food, medicinal, cultural, spiritual, or other materials from an ecosystem
Other forest management	Precommercial forest management treatment activities. Or work conducted in an area to improve stand structure or composition
Other fuels reduction	Work conducted in an area where the primary objective is to reduce fuel loads. While this can be accomplished through Fuel Break and Broadcast Burn objectives, this should be used when Fuel Break and Broadcast Burning objectives are not being utilized
Prescribed fire	Work conducted in an area where the primary objective is reducing fuel loads through broadcast burning and pile burning
Recreation	Work conducted to improve or maintain recreation opportunities
Reforestation	Work conducted to promote the reforestation of non- or understocked forestland and areas burned by wildfire, drought, pests, or other natural disturbances to increase carbon sequestration and rebuild natural habitats and ecosystems. Tree planting associated with timber harvest operations is not tracked because these activities are legally required to meet minimum stocking standards following timber operations
Riparian restoration	Work conducted to improve riparian habitat or stream channel function
Roadway clearance	Work conducted along the right of way of fire roads, county roads, or highways for purposes of improved ingress and egress. This includes the removal of dead trees resulting from insects or drought. Right of Way Clearance is not done with the intent of stopping a fire at the location of work but instead focuses on ingress and egress enhancement
Site Preparation for Planting, Seeding, or Natural Regeneration	Manipulation of a site to enhance the success of regeneration, including through the completion of activities such as broadcast burning, mastication, mowing, dozer, or herbicide application
Timber harvest	Work conducted in an area where the primary objective is to harvest timber to produce wood products
Utility right of way clearance	Work conducted along the right of way of Electric Utility lines. This includes the removal of dead trees resulting from insects or drought. Right of Way Clearance is not done with the intent of stopping a fire at the location of work but instead focuses on keeping trees from hitting powerlines and/or high fuel loads from forming under powerlines

Objective	Objective definition
Watershed restoration	Work conducted in uplands and/or riparian areas to restore watershed function, including improvements in water quantity, water quality, habitat, and other ecological characteristics
Wetland restoration	Work conducted on land that is covered or saturated by water for all or portions of a year (excluding mountain meadows and riparian areas), to improve ecosystem function, including water quality, habitat, and other ecological characteristics

A4 Parcel Level Variables

A4.1 Required *parcel* level variables

The following variables represent the minimum requirements that shall be collected and submitted for each *parcel* and subsequent *structures* within the *neighborhood* being evaluated. Tables are broken down into parcel-level subsystems. The following are the sub-systems used in the data dictionary and minimum requirements as developed by IBHS in support of the *IBHS Wildfire Prepared Home Standard*. The *parcel*-level data fields can be obtained through any means such as ground-based inspections, *aerial imagery* etc. but must meet the minimum data requirements specified here.

Table A4.1. Home inspection details subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
address	address	string		Physical address	Home Inspection Details	
latitude	lat	float		Latitude in decimal degrees	Home Inspection Details	
longitude	lon	float		Longitude in decimal degrees	Home Inspection Details	
Single family home	single_family_home_present	string	Single Family Home Present?	Is the home a single-family home (no townhomes / condos) with three stories or less? Binary True/False	Home Inspection Details	0=True /compliant 1=False
Stories	number_of_stories	integer	Number of stories	How many stories does the home have (not including a walk-out basement)?	Home Inspection Details	
<i>Neighborhood flame zone</i>	flame_resistance_zone	string	Neighborhood flame zone	Is the parcel/home a part of the <i>neighborhood flame zone</i>	Home Inspection Details	0=True/Yes 1=False/No
<i>Neighborhood ember zone</i>	ember_resistance_zone	string	Neighborhood ember zone	If the parcel/home is not part of the neighborhood flame zone, is it part of the <i>neighborhood ember zone</i>	Home Inspection Details	0=True/Yes 1=False/No

Table A4.2 General parcel subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Accessory structure/s	accessory_structures_properly_distanced_from_home	string	Accessory structure spacing	Are all additional <i>structures</i> larger than 15 square feet. more than 30 feet from the house or not present? Note: If	General	0=True/Compliant 1=False

				not present, select yes. (Structure examples sheds, hot tubs, propane tanks, pergolas, ADUs, playsets) Binary Yes/No		
Accessory structure/s inside 30 feet	accessory_structures_present	string	Accessory structures inside 30 feet from the house	If the property has additional structures larger than 15 ft ² within 30 feet of home, are there three or fewer structures? Additional data requirements: Photo of each accessory structure present showing distance from home for reference.	General	0=True/Compliant 1=False

Table A4.3 Accessory structure compliance subsystem (for 3 accessory structures, not required if not present).

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Accessory structure compliance 1	accessory_structure_compliance_1	String	Accessory structure 1 compliance	For the accessory structure 1, does it meet all of the same requirements as the home? Binary Yes/No Additional data requirements: Photos of the 5 feet buffer zone all the way around the structure.	Accessory structure compliance	0=True/Yes/Compliant 1=False
Accessory structure compliance 2	accessory_structure_compliance_2	String	Accessory structure 2 compliance	For the accessory structure 2, does it meet all of parcel requirements? Binary Yes/No Additional data requirements: Photos of the 5 feet buffer zone all the way around the structure.	Accessory structure compliance	0=True/Yes/Compliant 1=False
Accessory structure compliance 3	accessory_structure_compliance_3	String	Accessory structure 3 compliance	For the accessory structure 3, does it meet all of the parcel requirements? Binary Yes/No Additional data requirements: Photos of the 5 feet buffer zone all the way around the structure.	Accessory structure compliance	0=True/Yes/Compliant 1=False

Table A4.4. External propane tank (not required if not present).

Variable	Data name	Variable type	Title	Description	Subsystem	Value
External propane tank compliance	propane_tank_compliance	string	External fixed propane tank	If a stationary propane tank is present, is it at least 10 feet from with house with the additional clearance requirements or placed 30 feet away from the home? Additional data requirements: Photos of the	Propane tank	0=True/Compliant 1=False

				5 feet buffer zone all the way around the propane tank.		
--	--	--	--	---	--	--

Table A4.5. Hot Tub/Spa (not required if not present).

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Hot tub/spa compliance	hot_tub_compliance	string	Hot tub/spa	If applicable, is the hot tub placed at least 10 feet from the home, on a noncombustible surface (no wood decks) and not under a covered porch or pergola? Binary Yes/No Additional data requirements: Photos of the 5 feet buffer zone all the way around the hot tub.	Hot tub	0=True/Compliant 1=False

Table A4.6. General roof condition subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Roof debris	roof_clear_of_debris	string	Roof debris	Is the roof clear of debris Binary True/False. Additional data requirements: Presence of debris shall be documented with photo/s	Home Inspection Details	0=True/Compliant 1=False

Table A4.7. Dominant roof cover subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Dominant roof cover percentage	dominant_roof_cover_percentage	integer	Dominant Roof Cover Percentage	Percentage of coverage for the dominant roof cover material	Dominant roof cover	Range: 50%-100%
*Dominant roof cover material type	dominant_roof_cover_material	string		What is the dominant roof covering material? Additional data requirements: Photo requirement: 6 photos showing all roof faces.	Dominant roof cover	See sub-table for minimum required roof cover types

Table A4.8. Secondary roof cover subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Secondary roof cover percentage	secondary_roof_cover_percentage	integer	Dominant Roof Cover Percentage	Percentage of coverage for the dominant roof cover material	Dominant roof cover	Range: <50%
*Secondary roof cover material type	secondary_roof_cover_material	string		What is the secondary roof covering material? Additional data requirements:	Dominant roof cover	See sub-list for minimum required roof cover types

				Photo requirement: 6 photos showing all roof faces.		
--	--	--	--	---	--	--

**The following provides the minimum required roof cover types to be evaluated and listed in required parcel-level data for both dominant and secondary roof cover materials:*

Asphalt shingle
 Standing seam metal
 Metal with exposed fasteners
 Discontinuous metal
 Clay tile with bird stops
 Clay tile without bird stops
 Concrete tile with bird stops
 Concrete tile without bird stops
 Slate
 Composite shingle/Plastic Panel
 Wood shake shingle
 Low slope/flat membrane
 Low slope/flat built-up/TPO
 Low slope/flat modified bitumen
 Low slope/flat ballasted
 Unknown steep slope
 Unknown low slope/flat

Table A4.9. Gutters, downspouts subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Metal gutters downspouts	metal_gutter_downspouts_present	string	Metal gutters and downspouts	Are the gutters and downspouts made of metal Binary True/False Additional data requirements: Photos required of gutters and downspouts	Gutters & downspouts	0=True/Compliant 1=False
Gutter debris	gutters_downspouts_clear_of_debris	string	Debris in gutters	Are the gutters and downspouts clear of debris. Additional data requirements: Photos required of inside gutter condition	Gutters & downspouts	0=True/Compliant 1=False
Gutter guards	metal_gutter_guard_present	String	Presence of gutter guards	Are gutter guards present and completely made of metal? Additional data requirements: If true a photograph is required	Gutters & downspouts	0=True 1=False

Table A4.10. Vents subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Roof vent compliance	roof_vents_compliance	string	Roof vent compliance	Are all roof vents (except plumbing vents) flame- and ember-resistant or covered with 1/8" metal mesh or finer? Binary True/False	Vents	0=True/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Value
				Additional data requirements: Close-up photo of every vent with mesh in view (to observe size).		
Under eave vents	vents_under_eaves_compliance	string	Vents_under_eaves_compliance	If present: Are the open eave vents flame- and ember-resistant or covered with 1/8" metal mesh or finer? Binary True/False Additional data requirements: Photos require close-up of every vent with mesh in view (to observe size).	Vents	0=True/Compliant 1=False
Roof vent type	roof_vents_type	string	Roof vent types	Identify and list all vents visible that are present on the roof. Additional data requirements: Provide photographs of each	Vents	*See sub-list below for minimum vent type requirements
Eave attic vents	eave_attic_vents_compliance	string	Eave attic vents	If present: Are under eave vents that enter directly into the attic space flame- and ember-resistant or covered with 1/8 th inch metal mesh or finer? Binary True/False	Vents	0=True/Compliant 1=False
Gable end vents	gable_end_vents_compliance	string	Gable end vents	If present: Are the gable end vents flame- and ember-resistant or covered with 1/8" metal mesh or finer? Binary True/False Additional data requirements: Photos must be provided of each visible vent with close-up of mesh	Vents	0=True/Compliant 1=False
Crawl space vents	crawl_space_vents_compliance	string	Crawl space vent compliance	If present: Are the crawl space vents flame- and ember-resistant or covered with 1/8" metal mesh or finer? Additional data requirements: A close-up photo of every vent with mesh in view (to observe size).	Vents	0=True/Compliant 1=False
Forced air vent louver flap	dryer_vent_louver_flap_present	string	Forced air vent louver flap present	Do forced air vents have a louver or flap? Binary True/False Additional data requirements: A close-up photo of the vent.	Vents	0=True/Compliant 1=False
Forced air vent and flap material	metal_dryer_vent_present	string	Forced air vent louver flap material	Is the dryer vent assembly made of metal? Additional data requirements: A close-up photo of the vent/s.	Vents	0=True/Compliant 1=False

*The following provides the minimum required roof vent types to be listed in required parcel-level single-family home data.

Ridge-cap vent

Off-ridge vent

Turbine vent

Table A4.11. Eave/Soffit subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Eave/soffit materials	eave_soffits_materials_compliance	string	Eave soffit materials	Are the eaves enclosed on the underside with soffits made of noncombustible material, have at least a 1-hour fire-resistance-rating, material, or 2-inch dimension lumber (no plywood or vinyl)? Binary True/False Additional data requirements: A close-up photo/s of the eaves.	Dominant roof cover	0=True/Compliant 1=False

Table A4.12. General exterior walls subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Exterior walls material and 6- inch vertical clearance	exterior_walls_material_compliance	string	Exterior Walls Material(s) Compliance	Noncombustible 6-inch vertical clearance. Do all exterior walls have a minimum of 6 vertical inches (measured from the ground up and from any attached horizontal surface like a deck or patio) of noncombustible siding material around the home such as fiber-cement, brick, stone, stucco, or exposed concrete foundation?	General exterior walls	0=True/Compliant 1=False

Table A4.13. Dominant wall subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Dominant wall cover material	dominant_wall_cover_material	string	Dominant wall cover material	*Please select the dominant wall cover material(s). Additional data requirements: A close-up	Dominant walls	*see list below for minimum wall material types

				photo/s of materials used on all wall coverings.		
Dominant wall cover material coverage	dominant_wall_cover_cover_percentage	integer	Dominant wall cover material coverage percentage	What is the dominant wall cover percentage of coverage on the structure	Dominant walls	>50%

Table A4.14. Secondary wall subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Secondary wall cover material	secondary_wall_cover_material	string	Secondary wall cover material	*Please select the secondary wall cover material(s). Additional data requirements: A close-up photo/s of materials used on all wall coverings.	Secondary walls	*See list below for minimum wall material types
Secondary wall cover material coverage	secondary_wall_cover_cover_percentage	integer	Secondary wall cover material coverage percentage	What is the secondary wall cover percentage of coverage on the structure?	Secondary walls	<50%

*The following provides the minimum required wall material types to be listed in required parcel-level single-family home data.

Stucco
Vinyl siding
Fiber cement siding
Wood panel/wood-based composite siding
Wood shake
Plastic composite siding
Brick or brick veneer
Stone or stone veneer
Concrete
Other
Unknown

Table A4.15. Foundation subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
				Photos required	Foundation	

Table A4.16. Shutters subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Functional shutters	functional_shutters_present	string	Presence of functional shutters	Are functional noncombustible shutters present on all windows? Binary True/False	Shutters	0=True/Yes 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Value
				Additional data requirements: Close-up photos showing the shutters/shutter system.		
Decorative shutters	secondary_wall_cover_cover_percentage	string	Presence of decorative shutters	If present, are decorative shutters made of noncombustible material? Binary True/False Additional data requirements: Close-up photo/s of the materials used.	Shutters	0=True/Yes 1=False

Table A4.17. Exterior glass and doors.

Variable	Data name	Variable type	Title	Description	Subsystem	Value
Exterior glazing	windows_skylights_glazed_glass	string	Windows / Skylights / Glazed Glass	Do all windows, skylights, and glazed openings within doors meet ONE of the following requirements: Multipaned glass with at least two tempered panes (etched), have a 20-minute fire-resistance rating, or glass blocks (windows only)? Additional data requirements: Photos of the tempered glass etched label (bug), located on the inside of each tempered pane in one of the four corners, meeting AMMA labeling requirements.	Exterior glazing, doors, bay windows	0=True/Yes/Compliant 1=False
Exterior doors	exterior_door_material_compliance	string	Exterior door materials compliance	Are all exterior doors solid, have a noncombustible threshold and ONE of the following: 1) Door surface/cladding made of noncombustible or ignition-resistant material (e.g., metal, solid hardwood, fiberglass), or 2) a noncombustible storm door as the outermost door? Additional data requirements: A photo of every exterior door.	Exterior glazing, doors, bay windows	0=True/Yes/Compliant 1=False
Skylight type	skylight_type	string	Skylight glass type	If skylights are present, are they made of flat glass (rather	Exterior glazing,	0=True/Yes/Compliant

Variable	Data name	Variable type	Title	Description	Subsystem	Value
				than domed plastic)? Binary Yes/No	doors, bay windows	1=False
Skylight mesh	Skylight_mesh	string	Skylight mesh protection	If skylights are operable, is the opening protected by a noncombustible mesh screen where the dimensions of the mesh shall not exceed 1/8-inch in diameter? Binary Yes/No	Exterior glazing, doors, bay windows	0=True/Yes/Compliant 1=False

Table A4.18. Primary deck/covered porch subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Values
Area around deck	deck_area_noncombustible_space_present	string	Deck area noncombustibles	Does the area around the footprint of all decks / covered porches, including under stairs, have at least 5 feet of noncombustible space? Binary Yes/No	Primary deck/covered porch	0=True/Yes/Compliant 1=False
Decks and porches condition	decks_covered_porches_clear_of_debris	string	Decks covered porches clear of debris	Is the top surface of all decks / covered porches clear of yard debris? Binary Yes/No Additional data requirements: Photo/s of the deck / porch deck surface.	Primary deck/covered porch	0=True/Yes/Compliant 1=False
Deck or porch type description	deck_covered_porch_type	string	Type of porch/deck	What type of deck / covered porch is present? Additional data requirements: Photos of each side of the deck / porch and include the base of the structure (see subsystem photo requirements for additional details)	Primary deck/covered porch	*See sublist below for minimum porch/deck descriptors
Deck and porch vegetation condition	decks_covered_porches_clear_of_excessive_vegetation	string	Porch/deck vegetation condition	Is the top surface of all decks / covered porches completely free from trees and shrubs, with no more than 10 potted plants / flowers in noncombustible planters? Binary Yes/No	Primary deck/covered porch	0=True/Yes/Compliant 1=False
Underneath deck area condition assessment	underneath_decks_covered_porches_clear_of_vegetation	string	Under deck condition assessment	Is underneath all decks / covered porches including stairs free from any vegetation (including wood piles, plants, grass, weeds,	Primary deck/covered porch	0=True/Yes/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Values
				etc.)? Binary Yes/No Noncombustible materials like concrete, rock, or dirt are permitted. Additional data requirements: Photo/s of underneath the deck / porch of the ground and substructure (including any mesh or lattice used to enclose it.)		
Decks/porches under 4 feet elevation	decks_porches_less_than_4ft_to_ground_properly_enclosed	string	Deck/porches below 4 feet elevation	Decks / porches 4 feet or less from walking surface to ground: Is it fully enclosed underneath with 1/8-inch or finer metal mesh with no combustible material such as lattice installed over the mesh? Binary Yes/No Additional data requirements: Photo/s of the covering.	Primary deck/covered porch	0=True/Yes/Compliant 1=False
Auxiliary deck structures	decks_w_additional_structure_compliance	string	Decks with additional structure/s attached	Attached decks with an additional structure (like a pergola or gazebo): Is it made of metal, with no solid roof cover, free from all vegetation, and without curtains / drapes / screens? Additional data requirements: Photo/s of the structure.	Primary deck/covered porch	0=True/Yes/Compliant 1=False
Deck stairs materials	decks_stairs_construction_materials_compliance	string	Deck stair materials	Are all decks, including stairs, entirely constructed with noncombustible materials such as metal / lightweight concrete OR retrofitted with noncombustible materials for no-gap walking surfaces and railing within 5 feet of home? Binary Yes/No. Additional data requirements: minimum of 2 photos of underdeck structure materials and a close-up of the walking surface.	Primary deck/covered porch	0=True/Yes 1=False

Table A4.19. Secondary deck/covered porch subsystem – provides data requirements for additional decks and porches.

Variable	Data name	Variable type	Title	Description	Subsystem	Values
Area around deck	secondary_Deck_area_noncombustible_space_present	string	Deck area noncombustible	Does the area around the footprint of all decks / covered porches, including under stairs, have at least 5 feet of noncombustible space? Binary Yes/No	Secondary deck/covered porch	0=True/Yes/Compliant 1=False
Decks and porches condition	secondary_decks_covered_porches_clear_of_debris	string	Decks covered porches clear of debris	Is the top surface of all decks / covered porches clear of yard debris? Binary Yes/No Additional data requirements: Photo/s of the deck / porch deck surface.	Secondary deck/covered porch	0=True/Yes/Compliant 1=False
Deck or porch type description	secondary_deck_covered_porch_type	string	Type of porch/deck	What type of deck / covered porch is present? Additional data requirements: Photos of each side of the deck / porch and include the base of the structure (see subsystem photo requirements for additional details)	Secondary deck/covered porch	*See sublist below for minimum porch/deck descriptors
Deck and porch vegetation condition	secondary_decks_covered_porches_clear_of_excessive_vegetation	string	Porch/deck vegetation condition	Is the top surface of all decks / covered porches completely free from trees and shrubs, with no more than 10 potted plants / flowers in noncombustible planters? Binary Yes/No	Secondary deck/covered porch	0=True/Yes/Compliant 1=False
Underneath deck area condition assessment	secondary_underneath_decks_covered_porches_clear_of_vegetation	string	Under deck condition assessment	Is underneath all decks / covered porches including stairs free from any vegetation (including wood piles, plants, grass, weeds, etc.)? Binary Yes/No Noncombustible materials like concrete, rock, or dirt are permitted. Additional data requirements: Photo/s of underneath the deck / porch of the ground and substructure (including any mesh or lattice used to enclose it.)	Secondary deck/covered porch	0=True/Yes/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Values
Decks/porches under 4 feet elevation	secondary_decks_porchess_than_4ft_to_ground_properly_enclosed	string	Deck/porches below 4 feet elevation	Decks / porches 4 feet or less from walking surface to ground: Is it fully enclosed underneath with 1/8-inch or finer metal mesh with no combustible material such as lattice installed over the mesh? Binary Yes/No Additional data requirements: Photo/s of the covering.	Secondary deck/covered porch	0=True/Yes/Compliant 1=False
Auxiliary deck structures	secondary_decks_w_additional_structure_compliance	string	Decks with additional structure/s attached	Attached decks with an additional structure (like a pergola or gazebo): Is it made of metal, with no solid roof cover, free from all vegetation, and without curtains / drapes / screens? Additional data requirements: Photo/s of the structure.	Secondary deck/covered porch	0=True/Yes/Compliant 1=False
Deck stairs materials	secondary_decks_stairs_construction_materials_compliance	string	Deck stair materials	Are all decks, including stairs, entirely constructed with noncombustible materials such as metal / lightweight concrete OR retrofitted with noncombustible materials for no-gap walking surfaces and railing within 5 feet of home? Binary Yes/No. Additional data requirements: minimum of 2 photos of underdeck structure materials and a close-up of the walking surface.	Secondary deck/covered porch	0=True/Yes 1=False

Table A4.20. 0–5 Foot Noncombustible Zone: 0–5 foot subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Values
0-5 Foot Noncombustible Zone ground cover assessment	hiz_ground_cover_noncombustible	string	Ground cover assessment	Is the ground cover in the 0-5-Foot Noncombustible Zone hardscaped with bare dirt, gravel, pavers, river rocks, DG base, steppingstones, or concrete and free from debris? No combustible	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Values
				ground covers such as wood or rubber mulch are allowed. Binary Yes/No		
0-5 Foot Noncombustible Zone vegetation assessment	hiz_clear_of_vegetation	string	Vegetation assessment	Is the 0-5-Foot Noncombustible Zone free from all vegetation? This means no bushes, grass/artificial turf, flowers, trees, succulents, including no overhanging tree branches? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
0-5 Foot Noncombustible Zone combustible items	hiz_clear_of_combustible_items	string	Combustible items assessment	Is the 0-5-foot noncombustible buffer free from all combustible items such as furniture, firewood, sheds, storage units, hot tubs, etc.? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
0-5 Foot Noncombustible Zone Vehicles	hiz_clear_of_vehicles	string	Vehicles	Is the 0-5-foot noncombustible buffer free of stored boats, RVs, trailers, or ATVs? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
Yard vegetation debris	hiz_clear_of_debris_accumulation	string	Yard vegetation debris	Is the entire yard free of accumulated fallen pine needles, leaves, and other debris? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
Tree spacing canopy	trees_spaced_pruned	String	Tree spacing/canopy spacing	Are all trees with trunks 4+ inches spaced apart / pruned to a canopy-to-canopy distance of at least 10 feet and limbs pruned to a minimum of 6 feet off the ground? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
Tree to shrubs/bush spacing	trees_vegetation_properly_spaced	string	Tree to shrub-bush spacing	Are the trees with trunks 4+ inches properly spaced? (Spacing between the tree canopy and the next closest shrub / bush / tree must be at least twice the height of the shrub / bush / tree or 10 feet.) Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False
Shrubs and bushes spacing	shrubs_bushes_trees_spaced_properly	string	Shrub/bushes spacing	Do all the shrubs / bushes / trees with trunks less than 4 inches have proper spacing between them? Spacing distance must be at least twice the height of the tallest	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Values
				bush / shrub present and privacy bushes or rows of shrubs are not allowed. (Example: 3 feet bush + 4 feet bush (tallest) = spaced 8 feet apart.) Binary Yes/No		
Dead vegetation	dead_vegetation_removed	string	Dead vegetation maintenance	Has all dead vegetation been removed? Binary Yes/No	0-5 Foot Noncombustible Zone	0=True/Yes/Compliant 1=False

Table A4.21. 5–30-foot subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Values
Trees properly pruned	thirty_feet_hiz_trees_pruned	string	Trees pruned	Do all trees within 30 feet, have branches removed from the ground up to 6 feet and upper branches trimmed to ensure 10 feet of space from neighboring trees? Binary Yes/No	HIZ 5-30	0=True/Yes/Compliant 1=False
Tree spacing canopy	thirty_feet_hiz_vegetation_spaced	string	Tree spacing 5-30 feet	Trees with trunk 4 inches or larger: Have spacing between the tree canopy and the next closest shrub/bush/tree with a trunk diameter of less than 4 inches at least twice the height of the bush/shrub/tree (or 10 feet, whichever is less)? Binary Yes/No	HIZ 5-30	0=True/Yes/Compliant 1=False
Shrub/bushes spacing	thirty_feet_hiz_shrubs_spaced	string	Spacing of shrubs and bushes	Are all shrubs within 30 feet, removed from under trees, have space between grouping of a 10-foot area of 10 feet apart, AND all privacy hedges and rows of bushes have been removed? Binary Yes/No	HIZ 5-30	0=True/Yes/Compliant 1=False
Yard debris Zone 1	thirty_feet_hiz_vegetation	string	Yard debris 5-30 foot area	Within 30 feet of the home, is the yard free of accumulated fallen pine needles, leaves, and other debris? Binary Yes/No	HIZ 5-30	0=True/Yes/Compliant 1=False
Dead vegetation and firewood stacks	thirty_feet_hiz_vegetation_firewood	string	Dead vegetation and	Has all dead vegetation and firewood stacks been	HIZ 5-30	0=True/Yes/Compliant 1=False

Variable	Data name	Variable type	Title	Description	Subsystem	Values
			firewood 5–30-foot area	removed or placed at least 30 feet away from the home?		

Table A4.22. Fences subsystem.

Variable	Data name	Variable type	Title	Description	Subsystem	Values
Back-to-back fencing	back_to_back_fencing_compliance	string	Back-to-back fence sections	If fences are back-to-back within 30 feet, is there at least 5 feet between them? Binary Yes/No Additional data requirements: Photos of any fencing within 30 feet.	Fences	0=True/Yes/Compliant 1=False
Home fencing	fencing_distance	string	Fencing near or within the HIZ	Is fencing within 5 feet of the home, including any part that attaches to the home? Binary Yes/No Additional data requirements: Photos of any fencing near or within 5 feet/HIZ of the home.	Fences	0=True/Yes/Compliant 1=False
0-5 Foot Noncombustible Zone fencing	fence_material_noncombustible	string	0-5 Foot Noncombustible Zone fencing	If fencing, posts or gates are present within 5 feet of the home, are they made of <i>noncombustible</i> materials, such as metal (aluminum, chain link, or iron) or concrete blocks? No vinyl or wood fences allowed. Binary Yes/No	Fences	0=True/Yes/Compliant 1=False

A4.2 Parcel level additional data requirements

The following represent the minimum subsystem photograph requirements that shall be collected for each *parcel/single family structure* and subsystem variable if the variable feature is present. See Section A6 for photograph/image format requirements, metadata requirements and recommendations.

Table A4.23 Parcel level additional data requirements.

Subsystem	Variable	Data name	Photograph minimum requirements
Home Inspection Details	Address numbers	address_numbers_photo	1 photo of the address numbers on the home / mailbox.
Home Inspection Details	Left elevation photographs	left_yard_photos	2 photographs of the yard area in its entirety

Subsystem	Variable	Data name	Photograph minimum requirements
Home Inspection Details	Back/rear of house photographs	back_of_the_house_photos	3 photos of the back of the property in landscape mode/orientation.
Home Inspection Details	Front elevation of the property photographs	front_of_the_house_photos	3 photos of the front of the property in landscape mode/orientation.
Home Inspection Details	Front yard photographs	front_yard_photos	2 photos of the yard in its entirety.
Home Inspection Details	Left Side of the House Photos	left_side_of_the_house_photos	3 photos of the left side of the property in landscape mode/orientation.
Home Inspection Details	Right Side of the House Photos	right_side_of_the_house_photos	3 photos of the right side of the property in landscape mode/orientation.
Home Inspection Details	Right Yard Photos	right_yard_photos	2 photos of the yard in its entirety.
General	<i>Accessory structures</i> within 30 feet	accessory_structures_present	Photo/s required of each <i>accessory structure</i> present showing distance from home for reference.
Accessory structure 1	<i>Accessory structure</i> compliance 1	accessory_structure_compliance_1	Photos of the 5 feet buffer zone all the way around the <i>structure</i>
Accessory structure 2	<i>Accessory structure</i> compliance 3	accessory_structure_compliance_2	Photos of the 5 feet buffer zone all the way around the <i>structure</i>
Accessory structure 3	<i>Accessory structure</i> compliance 3	accessory_structure_compliance_3	Photos of the 5 feet buffer zone all the way around the <i>structure</i>
Hot Tub/Spa	Hot tub/spa	hot_tub_compliance	Photos of the 5 feet buffer zone all the way around the hot tub
Exterior Propane Tank	Exterior fixed propane tank	propane_tank_compliance	Photos of the 10 feet buffer zone all the way around the propane tank.
Dominant Roof Covering	Dominant roof cover material	dominant_roof_covering_material	6 photos showing all roof faces
Secondary Roof Covering	Secondary roof cover materials	secondary_roof_covering_material	6 photos showing all roof faces
Roof	Roof clear of debris	roof_clear_of_debris	Photo/s of any areas of visible built-up debris on any roof face. Close-up photographs if possible
Gutters and Downspouts	Gutters and downspout materials	metal_gutter_downspouts_present	1 close-up photo of gutter, 1 close-up photo of downspout
Gutters and Downspouts	Gutters and downspout debris accumulation	gutters_downspouts_clear_of_debris	Photo/s of any areas of debris in gutter systems

Subsystem	Variable	Data name	Photograph minimum requirements
Gutters and Downspouts	Gutter guard	metal_gutter_guard_present	Close-up photo/s of gutter guard material (if present)
Vents	Roof vent compliance	roof_vents_compliance	Close-up photo of every vent with mesh in view (to observe size)
Vents	Roof vent types	roof_vents_type	Close-up wide-angle photo of every vent with mesh in view (to observe size)
Vents	Forced air vent assembly	dryer_vent_louver_flap_present	1 photo of the vent assembly including the louver flap (if present)
Vents	Dryer vent material	metal_dryer_vent_present	1 close-up photo of the vent
Vents	Eave attic vents	eave_attic_vents_compliance	A close-up photo/s of every vent with mesh in view (to observe size)
Vents	Gable-end attic vents	gable_end_vents_compliance	A close-up photo/s of every vent with mesh in view (to observe size)
Vents	Crawl space vents	crawl_space_vents_compliance	A close-up photo/s of every vent with mesh in view (to observe size)
Eaves & Soffits	Eave/soffit material compliance	eaves_soffits_materials_compliance	Close up photo of the eaves for all 4 elevations (4 total photos, minimum requirement)
Dominant Walls	Dominant wall cover material	dominant_wall_cover_material	Close up photo of material used on dominant percentage wall coverings
Secondary Walls	Secondary wall cover material/s	secondary_wall_cover_material	Close up photo/s of material/s used on any secondary wall coverings
Foundation	Foundation	foundation_photos	Photos of all sides of the foundation, including the deck (if present). Minimum of 4 photos total, 1 for each elevation clearly showing foundation ground/foundation interface.
Shutters	Functional shutters	functional_shutters_present	Close-up photo showing the shutters
Shutters	Decorative shutters	decorative_shutters_material_non_combustible	Close up photo/s of the decorative shutter material/s
Exterior glazing, windows, doors, bay windows	Windows, skylights compliance	windows_skylights_glazed_glass	Photo of the tempered glass etched labels for all accessible windows.
Exterior glazing, windows, doors, bay windows	Exterior Door Material(s) Compliance	exterior_door_material_compliance	Photo of every exterior door
Exterior glazing, windows, doors, bay windows	Bay window	bay_window_non_combustible_wall_present	Photo/s of any bay window and area underneath and surrounding the window feature.
Primary Deck / Covered Porch	Deck / Covered porches clear of debris	decks_covered_porches_clear_of_debris	Photo/s of the deck / porch deck surface
Primary Deck / Covered Porch	Deck / Covered porch type	deck_covered_porch_type	Photos (minimum 3) of each side of the deck / porch and include the base of the structure.

Subsystem	Variable	Data name	Photograph minimum requirements
Primary Deck / Covered Porch	Under deck/porch area	underneath_decks_covered_porches_clear_of_vegetation	Photo/s of underneath the deck / porch of the ground and substructure (including any mesh or lattice used to enclose it.)
Primary Deck / Covered Porch	Decks below 4 feet elevation	decks_porches_less_than_4ft_to_ground_properly_enclosed	Photo of the covering surrounding deck (less than 4 feet elevation)
Primary Deck / Covered Porch	Decks with additional structure/s	decks_w_additional_structure_compliance	Photo/s of the structure/s
Primary Deck / Covered Porch	Deck/stairs materials	decks_stairs_construction_materials_compliance	2 photos of underdeck structure materials and 1 close-up photograph of the walking surface
Secondary Deck / Covered Porch	Secondary deck/porch debris condition	secondary_decks_covered_porches_clear_of_debris	Photo of the deck / porch deck surface
Secondary Deck / Covered Porch	Secondary deck / Covered porch type	secondary_deck_covered_porch_type	Photos (minimum 3) of each side of the deck / porch and include the base of the structure.
Secondary Deck / Covered Porch	Secondary deck underneath area	secondary_underneath_decks_covered_porches_clear_of_vegetation	Photo of underneath the deck / porch of the ground and substructure (including any mesh or lattice or other materials used to enclose it.)
Secondary Deck / Covered Porch	Secondary decks below 4 feet elevation	secondary_decks_porches_less_than_4ft_to_ground_properly_enclosed	Photo of the covering surrounding deck (less than 4 feet elevation)
Secondary Deck / Covered Porch	Secondary decks with additional structure/s	secondary_decks_w_additional_structure_compliance	Photo/s of the structure/s
Secondary Deck / Covered Porch	Secondary decks/stairs materials	secondary_decks_stairs_construction_materials_compliance	2 photos of underdeck structure materials and a close-up of the walking surface
0-5 Foot Noncombustible Zone	0-5 Foot Noncombustible Zone Photos	hiz_photos	Please take photos showing the 0-5-Foot Noncombustible Zone surrounding the entire house. Photos must capture all four elevations, front, rear, left and right sides
5-30 Foot Defensible Space Zone	5-30 Foot Defensible Space Zone Photos	thirty_feet_hiz_photos	Please take photos showing the 5-30 Foot Defensible Space Zone surrounding the entire house for reference. Photos must capture all four elevations, front, rear, left and right sides
Fences	Fencing	back_to_back_fencing_compliance	Photos of any fencing within 30 feet
Fencing	0-5 Foot Noncombustible Zone Fencing	fencing_distance	Photos of any fencing near the home

A4.3 Connective fuel parcel level requirements

A4.3.1 Required data

Connective fuel assessment is required for all structures within the designated neighborhood/community and the following data fields are required. See *connective fuel node* definition.

Table A4.24. Connective fuel pathways.

Subsystem	Variable	Data name	Description	
Connective fuels	Cluster identifier	Cluster_id	Which cluster of <i>structures</i> does this parcel belong to	ID integer
Connective fuels	Front elevation connective fuel	front_elevation_connective_fuel	Does the front elevation have a connected fuel node pathway to a neighboring <i>structure</i> ?	0= Yes 1= No
Connective fuels	Left elevation connective fuel	left_elevation_connective_fuel	Does the left elevation have a connected fuel node pathway to a neighboring <i>structure</i> ?	0= Yes 1= No
Connective fuels	Back/rear elevation connective fuel	back_elevation_connective_fuel	Does the back/rear elevation have a connected fuel node pathway to a neighboring <i>structure</i> ?	0= Yes 1= No
Connective fuels	Right elevation connective fuel	right_elevation_connective_fuel	Does the right elevation have a connected fuel node pathway to a neighboring <i>structure</i> ?	0= Yes 1= No

A4.4 Additional data

Intentionally left blank for future standard revisions and the identification of additional relevant data sources

A4.5 Additional optional neighborhood to parcel data

A4.5.1 Neighborhood “as built” site and structure plan drawing sets

“As built” site and individual *structure* drawing sets can be submitted as a .pdf document.

A4.5.2 Local defensible space ordinance

A .pdf file of any local ordinance in place and enforced for *defensible space* requirements.

A5 Structure cluster and neighborhood connective fuel minimum data requirements

See *structure cluster* definition and *Chapter 3* for *structure* identification and connective fuel processes and *Chapter 4* for defined *neighborhood* requirements.

Table A5.1. Contiguous cluster required variables and connective fuel flags.

Variable	Data name	type	Description	Value
Cluster identifier	cluster_id	integer	Integer number identifier for each contiguous <i>structure cluster</i> identified within the boundaries of the <i>neighborhood</i>	i.e. 1, 2, 3, ... N block. Each block can reuse integer IDs
Total homes within the cluster	cluster_homes	integer	Number of homes/units within the identified contiguous <i>cluster</i>	Numeric integer values

Total homes pass connective fuels	cluster_homes_pass	integer	Total number of homes/units which passed <i>connective fuel node</i> criteria in <i>cluster</i>	Numeric integer values
Total homes flagged for connective fuels	cluster_homes_flagged	integer	Total number of homes/units which failed <i>connective fuel node</i> criteria in <i>cluster</i>	Numeric integer values
Cluster compliance	cluster_compliance	string	Was the cluster flagged for connective fuels?	0=No/Compliant 1=Yes/Flagged for connective fuels

Table A5.2. Neighborhood connective fuel compliance.

Variable	Data name	type	Description	Value
Neighborhood connective fuel compliance	neighborhood_connect_fuel	integer	Does the <i>neighborhood</i> meet all connective fuel requirements?	Binary 0=Yes/Compliant 1=No/False/Non-Compliant

A6 Neighborhood flame zone and neighborhood ember zone mitigation compliance

Table A6.1. Flame and neighborhood ember zones mitigation compliance.

Variable	Data name	type	Description	Value
Neighborhood flame zone compliance	flame_resistance_zone	string	Does the parcels within the <i>neighborhood flame zone</i> meet all mitigation requirements including connective fuel provisions	Binary 0=Yes/Compliant 1=No
Neighborhood flame zone percentage mitigated	flame_resistance_zone_percent	percentage	Percentage of mitigated <i>parcels</i> meeting <i>neighborhood flame zone</i> requirements	Percentage (if compliant, percentage = 100%)
Neighborhood ember zone compliance	ember_resistance_zone	string	Does the <i>parcels</i> within the <i>neighborhood ember zone</i> meet all mitigation requirements	Binary 0=Yes/Compliant 1=No
Neighborhood ember zone percentage mitigated	ember_resistance_zone_percent	percentage	Percentage of mitigated <i>parcels</i> meeting <i>neighborhood ember zone</i> requirements	Percentage (if compliant, percentage = 100%)

A7 Imagery minimum requirements

A7.1 Ground-level imagery photograph requirements

The following provides requirements and recommendations for *ground level imagery* and photographs used to assess, verify, validate, and/or monitor any element required by the *IBHS Wildfire Prepared Neighborhood Standard*.

A7.1.1 Camera specifications

Resolution: Any submitted ground-based imagery shall use a minimum resolution of 12 megapixels.

Lens: It is recommended to use wide-angle lenses to capture more of the scene; a focal length of 24mm-35mm is recommended but not required.

A7.1.2 Image format

File Format: Images shall be saved and submitted in RAW format.

Color Depth: Images shall use a minimum 16-bit color depth setting.

A7.1.3 Geotagging and metadata

All submitted images shall contain the following minimum metadata:

Time, Latitude, Longitude, Camera settings (i.e., aperture and focal length settings)

A7.1.4 Temporal requirements

Ground-based imagery shall be collected within 60 days of any defined neighborhood evaluation, verification and/or monitoring.

A7.2 Ground level imagery recommendations

The following are recommendations and best-practices for ground-level imagery and are not considered to be requirements for ground-based imagery use for any element and/or requirement of the *IBHS Wildfire Prepared Neighborhood Standard*.

A7.2.1 Recommended imaging conditions

Time of Day: For the best image quality, photos should be taken during the “golden hours,” however it is understood that these times are not ideal for typical inspection activities.

A7.2.2 Weather conditions

Avoid rainy or completely overcast days, if possible, to minimize reflections, issues with water droplets, distortion from rain/moisture, and shadows that might not show details.

A7.2.3 Photographic techniques

Exposure: It is recommended to use HDR techniques to manage high-contrast scenes but not required

Focus: Ensure the entire scene is in focus.

A7.2.4 Coverage

360-Degree Views: Each required image location could also include a 360-degree series of photos. For 360-degree image processing, the process will require taking multiple photos in a circle around a central point. 360 imagery is not required (see imagery requirements).

A7.2.5 Panoramic shots

Use panoramic shots for open areas to get a wider perspective of the landscape and community layout, which can be useful for understanding potential fire spread.

A7.2.6 Overlapping fields of view

Each photo should overlap with the previous by approximately 30% to ensure complete coverage when stitching images together or when analyzing spatial relationships.

A7.2.7 Consistent height

Establish a consistent height at which photos are taken by using a tripod to standardize the angle of capture across different photographers and locations. While not required, the use of a tripod at a consistent height for all ground-based images is recommended.

A7.2.8 Distance from subject

Standardize the distance from which photos are taken to maintain consistency across different images and scenes.

A7.2.9 Positioning and reference points

Use reference points or markers in photos to help align shots taken from different angles or at different times. Mark specific spots for repeated photography. It's useful for monitoring changes over time.

A7.2.10 Macro and micro scales

Instruct photographers to take both wide-angle shots for overall views and closer, detailed shots of specific features like building materials, vegetation types, and ground cover for assessing fire risk.

A7.2.11 Angle grids

Create a grid system for larger areas, specifying the exact points and angles from which photos should be taken. This can guide photographers and ensure that all necessary perspectives are covered.

A7.3 Aerial imagery requirements

This section provides the minimum requirements for aerial imagery used for assessment, verification, validation, and/or monitoring of any requirement specified in the *IBHS Wildfire Prepared Neighborhood Standard*.

A7.3.1 General aerial imagery requirements. Aerial imagery collected from any fixed-wing aircraft, unmanned aerial vehicle, drone, quadcopter etc. for use in assessing roof cover type, connective fuels, defensible space, and fuelbreak characterization shall meet the following:

A7.3.1.1 Digital file format

Aerial imagery may be supplied using one of the following file formats: ECW, geoTiff, GeoJSON, TIFF, MrSID, MRF or HDF. Other file formats not listed here require additional approval for use.

A7.3.1.2 Spectral resolution

Photogrammetric digital camera providing 3-bands, red, green, blue, and panchromatic if available.

A7.3.1.3 Temporal resolution

Aerial imagery used to provide an evaluation and determination of mitigation requirements specified in *Chapter 4* using the processes described in *Chapter 3* shall have been collected within one calendar year. Imagery used for verification of mitigation actions and/or monitoring of mitigation actions described in *Chapters 3 and 4* shall be collected within 6 months of its use in verifying actions.

A7.3.1.3 Spatial resolution shall be 15 cm or finer.

A7.3.1.4 Image compression shall not exceed 15 times and should minimize image quality loss.

If imagery must be converted follow these recommendations for the specific data type (recommendations courtesy of ESRI).

Table A7.1

Data Type	Recommendations
8-bit or 16-bit, 1-,3-, or 4-band rasters where lossy compression is not suitable	Use MRF with LERC compression or TIF with LZW/Deflate compression. These formats include tiling with tiles of size 512, 256 or 128. Smaller tile sizes work best for scientific data where access to temporal profiles is more common.
8-bit, 3-band natural color imagery already preprocessed by orthorectification, color balanced, mosaicked, and cut into tiles	This imagery is generally used as background imagery and should be converted directly to a tile cache or stored as MRF or TIFF with JPEG YCbCr compression. Typically, a quality value of around 80 is used, which provides approximately 8-times compression. YCbCr-based JPEG compression internally converts the image to a different spectral domain, improving the compression.
16-bit or 32-bit, 1-band elevation data	Use MRF with LERC compression or TIFF, LZW/Deflate compression, tiled 128 or 256. For 16-bit elevation, be sure that JPEG is not used.
8- or 16-bit imagery where lossy compression is suitable	Use MRF or TIF with JPEG (YCbCr) compression. The quality should be checked by testing some sample imagery. In many cases, a quality factor of 90 is suitable. Note that ArcGIS supports a 12-bit version JPEG. Therefore, when compressing 16-bit pan imagery using JPEG, only the first 12 bits of the imagery will be used. Many modern sensors have a sensitivity in the range of 11 - 14 bits, and using 12-bit compression maintains much of the image content but excludes the last (often noisy) bits.
8-bit or 16-bit, 3-band, non-natural-color imagery when lossy compression is suitable	Examples of this kind of imagery include false color imagery or scanned maps. Use MRF or TIFF, with JPEG (RGB) compression. In RGB JPEG compression, each band is compressed separately.
8-bit or 16-bit, 4-band RGB-IR	<p>This is the format often captured by modern digital sensors. If the data has been orthorectified and enhanced, then some of the original image information has been lost, potentially limiting its use for some forms of analysis. For such imagery, lossy compression may be suitable, but care should be taken to quantify the effects on any intended future analysis.</p> <p>It is then recommended to convert such imagery into a 3-band RGB and 1-band NIR image and use the above recommendations for compressing each. Splitting into a separate RGB image enables better compression, and most users will likely access the RGB component more than the NIR. In ArcGIS, one can virtually merge the two files to create an RGB-IR image suitable for displaying as false color or computing NDVI. Typically for such imagery, the compression quality is set higher, to 90 or 95, so that compression does not add significant artifacts to NDVI.</p> <p>When using JPEG compression, the recommended quality values to use can range from 80 to 95. It is best to try different factors on sample images and review the differences to determine an optimal value.</p>

Data Type	Recommendations
8-bit or 16-bit, 5-band RGB-IR with a panchromatic band	<p>Many sensors include 4-band multispectral imagery and 1-band higher-resolution panchromatic imagery. If you are maintaining the IR band, it is recommended to not pre-pansharpen such imagery. The pan-image changes the multispectral properties of the bands, and the pan-sharpening process will significantly increase the file sizes, reducing the suitability of the imagery for analysis. Instead, maintain the 4-band multispectral and 1-band panchromatic as separate rasters, and use the capability of ArcGIS to pan-sharpen on the fly, which is performed very fast and ensures that the integrity of the spectral bands is not lost. If you need to compress the imagery to reduce size, the panchromatic band should use JPEG compression, as the panchromatic band is typically much larger than the multispectral image and is not used for spectral analysis. Limited JPEG compression (for example, Q90) has minimal effect on visual interpretation or computation of tie points or DSM generation.</p> <p>When using JPEG compression, the recommended quality values to use can range from 80 to 95. It is best to try different factors on sample images and review the differences to determine an optimal value.</p> <p>Another option that can be used is to pansharpen and store the 3band RGB image with lossy JPEG compression. This image can be used for visual interpretation. Then store the lower resolution multispectral red and IR bands separately for use in analysis.</p>

A7.3.2 Aerial imagery requirements for connective fuel assessment.

For *aerial imagery* to be used in *connective fuel* assessments it must be orthorectified for use in Geographic Information Systems (GIS) platforms.

It is important to collect ortho-rectified imagery so ground features/connective fuel elements can be measured, and other data layers can be created from the data source which has a strong relationship to ground control. The data required for ortho-rectification include orientation parameters for the source image(s) and a digital elevation model (DEM) of the geographic area to be covered by the imagery. Ortho-rectification corrects for tip and tilt of the aircraft and displacement in the photograph caused by changes in the ground elevation. Generally, the development of ortho-rectified imagery requires the acquisition of overlapping photography of the same geography and some combination of surveyed ground control and airborne (Global Positioning System) GPS collection at the time of photography. A photogrammetrist performs image correlation techniques and aero-triangulation on the resulting block of photographs to establish the orientation parameters of the individual image. Using the most recent DEM source or new LiDAR DEM provides the base for which the new imagery is rectified. Ortho-rectified imagery allows for detailed connective fuel features to be accurately mapped and measured. The requirements specified here provide a consistent structure for data providers and users to ensure compatibility of datasets within the same framework layer. The requirements integrate with existing standards such as the American Society for Photogrammetry and Remote Sensing (ASPRS) standards.

A8 Definitions specific to this appendix

Accuracy, horizontal. A measure of the horizontal distance on a photograph within defined tolerances.

Accuracy, vertical. Vertical (elevation) accuracy of a rectified image and associated digital elevation models. Vertical measurements are usually expressed as contour lines or spot heights.

Aerial imagery. Any image taken from an airborne craft.

Band. A range of wavelengths of electromagnetic radiation.

Covenants, Conditions, and Restrictions (also referred to as CC&R). A recorded document that contains a legal description of the development and a statement that it is a community apartment project, condominium project, planned development, or stock cooperative. The declaration must additionally set forth the name of the association and the restrictions on the use or enjoyment of property. Unlike bylaws, which address the governance of an association, CC&Rs describe property rights and obligations of the membership, such as 1) restrictions on the use of property, 2) member and association maintenance duties, 3) enforcement powers, 4) lender protection provisions, 5) assessments obligations and lien/collection rights, 6) duty to insure, and 7) dispute resolution and attorneys' fees provisions.

Datum. The description of the shape of the earth as defined by the National Geodetic Survey; usually referred to as NAD27 or NAD83 for the horizontal datums and NAVD29 or NAVD88 for the vertical datums. NAD27 uses surface reference points, whereas NAD83 uses the center of the earth as the reference point.

Digital elevation model (DEM). A Digital Elevation Model (DEM) is a representation of the bare ground (bare earth) topographic surface of the Earth excluding trees, buildings, and any other surface objects.

Forward lap or End lap. The extent to which sequential exposures in a flight line overlap, typical end lap for stereo photography is 60%.

Ground sample distance (GSD). The area of ground represented in each pixel in x and y components.

Ground-based imagery. Any imagery taken or collected from the ground.

Side Lap. The extent to which the exposures of adjacent flight lines overlap, typical side lap for a block of stereo photography is 30%.

Pixel. The smallest cell size with a uniform value of an image. This digital image cell is produced in varying sizes, usually referred to in ground units such as 6 inches, 1 foot, 3 meters, etc. Pixels are created during the scanning of the aerial imagery and are key to establishing the resolution of the orthophotograph.

Map or Cartographic scale. The relationship between a given distance on the ground and the corresponding distance on a photograph or image. Scale is expressed in at least two different ways. Both are ratios. In the first, commonly used measuring systems are compared; for example, 1" = 100' (1 inch on the map equals 100 feet on the earth). In the second, the map unit is arbitrary; for example, 1:100 means that one of anything (an inch, a foot, a centimeter, etc.) on the map equals 100 of that same unit on the earth. (1"=100' is the same scale as 1:1200). Scale is presented in several ways: as a bar at the bottom of the map, as a ratio (1:100), or as an equation (1"=100').

Orthorectified. The process of geometrically correcting an image to remove relief distortions, sensor artifacts, earth curvature and other perspective distortions, and align the image with coordinates on the

ground, restoring geometric integrity. Ground control points, tie points, and elevation data are used to correct perspective and terrain distortion in aerial, drone, and satellite imagery.

Projection. Methods of presenting the earth (a three-dimensional object) on a plane, (a two-dimensional object) with as little distortion as possible.

Root-mean-square error (RMSE). Square root of average squared error.

Scanning. The process of converting analog photographs or hard copy maps into a digital form.

Spatial accuracy. Distance from true ground location.

Spatial resolution. Pixel.

**APPENDIX B
Commentary**

B1 Administrative commentary

The *IBHS Wildfire Prepared Neighborhood Standard* was developed to provide a means for community-scale wildfire mitigation through a system of requirements that could build upon the growing body of science. The goals of this standard are to provide a system of mitigation requirements that account for varying external fuel exposures, structure spacing, and connective fuel conditions to address the following core principles:

- Reduce the probability of *structure* ignition from flames, radiant heat, and ember exposures that are closest to or in direct contact with the specific external fuels that surround the defined neighborhood.
- Holistically reduce the probabilities of ember-driven ignitions across the defined neighborhood.
- Slow or halt structure-to-structure fire spread within the defined neighborhood should ignitions occur.

By addressing each of these elements, the probability of a *conflagration* occurring can be reduced and allow the neighborhood to function more as a *fuelbreak* rather than a fuel source.

The *IBHS Wildfire Prepared Neighborhood Standard*, like any building code, ordinance, or standard, has its limitations which are governed by practical application and limits to scientific and engineering understanding. It is designed to provide a system of mitigation elements that are generally more stringent than those administered under current *WUI* building code provisions. The *IBHS Wildfire Prepared Neighborhood Standard* is intended to be applied as a voluntary standard that enables a neighborhood and/or community to increase its resilience to wildfires and reduce the probabilities that a built-environment *conflagration* occurs. It is meant to defend against fire entering the defined neighborhood from all directions.

The current state of wildfire science does not provide the practical ability to reduce *structure* ignition probabilities to zero, even in a neighborhood which meets the provisions of this standard. The scientific reasoning behind the provisions included in this standard are targeted to contain *structure* ignitions to 10% or less within a compliant neighborhood. This is accomplished through bulk *parcel* level requirements, management of *connective fuels*, and evaluating the presences of *fuelbreaks* and *firebreaks*. Like all codes, ordinances, and standards, the maintenance of the required provisions is critical to ensuring the effectiveness of the mitigation system.

It is well understood that wildland fire behavior is governed by fuel, weather, and topography. The *IBHS Wildfire Prepared Neighborhood Standard* seeks to affect fuels and account for typical weather conditions that occur during built-environment conflagrations. Topography, however, is not included as a critical variable. While different slope configurations can be diagnosed, the small-scale changes in topography present practical challenges for designing and implementing a technical mitigation standard such as this. The focus on *connective fuels* and the *parcel*-level mitigation elements specified in this standard should also account for fuels across topographic features which could influence fire spread toward *structures*. The *IBHS Wildfire Prepared Neighborhood Standard* uses a 10 m, 70 mph 3-second gust wind for open terrain conditions as its wind-design level. Using the extreme value analysis of wind return intervals used in the ASCE 7-22 standard, this value generally represents an annual exceedance probability of 0.25% – 1% across much of the Western United States. It is noted that this design wind speed is higher than the 90th percentile of peak gusts observed in downsloping wind events across the Pacific Coast states of California, Oregon, and Washington (56 mph; Garner and Kovacic 2022). However, it is below extremes that have been observed, such as the peak gust observed in Arvada, Colorado of 115 mph during the Marshall Fire (2021) and those estimated to have occurred within meso- and micro-scale features such as the tornado-like vortex seen during the Carr Fire (2018) (Lareau et al. 2018).

B1.1 Applicability

The applicability of the standard and the areas in which it can be applied was determined through synthesizing the body of research regarding *wildland-urban interface* fires, beginning with Cohen's (2008) conceptual model of *wildland-urban interface* fire spread through Maranghides et al.'s framework for mitigation. It also leverages improved understanding, through experimental testing, of how fire spreads between structures. The *IBHS Wildfire Prepared Neighborhood Standard* was designed to serve typical communities near or within the *WUI*. Its system of actions is generally designed for and applicable to *WUI* types 1-5 developed by Maranghides et al. (2022) and shown in *Table B1*. The standard also follows a similar approach to Maranghides et al. (2022) of segregating perimeter areas from areas interior to the defined *neighborhood*. It is noted that the *IBHS Wildfire Prepared Neighborhood Standard* is more conservative with *structure separation* in types 1 and 2 (see *Table B1.1*) due to recent experimental testing results described in *Section B2*. The *IBHS Wildfire Prepared Neighborhood Standard* only can apply if at least 90% of the *structures* within the defined *neighborhood* have more than 10 feet and less than 100 feet of *structure separation* distance.

Table B1.1. WUI types classified by structure separation and typical parcel/lot size as developed by Maranghides et al. (2022). The green shaded rows are the classes where the IBHS Wildfire Prepared Neighborhood Standard is generally applicable. It is noted that the IBHS Wildfire Prepared Neighborhood Standard applies 10 feet as the lower bound for structure separation distance whereas Maranghides et al. (2022) uses 6 feet, applying a 3 feet setback distance.

Type	WUI Type Name	Structure separation (feet)	Typical parcel/lot size (acres)	Typical housing density (structures per acre)
*1	High density intermix – perimeter	6-30 feet	< 0.5	2 – 8+
*2	High density intermix - interior	6-30 feet	< 0.5	2 - 8+
*3	Medium density intermix – perimeter	30-100 feet	0.5 – 1+	< 2
*4	Medium density – intermix – interior	30-100 feet	0.5 – 1+	< 2
*5	Medium density intermix	30-100 feet	0.5 – 1+	< 2
6	Low density interface	> 100 feet	> 1	< 1
7	Low density intermix	> 100 feet	> 1	< 1

**WUI types in which the IBHS Wildfire Prepared Neighborhood Standard is generally applicable are shaded green. For types 1 and 2, the classification assumes a 3 feet setback. For type 2, the interior of the community is defined as located more than 0.25 miles from wildland fuel sources.*

B1.2 Mitigation approach and framework

To develop the mitigation approach at a neighborhood-scale used in this standard, *IBHS* synthesized the body of scientific literature including post-event analyses, experimental testing, and dynamical modeling. The *IBHS Wildfire Prepared Neighborhood Standard* was developed as a system of protection which accounts for different characteristics of external fuels, how different parts of a *neighborhood* could experience different exposure from flames, radiant heat, and embers, as well as how the *neighborhood* is designed and the fuel characteristics across it.

Across the history of conflagrations in the built environment from urban fires, to fires following earthquakes, to wildfire-driven conflagrations five commonalities have emerged:

- Presence of drought conditions, at any time scales

- Presence of strong winds, typically above 20-30 mph
- Ignition mechanism, typically human-caused
- Dense construction with materials that have little to no fire resistance
- Dense combustible elements surrounding and between *structures*

The details behind the characteristics of wildfire-driven conflagrations are well summarized within Giammanco et al. (2023). The *IBHS Wildfire Prepared Neighborhood Standard* seeks to address the last two critical factors related to hardening of *structures* with more fire resistance characteristics and materials and helping remove pathways for fire to spread between and to neighboring *structures*. The controllable factors within a community are parcel level mitigation, distribution of density of ladder and connective fuels, building codes/ordinances/HOA CC&Rs, vegetative fuel types, presence of *fuelbreaks* and existing or in-place preparedness programs. The standard presented here is configured as a system to slow fire spread and reduce the probability of conflagration. To develop the system of requirements shown here, the following questions had to be addressed in some manner to identify a practical system for a *neighborhood* spatial scale:

- 1) What degree of parcel level mitigation/hardening could slow fire spread to a rate where conflagration was not a certainty?
- 2) How much *connective fuel* mitigation was needed with no parcel level hardening? With some hardening measures? With maximum protection that wildfire science could practically offer?

B1.2.1 Experimental simulations

To begin to address these questions to understand what mitigation approach should be taken and how to understand the influence of mitigation actions in larger scales, *IBHS* partnered with the University of Buffalo to conduct a series of idealized dynamical model simulations and two “hind-cast” simulations (Marshall Fire and Camp Fire) to understand what degree of mitigation through parcel level actions and connective fuel remediation is needed to slow fire spread and meaningfully lower the probability of a built-environment conflagration. Given the lack of post-fire observations of the impact of community-scale mitigation, dynamical modeling has helped fill the gap in designing the framework of this standard. The simulations were designed to bring together the known understanding of built-environment conflagrations, experimental test results and post-fire investigations.

The dynamical modeling study used the SWUIFT model (Streamlined Wildland-Urban Interface Fire Tracing) to conduct the hindcast and idealized neighborhood experiments using various levels of hardening, connective fuel conditions, and different wind speed exposures (Masoudvaziri et al. 2021). Inputs to the SWUIFT model were *LANDFIRE* for landcover, Microsoft building footprints, WRF-LES model for wind conditions, and WRF-Fire for wildland fire spread. The structure hardening conditions were designed to mimic the reduction in ember and direct flame/radiant heat ignition probabilities and designed to serve as proxies for the *IBHS Wildfire Prepared Home (WFPH)* requirements. The hindcast of the Marshall Fire (2021) using 70% of *structures* within the fire boundary hardened to a level that is considered a proxy for the *IBHS WFPH Plus* level of mitigation was shown to reduce fire spread within the built environment. However, at this same level of mitigation, it did not make a detectable difference in fire spread rates and destroyed structures for the Camp Fire (2018) hindcast. The *connective fuels*, in this case mostly vegetative, were too densely connected and enabled fire to continue to propagate despite the simulated mitigation efforts. The result suggested that a combination of both structure hardening, *parcel* level fuel management and overall *connective fuel* management is crucial to ensure the mitigation system can accomplish the goals set forth in this standard.

To test the framework of the system employed in this standard, two idealized communities were defined as a high and a medium density interface community (see *Table B1*) covering approximately 0.75 mi² with two different *structure spacing* distances (4 meters and 20 meter), 33 feet (10 meter) wide streets and different *connective fuel* and *parcel* level mitigation levels. Five different wind environments were also tested from winds of 5 to 25 ms⁻¹ (11–56 mph). This yielded 110 independent dynamical simulations. Conflagration was defined as greater than 10% structure loss in a 12-hour time window. In both communities, with *connective fuels* connecting all four sides of each *structure* and in any wind conditions conflagration occurred easily as no mitigation elements were present. In the most densely spaced community, even with 0% connected fuel coverage, once fire entered the modeled community conflagration occurred. Simulations at low wind speeds showed that by reducing *connective fuels* to only two *connective fuel paths* per *structure* reduced the number of *structures* burned and slowed fire spread but still met the conflagration criteria (> 10% *structures* ignited). When combining *parcel* level mitigation on 70% of *structures* (a proxy for *IBHS WFPH Plus* construction) and reducing connective fuel pathways to just one side of each *structure*, conflagration was avoided, and fire spread rates were greatly reduced.

The results were in general agreement with the wildfire mitigation framework within these types of communities discussed in Maranghides et al. (2022) and provided support for a framework which accounted for parcel level actions (both *structure* hardening and fuel management) and overall management of *connective fuels* into and within the defined *neighborhood*. The *IBHS Wildfire Prepared Neighborhood Standard* applies a modified hardening approach to utilize maximum protection elements in areas which may see a greater likelihood of direct flame and radiant heat exposure and fill the remaining ember protection gaps using those measures described in the base level of protection of the *IBHS Wildfire Prepared Home Standard*. This allows for greater flexibility in structure spacing applicability and in *connective fuel pathways*. It is noted that in each case, a 0–5 Foot Noncombustible Zone remains a cornerstone of mitigation actions. It is also noted that the 30% *connective fuel* coverage configuration on each parcel used in the dynamical simulations was nearly identical to the *connective fuel node* and *pathway* requirements stated in *Chapter 4*. The *IBHS Wildfire Prepared Neighborhood Standard* also uses a more stringent wind design environment (70 mph 3-second gust wind speed at 10 m (33 feet) height for open terrain exposure conditions) compared to the highest wind conditions used in the idealized *neighborhood* simulations (56 mph). In this Appendix, *sections B2 through B6* provide additional details to support the scientific and engineering decision made regarding structure separation applicability requirements, roof cover requirements, *connective fuels*, and the requirements of the *flame* and *neighborhood ember zones*.

B2 Roof provisions

The *IBHS Wildfire Prepared Neighborhood Standard* requires that all roof covering materials in the defined neighborhood carry a Class A fire rating based on the ASTM E108 (ASTM 2020) testing standard regardless of whether the home falls outside the *flame* or *neighborhood ember zones*. The requirement is more stringent than what is currently specified in Chapter 7A of the California Building Code and the 2021 International Wildland Interface Code (IWUIC). The *IBHS Wildfire Prepared Neighborhood Standard* specifically requires a Class A roof covering material and does not permit Class A by assembly. Regardless of their fire classification, any wooden roof covering product including but not limited to fire-retardant treated and fire-retardant coated wood shakes and shingles are not permitted.

Wind patterns near buildings heavily influence ember distribution patterns and accumulation locations. Because roofs are a large, elevated surface with complex geometry and a range of slopes, they are prone to ember accumulation during ember storms. The regions on the rooftop where embers reach stability and rest are also a complex function of roof geometry, particularly roof valleys. Roof valleys are often covered with organic vegetative debris, which is particularly susceptible to ignition from embers (Nguyen and Kaye

2021). Standard test methods such as ASTM E108 and UL 790 (Underwriters Laboratories 2022; ASTM 2020) evaluate the fire performance of different roof covering materials.

The vulnerability of roofs to ember storms is well studied. Several retrospective studies have reported a statistical correlation between wood coverings and building losses due to ember exposure (Davis 1990; Foote et al. 2011). Moore (1981) reported that out of 1,850 homes, 50% of homes with wooden roof covering within 30 feet of burning vegetation ignited while only 24% of homes with fire-resistant roofs ignited in the 1961 Bel Air Fire in Southern California. Foote (1994) found the degree of flammability of the roof had a significant impact on home survival where homes with nonflammable roofs had a 70% survival rate compared to 19% for homes with flammable roofs. After the 1991 Oakland Hills Fire in California, it was estimated that each burning home with a non-fire-retardant-treated wood shake roof contributed to the ignition of ten other homes (Bryner 2000). Hedayati et al. (2024) also identified during the Lahaina Fire that roof performance was nearly binary. Non-Class A roofs had an ignition rate greater than 80% and the roof was a critical variable in ignition probabilities. However, for *structures* with a Class A roof covering, the roof was a far less critical variable in explaining ignition potential.

Wood shake and/or wood shingle roofs have been identified as one of the most susceptible roof covers to ember attack and ignition. These materials, when new or at a later point in their lifetime, are often treated with fire retardant material or ignition-resistant coatings, sprays, paints, etc. to allow the material to have some degree of ignition resistance. Quarles and Standohar-Alfano (2017) investigated the aged performance of several fire-retardant coatings, and their relative ignition resistance compared to untreated wood surfaces. Degradation for some began as soon as three months, and by a year of exposure to typical weather conditions the ignition performance was no different than an untreated specimen. When considering fire-retardant coatings, Koo et al. (2001) also found highly variable performance of different fire-retardant coatings on wood specimens even in newly applied conditions.

Östman and Tsantaridis (2016) explored how treated wood products performed over a 10-year window of natural weathering. While they found some products that could retain their treatment compounds could maintain performance over time, others after 10 years showed no performance benefit compared to untreated products. Zhou et al. (2018) specifically examined a fire-retardant treated cedar shake shingle and how its ignition performance degraded using three accelerated weathering tests. While the fire-retardant treated wood performed better than its untreated counterpart, it was observed that ignition times decreased with added artificial aging. The result was sufficient to indicate a decrease in fire resistance performance as the treated wood aged.

While new coatings, treatments, and formulations continue to be developed and are emerging into the marketplace that show promise, there remains little new literature on how their performance changes over time under natural aging/weathering conditions; nor are there any operational testing standards that evaluate changes over time in performance. The uncertainties surrounding adhesion, compatibility of materials, and long-term durability are well described in Albert and Liew (2023).

Given the potential service life uncertainties of both ignition resistant treatments and applied ignition-resistant coatings, the use of wood shake, wood shingle, or any wood roofing materials regardless of test rating as a new product in the *IBHS Wildfire Prepared Neighborhood Standard* is prohibited. This follows that stated in Chapter 7A of the California Building Code (Section 703A.5.3). While new coatings, treatments, and formulations continue to be developed that show promise, there remains little new literature on how the performance changes over time under natural aging/weathering conditions. Additionally, there are no operational testing standards and associated product approvals that account for changes over time in performance.

B3 Structure separation

Laboratory experiments and post-fire investigations show a direct link between thermal exposure and the structure hardening needed for fire resilience (Maranghides et al. 2022). Effective wildfire mitigation balances both factors. Embers are the primary ignition source, starting small fires that, under favorable conditions, spread to larger fuels like fences, sheds, and vehicles. This escalation, combined with strong winds, often leads to rapid, building-to-building fire spread. Spot fires rely on nearby fuels to reach *structures*, with these fuels radiating heat and accelerating fire growth. Denser *neighborhoods*, with more fences and vehicles, amplify this risk. Thus, greater structure spacing is crucial to reducing vulnerability and preventing catastrophic conflagrations in the built environment.

The built environment, specifically where high-density construction is built with little to no fire-resistance, has minimal resistance time against potential flame exposure. Once ignited, the fuel load of a typical single-family home is easily sufficient to produce a flame and radiant heat exposure on a nearby *structure* to ignite it, even with some degree of hardened or fire-resistant materials, especially in the presence of wind which helps stretch flame lengths.

IBHS is studying wind-driven fire spread from a source building to a target building which represents a typical *primary dwelling unit* (30-feet by 40-feet in size, and 1.5 stories in height). *Figure B3.1* provides a photograph of an active test at the *IBHS* Research Center. In the first phase, the source building was a large burning shed, while the second phase uses a 625 ft² *accessory dwelling unit* as the source. Results from the first phase show that heat intensity on the target building depends on the source-target orientation, wind speed, and separation distance. When the target building absorbs thermal energy from the fire, energy is dissipated through the complex turbulent flow, some is reflected away from the *structure*, and the rest is absorbed, raising the temperature of the building envelope. The thermal response varies by component: annealed glass may shatter in place, tempered glass might fall out depending on its frame, combustible siding and open eave can ignite, and noncombustible siding may buckle. These illustrate the diverse damage modes under fire exposure. While some of these damages are not catastrophic, nearly all can compromise the building's envelope through large openings or ignitions, significantly increasing the likelihood of complete destruction in the absence of fire-service intervention.



Figure B3.1. Photograph of wind-driven flame spread testing at the IBHS Research Center in Richburg, South Carolina.

The first phase of the project was able to demonstrate that even under non-extreme wind conditions, the energy accumulated at a 10-foot separation is sufficient to ignite combustible siding and open eaves. Even with noncombustible siding or enclosed eaves, other vulnerable components of the building remain at risk at a 10-foot separation distance. In experimental tests, double-pane tempered windows with vinyl frames—a product with a 20% US market share and likely to remain popular due to its affordability—failed under similar energy accumulation rate. This suggests the fire intensity at 10 feet or closer is sufficient to overwhelm the resilience of many common building materials, even those compliant with modern WUI codes.

Therefore, based on the initial results from this experimental testing program, *the IBHS Wildfire Prepared Neighborhood Standard* uses the 10-foot minimum spacing benchmark as the smallest structure-to-structure spacing extent to which the standard is applicable.

B4 Connective fuels

The importance of fuels between and around structures has been a critical variable in built-environment *conflagrations* dating back to the first urban fires of the 1600s. Dense combustible fuels between *structures* create fire paths in which fire can easily spread through direct flame and radiant heat-driven ignition from structure-to-structure. In wildland fires, these types of fuels are commonly referred to as ladder fuels and are typically vegetative, which allow fire to spread both laterally and vertically. Within the context of a *WUI* fire or built environment *conflagration*, *connective fuels* are both *vegetative* and *built-environment fuels*. They play a critical role in whether a wildfire entering a *neighborhood* becomes a catastrophe. For example, wooden privacy fences served as a dominant fire pathway between *structures* during the Marshall Fire (2021) (FEMA 2023; Giammanco et al. 2023; Juliano et al. 2022).

B4.1 Fuel continuity

The arrangement and continuity of fuel can affect the fire's ability to spread, influencing the intensity of the flames. The arrangement and distribution of fuel, both vertically and horizontally, is referred to as fuel continuity. This continuity or connectivity describes the degree to which fuels are interconnected to provide a continuous path for fire to spread. Within the *IBHS Wildfire Prepared Neighborhood Standard*, these are referred to as *connective fuels* and *connective fuel pathways*. In terms of fire behavior, fuel continuity plays a significant role in determining the rate and intensity of fire spread. High fuel continuity, where fuels are densely distributed and interconnected, can promote the rapid spread of fire, as flames can easily propagate from one fuel source to another. In general, live vegetation exhibits gaps between needles, shrubs, or trees, and clumps of trees, arguing that understanding continuity of fuels is critical for fire suppression and fuel management (Hurley et al. 2015). Even at small scales, the separation between fuel particles has been shown to create critical conditions for fire spread on both natural and artificial fuel beds. (Vogel 1970; van Wagner 1970; Weber 1990; Di Christina et al. 2021; Bu et al. 2021). This concept of critical conditions or thresholds also applies to larger scales, where discontinuity occurs between plants rather than individual particles (Cheney et al 1998; Marden-Smedley et al. 2001; Weise et al. 2005). In either case, the fire spread threshold is determined by fuel characteristics and environmental factors such as wind, slope, and fuel moisture content.

Over the past few years, *IBHS* has collaborated with the United States Forest Service (USFS) to investigate and identify the critical physical processes that drive ignition, considering the spatial distribution of fuel and a range of environmental conditions. As a result of this collaborative effort, valuable insights have been gained, particularly regarding the threshold separation distance between pine needle fuel beds for continuous flame spread under various wind conditions. As can be seen in *Figure B4.1*, the findings have demonstrated the separation distance required for sustained flame spread varies depending on wind speed and moisture content conditions. Understanding this threshold separation distance is crucial for effectively predicting fire behavior and implementing appropriate fire management strategies such as the *connective fuel* provisions described in this standard in *Chapters 3 and 4*.

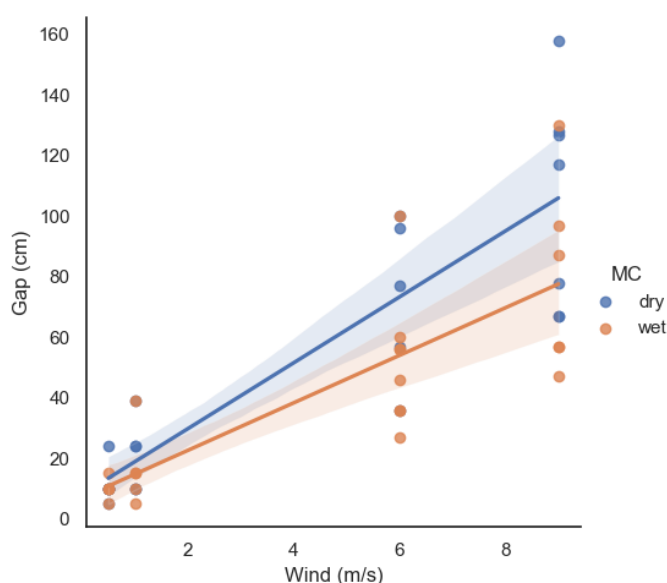


Figure B4.1. Maximum separation distance required for sustaining flame spread. Fuelbreak gap distances shown as a function of wind speed for fine fuels at two different moisture content levels at the IBHS Research Center.

The concept of fuel connectivity observed in vegetation fuels can also be extended to structural fuels such as fences, sheds, *accessory dwelling units*, and other similar objects. The underlying mechanism driving fire spread remains the same: when these structural fuels are closely spaced or connected, heat transfer between burned and unburned particles occurs at a high rate, leading to rapid fire spread (Shields 2008). Understanding the role of fuel connectivity in structural fuels is essential for assessing fire risk and implementing appropriate fire mitigation strategies. It emphasizes the importance of maintaining adequate spacing and reducing fuel continuity to minimize the potential for fire spread and mitigate the risks associated with structural fires

In the case of nonhomogeneous fuel, such as a mixture of different structural/*built environment and vegetative fuels*, details of the fire spread mechanisms are not yet well understood due to the interactions and complexities arising from the combination of different types of fuels. When low density fuels such as leaves meet larger fuels, such as building components, qualitative observations suggest a more rapid rate of fire growth. This fuel configuration can create a vertical fuel ladder that allows the fire to jump from the ground and engulf different building components in flames (Menning and Stephens 2007). According to post-fire investigations, discontinuities between trees, bushes and *structures* can reduce the threat of tall, high-intensity flames, which are strongly correlated with building damage. An analysis of Ramsay et al.'s (1970) post-Ash Wednesday bushfire damage in Australia found that damage to homes was affected by the amount and type of vegetation around them. Dense vegetation around houses aided in connecting the fire to other nearby homes, making it less likely they would survive. During the Witch Creek Fire (2007), when evaluating the vegetation within the first 30 feet of houses in San Diego County, California, Maranghides et al. (2013) found that 67% of homes with unmaintained vegetation were destroyed, whereas only 32% of homes with maintained defensible spaces were destroyed. The importance of fuel discontinuity was found to be even more important near buildings. Syphard et al. (2014), after analyzing more than 2,000 structures in San Diego County, concluded *structures* with defensible space that contained spaced vegetative fuels "immediately adjacent" survived more fires. Additionally, it was also found that reducing woody vegetation by up to 40% immediately adjacent to *structures* and preventing vegetation from overhanging or touching structures were the most effective measures (Syphard et al. 2014). A fence or deck attached to the house can also facilitate the spread of fire or radiate enough heat to ignite the building's cladding. *Figure B4.2* provides a photograph illustrating fire spread along a wooden fence following the Mountain Fire in Camarillo California in 2024. Both post-event investigations and laboratory experiments show that these components, especially if they are in the vicinity or in contact with vegetation, can ignite *structures*.



Figure B4.2. Photograph of a fence, following the 2024 Mountain Fire in Camarillo, CA, which had ignited adjacent to a home where fire spread to the wall of the structure. In this case fire service intervention and the presence of noncombustible wall cladding (stucco) helped avoid ignition of the structure. The window frame on the right side of the image was damaged, and there was evidence of sufficient radiant heat to damage the paint in the eaves of this home. Photograph by Evan Sluder.

B4.2 Connective fuel mitigation approach

The mitigation approach taken by the *IBHS Wildfire Prepared Neighborhood Standard* leans heavily on the defensible space provisions of the *IBHS Wildfire Prepared Home Standard* but takes a fire pathway approach toward evaluating the defined neighborhood and determining what conditions it must meet. *Connective fuels* are evaluated across contiguous *clusters* of *structures*, where fire can most easily spread from structure-to-structure via *connective fuels* and direct flame / radiant heat. This will manifest itself more readily across *clusters* of homes that do not have barriers that help break the chain of fire. Across those *clusters* the coverage of connective fuels is evaluated. Within the *neighborhood flame zone* where the most severe fire exposure from external fuels is most likely, *structures* cannot be connected by any fuel pathway. This area is the first step in minimizing initial ignitions in the area where fire is likely to enter the defined neighborhood through external fuels. Across the remainder of the defined *neighborhood* and the identified *clusters*, it is acceptable to have a single *connective fuel pathway*. Given the hardening provisions specified for *structures*, this flexibility would enable more practical landscape options while keeping the probability of *conflagration* low. It is noted in most cases, *structures* that comply with the *IBHS WFPH Plus*, will not have any connective fuel pathways. However, complications could arise with the use of accessory structures and the parcel configuration; where an *accessory structure* could act as a *connective fuel pathway* or complete a pathway to a neighboring *structure* while complying with the parcel-level provisions of the *IBHS Wildfire Prepared Home Standard*. If the defined *neighborhood* is large enough, or external fuels do not necessitate a *neighborhood ember zone*, the *connective fuel* provisions combined with the Class A compliant roof will still provide measures to defend against the lower probability of fire entering the area, representing a factor of safety.

B5 Neighborhood flame zone

The *neighborhood flame zone* encompasses the perimeter of the defined *neighborhood* where *structures* are near *external fuels* that could impart direct flame contact and radiant heat exposure on *structures* within the zone. It is in this area where protection from ember attack, direct flame contact and radiant heat is required to reduce the probability of ignitions should fire reach the defined *neighborhood* boundary.

The method can be broken down into three key steps, *external fuel* determination, fire intensity analysis, and heat transfer calculations. To complete each of these steps, described in detail in *Chapter 3*, requires key assumptions to be made. Undoubtedly, these assumptions impact those calculations used to determine mitigation provisions. The scientific assumptions used in the *IBHS Wildfire Prepared Neighborhood Standard* provide a conservative and objective process for determining necessary mitigation actions to achieve the four core principles of this standard listed in *Chapter 1*.

B5.1 External fuel determination

Fuel is a critical component in determining fire behavior, influencing how fires ignite, spread, and intensify. Fuel data is crucial for the decision-making process in the *IBHS Wildfire Prepared Neighborhood Standard*. Due to the availability of detailed vegetation maps and integration within the United States operational fire management practice, *LANDFIRE* is used as the baseline data source for the *external fuel* determination. A *LANDFIRE* landscape file is a multi-banded raster, with five bands required: elevation, slope, aspect, fuel model, and tree canopy cover (*LANDFIRE*). For the external fuel determination, the processes described in this standard specifically consider the fuel model band. *LANDFIRE* creates their fuel model maps by creating a rule set based on the existing vegetation type, existing vegetation cover, existing vegetation height, and the environmental site potential and assigns a *fire behavior fuel model type* to each rule set. These rules are reviewed by local experts to maximize accuracy and calibrate the rules and resulting maps (*LANDFIRE*).

Two Fire Behavior Fuel Models are available in *LANDFIRE*, 40 Scott and Burgan (2005) Fire Behavior Fuel Model (FBFM40), and the original 13 Anderson Fire Behavior Fuel Model (FBFM13). These two fuel models represent the same fuel types, although Scott and Burgan's model, chosen for use in this standard, offers more fuel models in every fuel type providing higher resolution for the fuel characterization processes.

LANDFIRE products were created and are maintained to support national, regional, and sub-regional fire management and analysis, with a spatial resolution of 30 meters (*LANDFIRE*). At this scale, considering the fire interface at the edge of a community requires assumptions and analysis that account for this resolution. Two methods are used to consider variations in fuel that may occur within the 30-meter resolution of *LANDFIRE* products.

The first method conservatively considers all fuels within a 0.25-mile buffer (*flame fuel assessment zone*) of the *neighborhood*, allowing for an analysis of 10 times the minimum spatial resolution of *LANDFIRE* products when considering what surface fuels drive fire intensity and the resulting exposure a *neighborhood* may experience. Considering all fuels present within the *flame fuel assessment zone* of the *neighborhood*, the worst-case fuel—determined by the total heat release rate per unit area—with 10% or greater coverage is used for the exposure analysis. For assessing potential flame exposure all fuels, regardless of coverage, are used to ensure that all fuels capable of generating the spreading line fire assumed in the *fire behavior fuel model* are considered.

The second method allows local, regional, or expert knowledge and data to supplement *LANDFIRE* in the determination of the appropriate *fire behavior fuel model* for this analysis. Fuel management and planning are encouraged to reduce the potential fire exposure. Fuel management practices within the *flame fuel assessment zone* outside the defined *neighborhood* boundary will affect the surface fire behavior and the appropriate *fire behavior fuel model*.

B5.2 Vegetative fuel fire intensity analysis

To determine potential surface fire intensity of the vegetative fuels identified in the *flame fuel assessment zone*, BehavePlus is used to calculate Reaction Intensity (or HRRPUA). The BehavePlus fire modeling system is a Windows®-based computer program that can be used for any fire management application that needs to calculate fire behavior Andrews (2003). It uses specified fuel and moisture conditions to simulate surface and crown fire rate of fire spread and intensity, probability of ignition, fire size, spotting distance, and tree mortality. The resulting HRRPUA is determined for each one of the 40 fuel models is shown in *Table B5.1*.

Table B5.1 Fire behavior fuel models and the resulting heat release rate per unit area (HRRPUA) for use in this standard.

<i>Fire Behavior Fuel Model Type Identifier</i>	<i>HRRPUA (kW/m²)</i>
GR1	88
GR2	233
GR3	301
GR4	454
GR5	852
GR6	1304
GR7	1598
GR8	1963
GR9	2993
GS1	309
GS2	503
GS3	819
GS4	3573
SB1	557
SB2	1127
SB3	1554
SB4	1637
SH1	313
SH2	1201
SH3	389
SH4	708
SH5	1163

Fire Behavior Fuel Model Type Identifier	HRRPUA (kW/m ²)
SH6	1074
SH7	1547
SH8	1667
SH9	2678
TL1	106
TL2	156
TL3	178
TL4	222
TL5	354
TL6	509
TL7	357
TL8	727
TL9	1052
TU1	364
TU2	410
TU3	824
TU4	1397
TU5	1813

However, to consider potential *crown fire* intensity a different approach was followed since the crown Fire model in Behave requires canopy base height as input—information that is often unavailable—and does not provide the HRRPUA needed for FDS simulations. Therefore, a simplified yet conservative approach is used to assess the potential impact of crown fires. This approach utilizes the existing vegetation cover (EVC) from the LANDFIRE dataset or a supplemental dataset that meets the specifications outlined in this standard. If 10% or more of the sector’s area is covered by trees, as identified from the EVC data, a 70-meter (230-foot) buffer is added to the *neighborhood flame zone (NFz)* distance derived from the fuel analysis. The buffer distance was determined based on exponent-based models for energy decay with distance in wildland fires. These models, derived from heat flux measurements of natural and prescribed wildland fires across Alaska to Florida between 2006 and 2010, identified four distinct regimes. Data from the most intense fires, typically associated with crown fires, yielded an incident heat flux equation, $q = 300/L^{0.75}$, where L is the distance from the fire (Butler et al. 2015). Using this equation, a radiative heat flux threshold of 13.1 kW/m²—representing a realistic ignition potential for common structural fuels Cohen (2004)—corresponds to approximately 65 meters. To ensure a conservative margin, this distance was rounded up to 70 meters.

B5.2.1 Heat transfer calculations

Heat flux calculations were performed using FDS, considering a range of HRRPUA values (~80 kW/m² to 3600 kW/m²) derived from BehavePlus for all fuel types. In all simulations, a fixed fire was positioned 5 meters from the boundary of the computational domain, with the fire’s head assumed to be located at the *neighborhood’s* edge or beyond any established *fuelbreaks* or *firebreaks*. A similar approach was previously employed by Parsons et al. (2014) to simulate potential burn injuries. In this case, the heat source is used to simulate potential structural

ignition, with the fire size assumed to match the resolution of the LANDFIRE data (30 m x 30 m). However, it is acknowledged that the fire size significantly influences the simulation results, and this effect will be analyzed in the following section.

Total heat fluxes were calculated at distances of 10, 20, 30, 40, and 80 meters downwind from the fire at a height of 1 meter above ground level assuming neutral stability and a logarithmic wind profile defined by the following equation:

$$u(z) = \frac{u_*}{k} \ln\left(\frac{z}{z_o}\right) \quad \text{Equation B5-1}$$

where u is wind speed, u_* is the friction velocity (m/s), z is height (m), k is the von Karman constant (0.4), and z_o is the surface roughness length (0.03 m for open terrain exposure). After the corresponding sensitivity analysis, all simulations were computed using a computational domain of 70 m x 130 m x 30 m and a grid resolution of 1 meter. An optical-thin approach is used for the radiation model, with a prescribed radiation fraction of 0.371. For all the simulations, the leading edge of the fire is positioned 5 meters from the boundary of the computational domain while the fire's head is assumed to be located at the edge of the *neighborhood* or outside any established *fuelbreaks* or *firebreaks*. No obstructions, such as *structures*, are considered in the model (Figure B5.1).

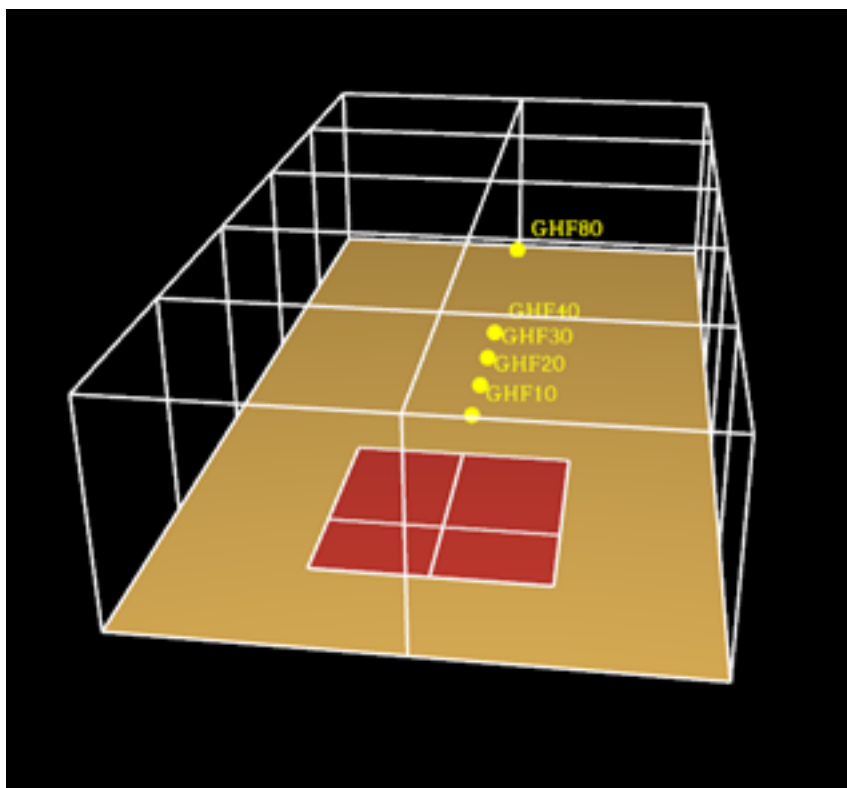


Figure B5.1. FDS simulation showing heat source and measurement locations

Mean heat fluxes, as a function of distance, are calculated during the quasi-steady state and used to determine a power-law or linear least-squares fit, depending on the HRRPUA range. An example for an HRRPUA of 1160 kW/m², corresponding to the FBFM SH5, is shown below in Figure B5.2.

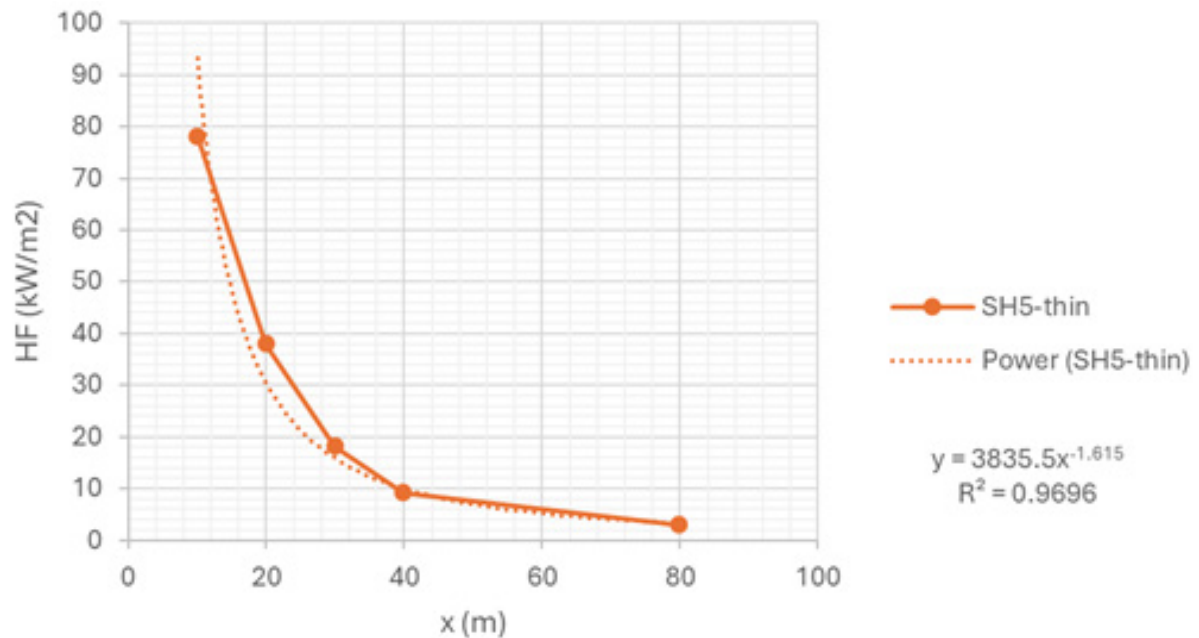


Figure B5.2. Power-law least squares fit for the mean heat flux (HF) as a function of the distance for a HRRPUA equivalent to the FBFM SH5.

These equations were derived for various HRRPUA values, ranging from 80 to 3600 kW/m², and solved with a radiative heat flux threshold of 13.1 kW/m², which is an appropriate threshold value to represent a realistic ignition potential for common structural fuels Cohen (2004). The solution identifies regions where this heat flux exposure threshold is met for different HRRPUA values, classifying them as part of the *neighborhood flame zone*. A second-degree polynomial fit with an R² value of 0.997 is then obtained to calculate the distances that meet this criterion as a function of HRRPUA, establishing the initial *neighborhood flame zone (NFz)* in meters, as given by Equation 3-2:

$$FZ(x) = 1 \times 10^{-6} x^2 + 0.0279x \quad \text{Equation B5-2}$$

where x is HRRPUA determined by Table 3.1 for the worst-case *fuel model type* in the *flame fuel assessment zone* in each sector. If the canopy fuel provision described above is met, then an additional 70-meter (230-foot) distance is added to obtain the value for FZ to use in Equation 4-1 for vegetative fuels.

B5.2.1.1 Optically thin approach

An optically-thin limit is applied in the radiation model, a suitable approach for simulating outdoor fires (McGrattan et al. 2008). In this method, the fire radiates a user-specified radiative fraction of energy, which is transported to the domain boundaries without being reabsorbed by cooler gases. The radiative fraction (χ_R), is a common parameter in CFD models; however, it is not a universal constant and depends on factors such as fuel type and fire size

Figure B5.3 illustrates examples of radiative fraction measurements for various liquid fuels as a function of pool fire diameter. The data show that χ_R changes slightly with increasing size for smaller fires (less than 1 meter), but these variations become more pronounced for larger fires, generally resulting in lower χ_R values.

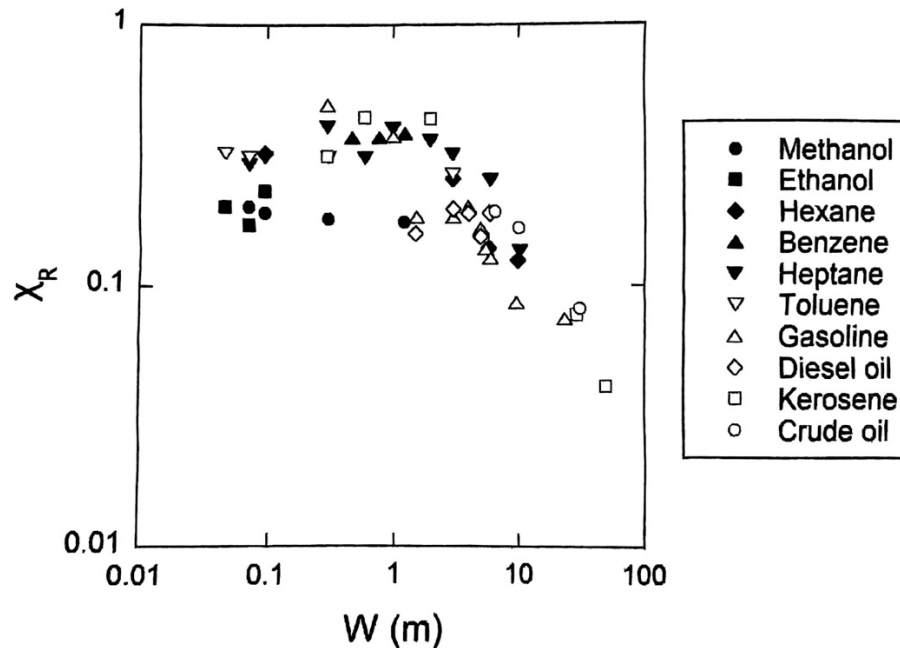


Figure B5.3 Radiative fraction as a function of pool fire diameter (Taken from Himoto, K. (2022). *Large Outdoor Fire Dynamics*. CRC Press.)

For biomass fires, several studies have measured the radiative fraction for different woody materials under various conditions. For example, Tihay et al. (2009) calculated the radiative fraction of laminar flames from vegetative fuels, finding values between 20% and 27%. Kremens et al. (2012) conducted experiments with preconditioned wildland fuels typical of mixed-oak forests, reporting an average radiative fraction of 17%. Morandini et al. (2013) studied the influence of fuel load on radiative fraction and other fire properties, using pine needle fuel beds (2 m x 1 meter) and found radiative fractions ranging from 17.4% to 22.4%. Further, Morandini et al. (2014) investigated the effect of slope on convective and radiative heat transfer. They observed slightly higher radiative fractions under sloped conditions, with values ranging from 25.1% to 38.9% for a slope of 20°, compared to flat surfaces.

In summary, χ_R that has not been measured or reliably predicted for all potential fuel types, and this parameter significantly influences the simulation results. For example, *Figure B5.4* illustrates mean heat fluxes at various distances for three different χ_R values, using a heat source of 20 meters x 20 meters. These data show higher heat flux values with increasing radiative fractions across all distances.

For this study, a conservative approach was adopted. Since most χ_R values reported in the literature for woody materials range from approximately 17% to 39%, we used a value of 0.37, which is the radiative fraction in FDS for "red oak." This value is close to the upper boundary of the reported range, ensuring higher heat flux predictions compared to smaller χ_R . Model results could be improved by inputting the appropriate χ_R values that better represent each specific type of vegetation.

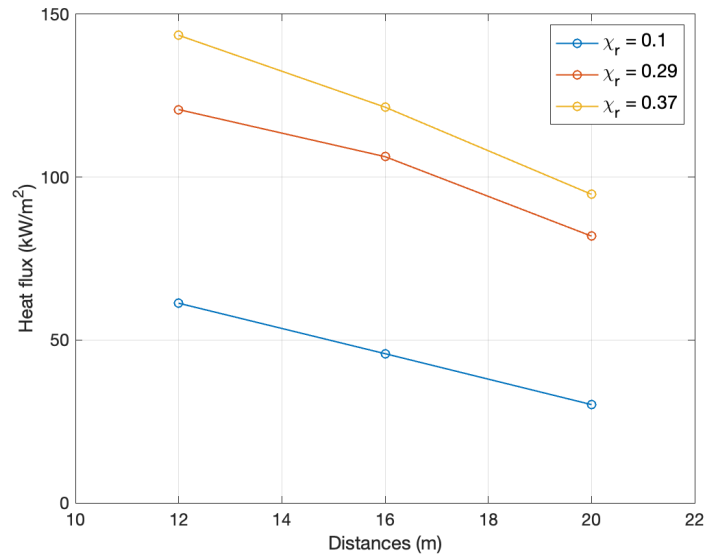


Figure B5.4. Simulation results for the mean heat flux values as a function of the distance for radiative fraction of 0.1, 0.29 and 0.37.

B5.2.1.2 Sensitivity analysis

Sensitivity analysis was done to evaluate the effect on the simulation results, specifically in the total heat fluxes as the grid size, the fire depth and fire width change. For this analysis, the larger fire provided by BehavePlus was used (HRRPUA = 3600 kW/m²) to ensure there the domain is large enough to recreate the prescribed HRR.

To begin with the sensitivity analysis, the appropriate grid size was evaluated considering the smallest (5 x 5 meters) and largest (30 x 30 meters) heat source size evaluated in this work. For this, the criteria suggested by Mc Grattan et al. (2008) were followed as guidance, stating the ratio between length scales characterizing the diameter of the pool fire (z_c), and the grid cell size in the gas-phase (dx_g) has to range between 4 and 16. Considering,

$$z_c = \left(\frac{\dot{q}}{\rho_a c_p T_a \sqrt{g}} \right)^{2/5} \quad \text{Equation B5-2}$$

Where \dot{q} is the HRR, ρ_a , c_p , T_a are respectively the density, specific heat and temperature of the ambient air and g is the standard gravity. Table B5.5 presents the values of z_c , $z_c/4$, and $z_c/16$ for the smallest fire simulated (5m x 5m) and the largest one (30m x 30m). $\delta = 0.5$ meter, 1 meter and 1.5 meters were used to evaluate the effect of the grid resolution in the results. For these simulations a value of radiative fraction of 0.37 was used.

Table B5.2

	z_c (m)	$z_c/4$ (m)	$z_c/4$ (m)
5m x 5m heat source	5.8	1.4	0.4
30 m x 30 m heat source	24.3	6.1	1.5

To assess the impact of grid size on simulation results, fires measuring 5 x 5 meters and 30 x 30 meters were simulated using grid sizes of 0.5 meter, 1.0 meter, and 1.5 meter. The mean heat fluxes and their corresponding standard deviations from the simulations for each heat source size are presented in Figure B5.5. Due to significant fluctuations in heat fluxes near the heat source, no notable effect of grid resolution was observed at distances less than 30 m. However, at 40 meters and 80 meters, the effect became more apparent, particularly for the 1.5 meter grid size compared to the smaller grid sizes. Based on these findings, a grid cell size of 1.0 meter was selected for subsequent simulations.

Another important factor influencing the simulation results is the size of the fire. Since HRRPUA (Heat Release Rate Per Unit Area) is the primary input, larger fire sizes result in higher total HRR and consequently greater heat fluxes in front of the fire. To optimize computational resources, it is desirable to simulate the smallest possible fire size that still provides realistic results for the intended scenario.

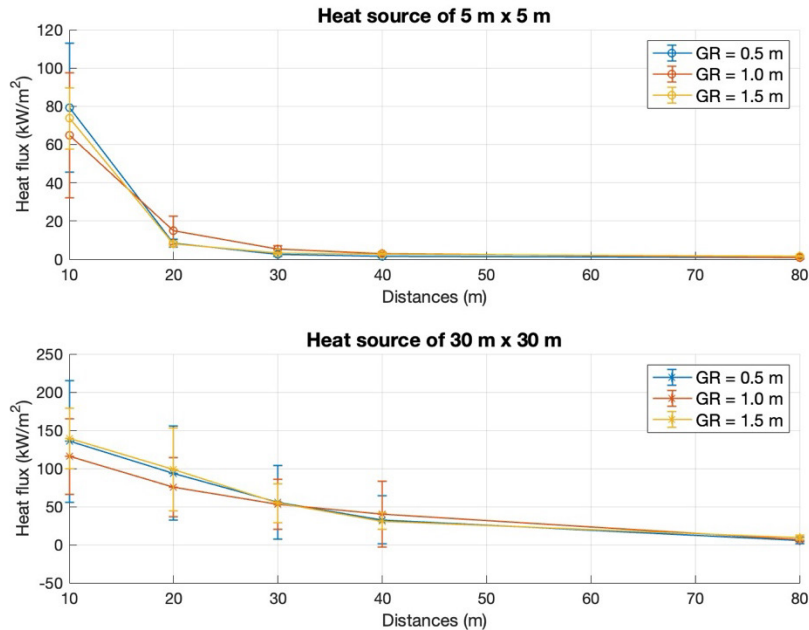


Figure B5.5. Mean heat flux results for varying grid cell sizes as a function of distance.

The effect of fire size was examined during the sensitivity analysis. *Figure B5.4a* shows the mean heat fluxes at various distances from the fire front as a function of FD with a fixed fire width (FW) of 10 meters. For locations closer to the fire front (less than 30 meters), no clear trend is observed, and the mean heat fluxes vary significantly as FD changes. However, this region is not the focus of this study, as structural ignition is assumed to occur in this zone due to proximity to the flame. The area of interest lies where heat flux values approach the ignition threshold of 13.1 kW/m^2 . This region is highlighted in *Figure B5.6b*, where it can be observed that changes in HF have become less significant as FD increases. In fact, the difference in HF values calculated for $\text{FD} = 30$ meters and $\text{FD} = 40$ meters is less than 1%. A similar trend is observed when heat fluxes are evaluated as a function of fire width (FW) with a fixed FD. Based on these findings, a fire source measuring 30×30 meters is used in this study.

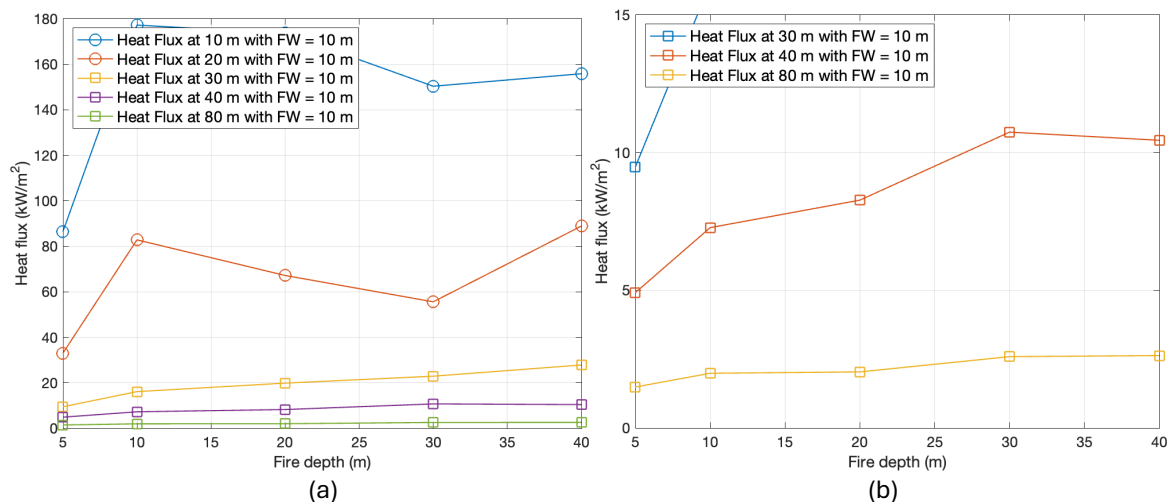


Figure B5.6. Mean heat fluxes at different distances from the fire front as a function of the fire depth (FD) considering a fire width of 10 m.

B5.3 Structural fuel fire intensity analysis

Structures are considered a non-burnable object in the *LANDFIRE* dataset, requiring an independent analysis from vegetative fuels. Burning structures can produce high radiant heat fluxes, large flames, and large embers capable of supporting extreme fire behavior and are an important exposure consideration for the defined *neighborhood*. However, there is a significant research gap in understanding the bounds of the potential exposures from burning structures in wind-driven fires, especially in extreme fire weather conditions. The variability of structure geometry and composition, complex fire dynamics, and scale of wind-driven structure fires are key challenges in the analysis of these potential exposures.

Research on building-to-building fire spread has predominantly relied on reduced-scale experiments (Narayanan et al. 2022) or on numerical, stochastic, and physics-based modeling approaches (Huang 2020; Masoudvaziri et al. 2021; Himoto and Tanaka 2008; Cheng 2011; Purnomo Dwi et al. 2024). Experimental investigations addressing fire spread between buildings, specifically considering flame radiation through openings during internal fires, are relatively scarce (Yuen et al. 2021; Lee et al. 2009; Maranghides and Johnsson 2008). In contrast, during wildfires, entire *structures* can become fully engulfed in flames and subjected to elevated wind speeds, resulting in significantly different fire dynamics

and exposure risks to adjacent buildings. Research focusing on fire spread from fully engulfed *structures* to nearby buildings, particularly under high wind conditions, remains limited.

To address this research gap and improve our understanding of wind-driven building-to-building fire spread and verify if small-scale experiments still hold up in a more realistic scenario, a series of fire exposure experiments were conducted between sheds and *structures* at *IBHS*. In the shed experiments, 15 UL 711 Class 1-A – 6-A wood cribs were placed inside a 12 x 24 foot shed, and the spread of the fire, heating rate, and damage modes to a 30 x 40 x 16 foot building were monitored. Currently, *IBHS* is working on another series of experiments between *ADU*'s and structures. The *ADU*'s contain household fuels and are internally finished to include the impact of fire development in a multicompartment *structure* from internal and external ignitions.

In the initial structural fuel fire intensity analysis, the potential impact of structural fuels are considered through a point source radiant heat calculation as indicated in *Equation B5-3* (Himoto 2023) utilizing heat release rates from literature and experiments at *IBHS*, and cross referenced with experimental heat flux and flame length measurements at *IBHS*.

$$\dot{q}_r'' = \frac{\chi_R HRR}{4\pi R^2} \quad \text{Equation B5-3}$$

Where X_R is the radiative fraction, HRR is the heat release rate of the fire, and R is the distance from the source to the target. The radiative fraction X_R is assumed to be 0.3 for these calculations (Himoto 2023). An analysis of the potential of direct flame contact and convective heating due to plume dynamics is not yet considered in this analysis. Flame shape and plume dynamics of multicompartment fires under wind driven conditions are not well understood and were considered beyond the scope of the capabilities of this document until a better understanding of the problem is established. However, to provide a conservative analysis that does not dismiss the contributions of these heat transfer mechanisms, the measured total heat fluxes at *IBHS* for wind-driven experiments are incorporated in this analysis, shown in *Figure B5.5* and discussed in more detail later in this section.

Heat release rates for *structure* fires are limited in the literature. Values from studies with a variety of compartment sizes and fuel conditions are considered as well as computational fluid dynamic method utilized by Purnomo DM et al. (2024) shown in *Table B5.6*. These HRR and the resulting heat flux exposures determined using *Equation B5-3* are shown in *Figure B5.5*.

Table B5.6 Heat release rates from available literature.

Type	Building Type/ Size (m ²)	Size (m ²)	Peak HRRPUA (kW/m ²)	Peak HRR (MW)
<i>Experimental Measurement IBHS</i>	Shed w/ Wooden Cribs	26.8	2238	60
<i>Experimental Measurement*</i>	Residence	8.64	255	2.2
<i>FDS Simulation 1*</i>	Residence	174	575	100
<i>FDS Simulation 2*</i>	Residence	109.2	687	75
<i>FDS Simulation 3*</i>	Residence	14.4	1014	14.6

Type	Building Type/ Size (m ²)	Size (m ²)	Peak HRRPUA (kW/m ²)	Peak HRR (MW)
Experimental Measurement NIST	Unfinished Residence (OSB & 2x4)	12	1816	21.8
Experimental Measurement FM Global	Residence	28.06	470.4	13.2

*Adapted from Jiang et al. (2021).

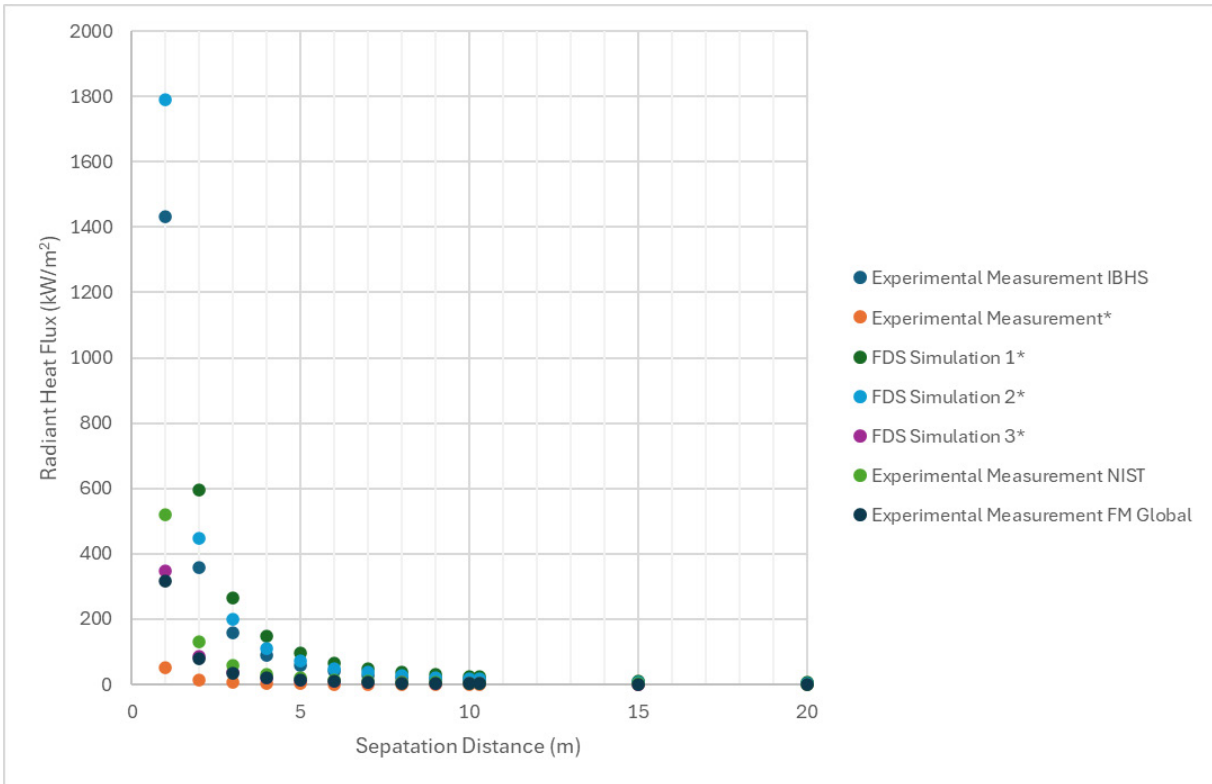


Figure B5.5. Plot of calculated radiant heat fluxes at varying distances using Equation B5-3 and Heat Release Rates for structures from literature and measurements at IBHS.

These calculated radiative heat flux values were compared to total heat flux measurements taken at *IBHS* during wind driven shed experiments at 20, 30, and 60 mile per hour wind speeds. It is known the wind component of the experiments at *IBHS* will have a significant impact of the resulting total heat flux measured downstream due to changes in the burning rate, flame stretch, flame tilt, and plume dynamics depending on the magnitude of the wind speed. The complexity of incorporating these impacts characteristic of wind-driven fire is beyond the current capabilities of this standard and instead, measurements from experiments at *IBHS* are used to ensure that the methods applied in this standard are sufficient for the potential exposure. In *Figure B5.6* the maximum and minimum fire sources are shown with a power fit, bounding the radiant heat fluxes calculated using the estimated fire sizes in *Table B5.6* and *Equation B5-3*. *IBHS* experiments with wind speeds between 20 and 30 mph are labeled as “*IBHS* Wind Driven Fire Shed Tests” while the 60 mph tests are labeled as “*IBHS* Extreme Wind Driven Fire Tests” in *Figure B5.7*.

IBHS wind driven fire shed tests fall generally within the two HRRs considered aside from measurements at lower *structure separation* distances that are more impacted by the wind component of the test and likely convective heat flux not considered in *Equation B5-3*, however, none of the IBHS extreme wind driven fire tests fall within the estimate by *Equation B5-3*. The result suggests the 70-mph gust wind speed, set as the design wind speed for this standard, would have led to an underestimation of the exposure heat flux. The high wind speed impacts the fire by stretching the flame closer to the target, increasing the fire intensity significantly, and introducing a convective heating component not considered in *Equation B5-3*, or a combination of these.

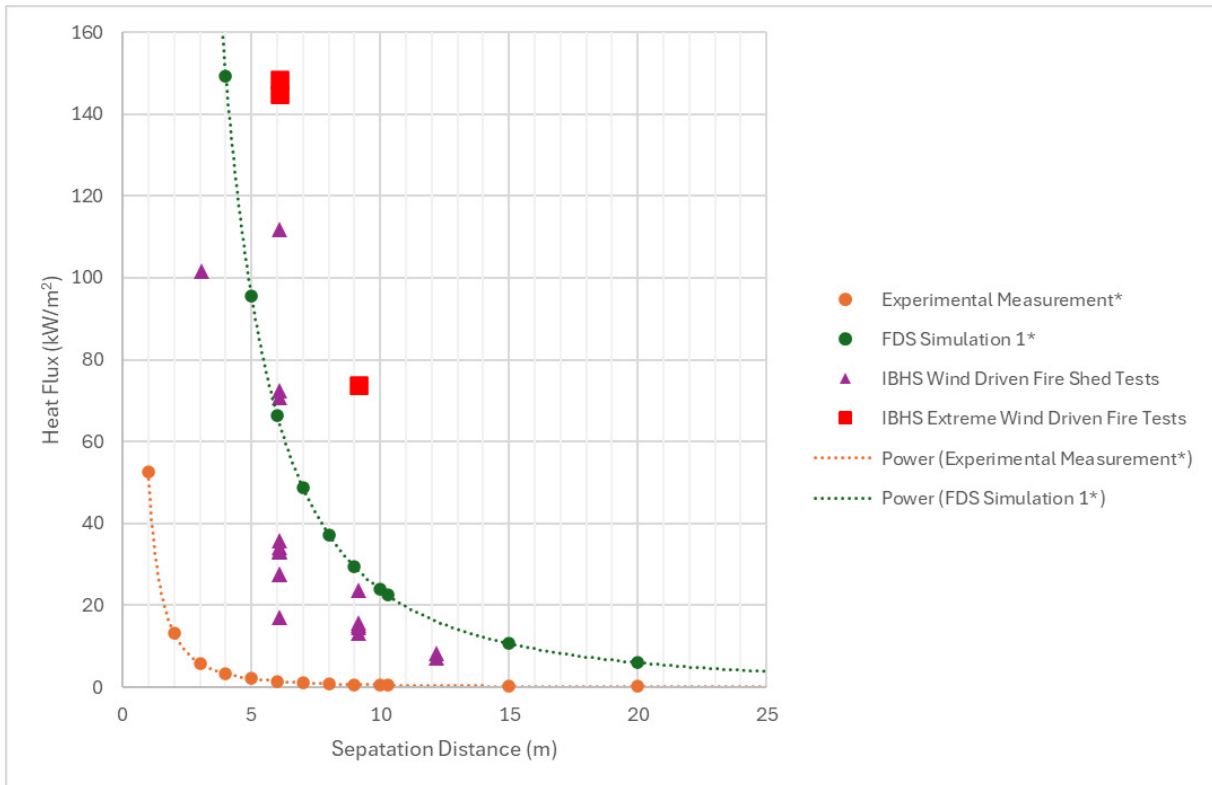


Figure B5.6. Maximum and minimum calculated radiant heat fluxes from Figure B5.5 and measured total heat fluxes from wind driven structure-to-structure fire spread experiments at IBHS.

To account for this underestimation, and to provide a conservative estimate for heating in the extreme wind-driven fire scenario, an effective HRR is determined. The effective HRR is calculated utilizing the measured heat fluxes in the extreme wind-driven fire tests and *Equation B5-3*. A heat release rate of 258 MW is determined using the maximum heat flux measurement from the extreme wind driven fire tests using *Equation B5-3*. Calculated heat fluxes using *Equation B5-3* considering a heat release rate of 258 MW are plotted in *Figure B5.7*.

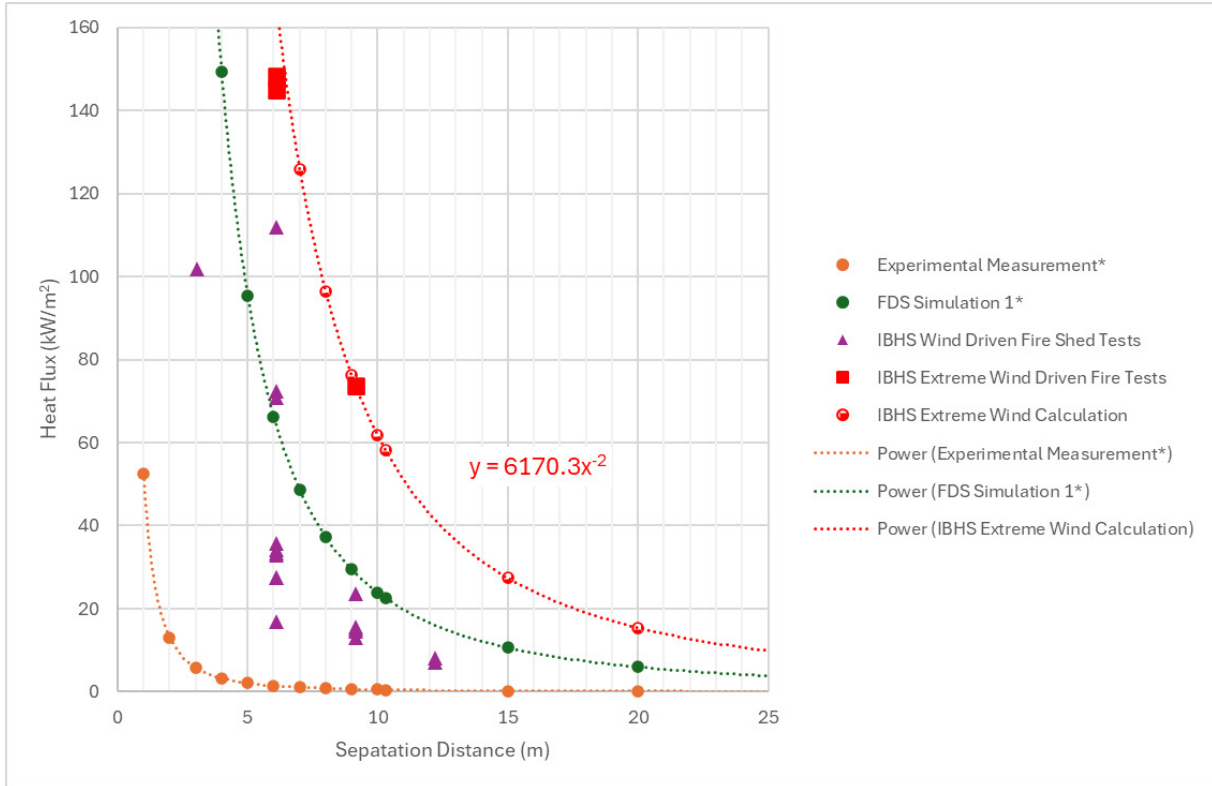


Figure B5.7. IBHS Extreme Wind-Driven Fire Shed Tests experimental measurements of total heat flux and associated curve fit using Equation B.5-3 to estimate the point exposure radiant heat flux, shown as a function of separation distance.

The curve fits for these heat fluxes provides a conservative estimate of distance in which *structures* require mitigation measures due to structural fuels outside the defined *neighborhood*. Solving for the threshold/design level heat flux of 13.1 kW/m², a *neighborhood flame zone* distance of 21.7 meters (71 feet) is used for structural fuels.

B5.4 Mitigation provisions for flames and radiant heat

While embers can ignite sporadic spot fires within communities, rapid fire spread from building to building occurs when spot fires grow and engulf *structures*. During such events, towering walls of flame can be driven by the wind, extending beyond the *structure separation* distance between homes and potentially causing direct flame contact. Furthermore, urban ladder/connective fuels—such as vehicles, sheds, fences, and vegetation—can ignite and contribute to the intensity and reach of the flames. As a result, *structures* at risk of direct flame contact must be hardened to withstand low to moderate heat exposure, which is the primary objective of the *IBHS WFPH Plus* requirements.

To achieve this, all primary vertical surfaces of the *structure*, including siding, windows, and exterior doors, should meet the highest fire resistance standards. It is also crucial to remove back-to-back fence rows, as they can facilitate fire spread between *parcels*. Additionally, the eaves and areas beneath bay windows should be enclosed to minimize heat accumulation in these zones. Deck assemblies should either be constructed from noncombustible materials or designed with solid walking surfaces that contain no gaps, further enhancing the home's fire resilience.

B6 Neighborhood ember zone

During wildland and WUI fires, numerous *firebrands* (the term embers is used interchangeably with the term *firebrands*)—flaming, glowing, or smoldering—are generated and transported by the fire's convective column and/or wind. Spotting consists of three key processes: generation, transport, and deposition. The likelihood of spot fires depends on fire intensity, ember properties, environmental conditions, and the characteristics of the fuel in which they land on (Filkov et al. 2023).

Fire intensity, driven by the interaction of fuel and local weather, is influenced by factors such as fuel load, wind speed, topography, and humidity. These elements determine the upward velocity of embers, with spotting distance largely dependent on fire intensity, wind conditions, and ember shape. A strong convective column lifts embers to a height where it descends as free-falling particles under wind influence. Disruption of the convective column by wind shear or premature ejection of embers can result in shorter-range spotting (Wadhvani et al. 2022).

Short-range embers, traveling less than 0.5 miles, are typically carried and/or tumbled by the wind rather than the fire plume, moving both vertically at times and/or horizontally over the ground. The travel distance is influenced by wind conditions, topography, and the type of burning material from which it originates. These embers often retain significant unburned material. Long-range ember transport, in contrast, are embers traveling substantial vertical and horizontal distances. These are lofted by the strong rising air associated with the fire's plume and tend to be less uniform in their dispersion. Several studies have attempted to model this phenomenon; however, the predicted long-range spotting distances in these models are often conservative. This is largely due to simplifying assumptions as there remains substantial gaps in the knowledge about the overall ember size distributions, their mass–diameter relationships, shape distributions, and overall aerodynamic properties.

B6.1 Ember characterization and transport

Several ember transport models have been developed to capture the complex behavior of embers and the environmental factors influencing their spread. Some models, particularly computational fluid dynamics (CFD)-based models, simulate the detailed physical processes of ember generation, lofting, and transport, accounting for convective currents, wind, and ember mass loss over time. While these models offer valuable insights into the interactions between embers, airflow, structures, and topography, it is computationally intensive.

These ember transport models share similar limitations, largely due to simplifying assumptions that affect predicted spotting distances. For instance, models often assume uniform wind profiles, disregarding natural fluctuations in wind speed and direction, which can significantly reduce ember travel. They also idealize ember properties, assuming fixed shapes (often spherical), constant mass with no mass loss during flight, and travel at terminal velocity. Additionally, steady heat conditions are commonly presumed, overlooking environmental cooling effects that can extinguish embers mid-flight. These models also assume unobstructed landscapes, omitting barriers such as vegetation, buildings, and varied topography that would hinder ember movement. Many models further exclude key factors like specific fuel types, detailed atmospheric conditions, and the true strength of the convection column, which influences terminal and initial vertical velocity. Together, these limitations often lead to conservatively large but comparable spotting distance outputs across models. For practical applications such as this standard, simpler, more efficient models are preferred. Applied ember transport models generally rely on statistical or empirical methods to represent ember generation, lofting, and spread over larger scales. Commonly used models include the McArthur (1967), Tarifa et al. (1965), Albini et al. (2012), and Himoto and Iwami (2021) models, each providing similar final transport distances.

McArthur (1967) developed a model for the maximum spotting distance in eucalypt forests, focusing on long-range *firebrand* transport, based on factors such as fire spread rate and fuel load. This model is derived by combining equations that describe the terminal velocity of *firebrands* during flight with models of lofting mechanisms and ambient wind conditions.

$$\text{Average max spotting distance} = \text{rate of spread}(4.17 - 0.033 \text{ fuel load}) - 0.36 \quad \text{Equation B6-1}$$

Tarifa et al. (1965) developed a model to estimate ember trajectory of burning wood particles of spherical and cylindrical shapes, representing embers. The particles were ignited and tested at their terminal velocity in horizontal and vertical wind tunnels. A differential equation was formulated using experimental data to predict the change in firebrand radius over time, which is essential for estimating both the flight duration and the time required for vertical ascent. The output of this model is depicted in *Figure B6.1*. One major challenge in this process was the particles typically break during flight and the validity range for the developed relation is not accurate at smaller sizes (Tarifa et al. 1965).

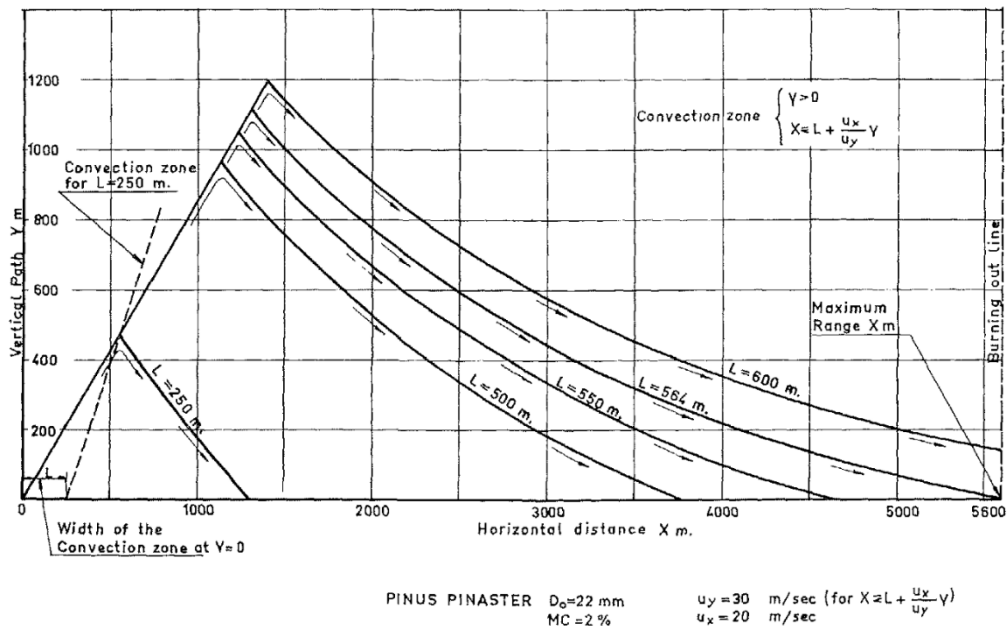


Figure B6.1. Flight paths of spheric firebrands (embers). Inclined convection column model. The initial position of the firebrands on the ground is fixed. From Tarifa et al. (1965).

Albini et al. (2012) developed a semi physical model to estimate the maximum spot fire distance from an active crown fire. This distance is based on flame height above the canopy, wind speed at canopy-top level, and the final size of the ember, represented by the diameter of a woody char cylinder. The model includes several components: a wind-blown flame front model, a two-dimensional buoyant plume model, a logarithmic wind speed profile with height, and an empirical model for the burning rate of a wooden cylinder (the *firebrand*). The ember's trajectory is calculated from its departure from the plume to its re-entry at the canopy, with the spotting distance depending on the ember's final diameter.

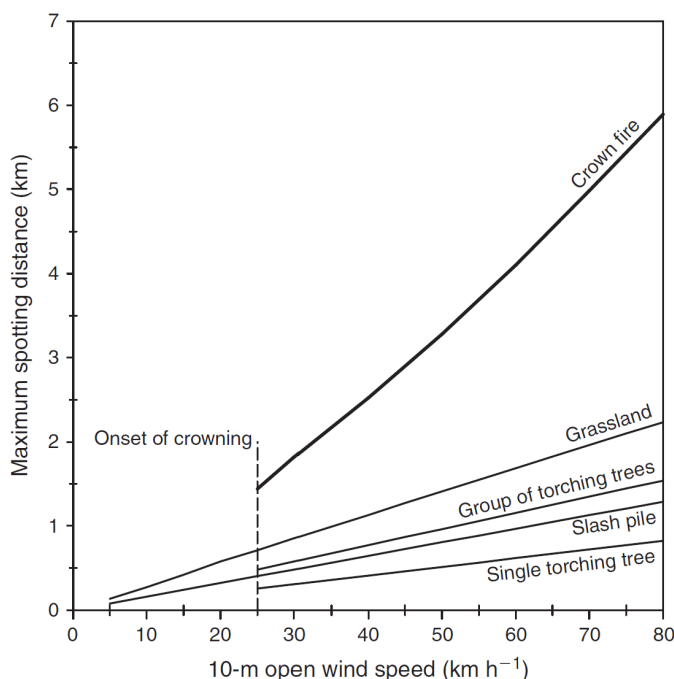


Figure B6.2. Comparison of model predictions for maximum potential spotting distance over level terrain as a function of wind speed for a specified set of burning conditions. From Albin et al. (2012).

Himoto and Iwami (2021) conducted a series of wind tunnel experiments to investigate the probabilistic variations in two of the three processes involved in spot ignition—*firebrand* generation and transport. The key variables studied were the ember ejection height (H), crosswind velocity (U_{∞}), and the thickness of the wood sticks used to construct the crib (d). Based on the experimental data, the projected area of embers and their downwind transport distances were modeled using simple physical principles. *Figure 3.7* illustrates the inputs for this model and the forces acting on embers. This includes: the ejection velocity, drag, gravitational forces, wind speed, and ejection height.

Himoto and Iwami's (2021) model was selected due to its simplicity in fuel characterization, allowing it to be used across different fuel assessment data sources and it offers a probabilistic approach. The probabilistic approach provides the opportunity to set a design level based on uncertainty in other elements of the standard through proper engineering judgement.

The following discussion outlines the ember transport calculation details used in this standard to ensure reproducibility. Relevant parameters in the Himoto and Iwami (2021) model are depicted in *Figure 3.7* in *Chapter 3, Section 3.4*. The constant values used in this standard are presented in *Table B6.1*. The ejection height was assumed to be equal to the fuel height, and all embers were considered to have a diameter of 1 cm. For the building fuel diameter, the equivalent hydraulic diameter of a rectangular (3.6 x 7.3 meters) was utilized. The values for heat release rate are the peak values reported for grass, for trees, and for buildings (sheds) (Overholt et al. 2014; Manzello et al. 2007; Maranghides et al. 2022). Accurately estimating the heat release rate of full-scale fires under windy conditions remains extremely challenging. Only a few studies have attempted to estimate the heat release rate of burning trees and grass. Since the heat release value for buildings is not available, a shed was used as a substitute.

Table B6.1. Constant values used in Himoto and Iwami (2021) model.

Parameter	Grass	Tree	Buildings
Ejection Height	1.5 m	3.45 m	3.45 m
Inflow Velocity		13,22,30 ms ⁻¹	
Ember Diameter		1 cm	
Fuel Diameter	50 cm	225 cm	487 cm
Heat Release Rate	0.15 MW	7.5 MW	20 MW
Gravity		9.8 ms ⁻²	

The lognormal distribution has been widely applied to model *firebrand* dispersion in windy conditions.

$$P(x_p|\lambda, \vartheta) = \frac{1}{\sqrt{2\pi}\vartheta x_p} e^{\left(\frac{-1}{2}\left(\frac{\ln x_p - \lambda}{\vartheta}\right)^2\right)} \quad \text{Equation B6-2}$$

$$\mu = \ln\left(\frac{\mu_x}{\sqrt{1 + \frac{\sigma_x^2}{\mu_x^2}}}\right) \quad \text{Equation B6-3}$$

$$\vartheta = \sqrt{\ln\left(1 + \frac{\sigma_x^2}{\mu_x^2}\right)} \quad \text{Equation B6-4}$$

Where μ and ϑ are mean and standard deviation respectively. By analyzing the deposition distribution of *firebrands* from a full-scale burn experiment of a three-story wooden building, Hayashi et al. (2014) derived the following relationships for the mean and standard deviation.

$$\frac{\mu_x}{d} = 41.0\hat{B}^{1.06} \quad \text{Equation B6-5}$$

$$\frac{\sigma_x}{d} = 4.52 \quad \text{Equation B6-6}$$

$$\hat{B} = \left(\frac{U_\infty U_0}{g\sqrt{d}d_p}\right)^2 \left(\frac{\rho_\infty}{\rho_p}\right) \left(1 + \sqrt{1 + \frac{2gH}{w_0^2}}\right)^2 \quad \text{Equation B6-7}$$

Here, \hat{B} governs the deposition behavior and is derived from embers with a diameter d_p , ejected from a fire with a height H and a vertical velocity w_0 , subjected to drag forces caused by a crosswind with speed U_∞ , \hat{B} can be viewed as the Froude number modified by the density ratio and initial effects of ejection velocity. The theoretical model for turbulent diffusion flames developed by Baum and McCaffrey (1989) was used to calculate the ejection velocity for intermittent flames.

$$w_0 = 1.85\dot{Q}^{1.5} \quad \text{Equation B6-8}$$

Where \dot{Q} is the heat release rate of the fire, listed in *Table B6.1*. By applying *equation B6-8* along with the values provided in *Table B6.1*, the ejection velocities obtained would be 5.04 m/s for grass embers, 11.02 m/s for tree embers, and 13.41 m/s for building embers. Applying these ejection velocities in *equations B6.2-7* and using the constants listed in *table B6.1*, the reported traveling distance for different embers could be obtained. It is important to note that this approach generates a probability distribution, allowing

the integral of the probability density function to be used for calculating the cumulative density function. For the *IBHS Wildfire Prepared Neighborhood Standard*, the 80th percentile threshold was selected for use in this standard. *Figure B6.4* illustrates the cumulative density function for grass embers at three different wind speeds and serves as an example of this approach.

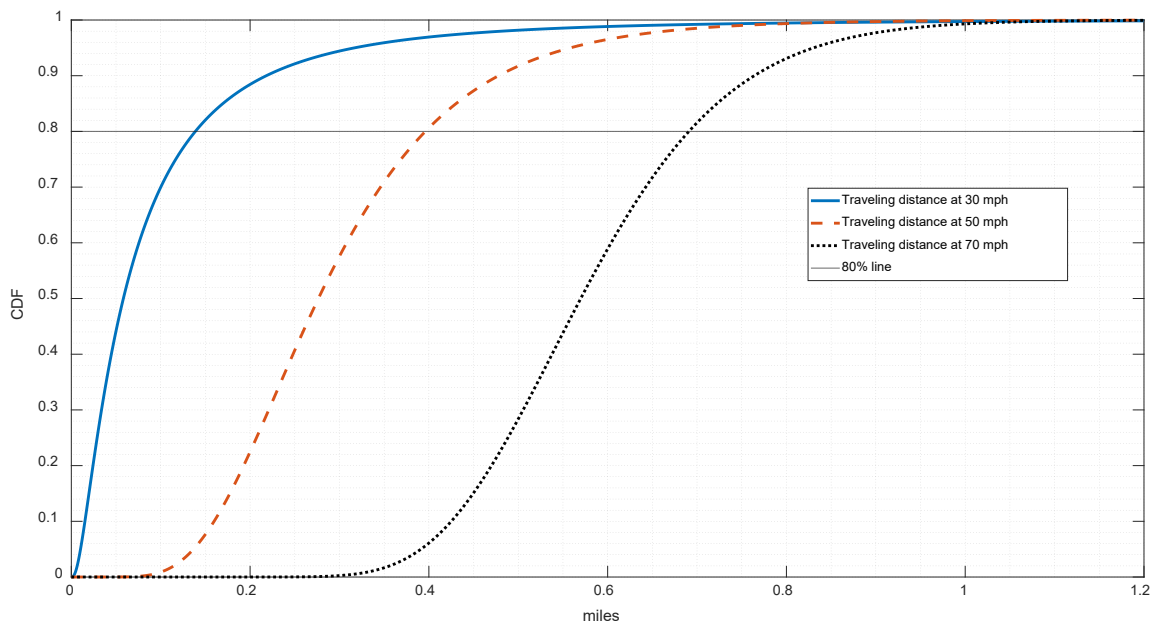


Figure B6.3 Estimated cumulative distribution function (CDF) of transport distance of firebrands from grass, based on parameters listed in Table B6.1

B6.2 Ember mitigation provisions

During wildfires, flying embers, along with wind-blown, ground-traveling burning debris, are the most common mechanisms that ignite *structures*, either directly or indirectly. Direct ignition occurs when embers land and accumulate on combustible building materials or enter through openings to ignite interior components. Indirect ignition happens when embers accumulate on nearby combustibles, igniting them and subsequently causing flames to reach the building through radiant heat or direct contact. While these spot fires typically burn with lower intensity than the main fire front, they can still spread to nearby *structures* under favorable conditions. Notably, only tall, thick flames can radiate enough heat to ignite *structures*; smaller flames must be in proximity or in contact to cause ignition.

Although experimental and numerical studies on ember storms in the *wildland-urban interface* (WUI) exist, predicting ember paths and accumulation locations remain challenging. During flight, embers follow unpredictable trajectories influenced by building features and environmental factors. The geometric characteristics of buildings, community density, and the nature of receptive fuel beds, along with the shape of the embers, their source fuel, and local wind patterns—especially coherent features at both meso- and microscales—affect ember accumulation. This complex thermal exposure necessitates systematic fuel management and home hardening strategies to mitigate the ignition probabilities of *structures*. In the *WUI*, ember-caused spot fires can use vulnerable *structures* as fuel, potentially escalating into tall flames and producing localized extreme fire behavior that threatens neighboring *structures*. While it may be possible to identify likely ignition pathways for an isolated *structure* during an ember storm, the chaotic accumulation patterns in communities complicate the identification of specific vulnerable components in any given *structure*. Recognizing these complexities, a systematic and

comprehensive hardening approach is essential to protect homes and their immediate surroundings against known vulnerabilities, which is the design performance criteria for the *IBHS WFPH Base* level of protection. This includes the requirement for a well-maintained Class A roof and the necessity for all vents to have mechanisms that minimize ember entry into the building. The *structure's* footprint should provide a 6-inch noncombustible vertical clearance to reduce direct contact between rolling, burning debris and any combustible exterior wall components. To mitigate the risk of indirect ember ignition, it is essential to maintain *defensible space*, with particular focus on the development and upkeep of a *0–5 Foot Noncombustible Zone*.

B7 Appendix specific references

Albert, C.M. and K.C. Liew. (2023). Recent development and challenges in enhancing fire performance on wood and wood-based composites: A 10-year review from 2012 to 2021. *J. Bioresources Bioproducts*, **9**, 27-42. <https://doi.org/10.1016/j.jobab.2023.10.004>.

Albini, F. A., M. E. Alexander, and M. G. Cruz. (2012). A mathematical model for predicting the maximum potential spotting distance from a crown fire. *Int. J. Wildland Fire*, **21.5**, 609-627.

American Society of Civil Engineers. (2022). Minimum design loads and associated criteria for building and other structures. ASCE/SEI 7-22, 1046 pp.

American Society for Testing and Materials. (2020). Standard Test Methods for Fire Tests of Roof Coverings.

Baum, Howard R. and B. J. McCaffrey. (1989). Fire induced flow field-theory and experiment. *Fire Safety Science*, **2**, 129-148.

Bryner, S. L. (2000). Fifteenth Joint Panel Meeting of the UJNR on Fire Research and Safety. N. 6588.

Bu, R., Y. Zhou, L. Shi, and C. Fan. (2021). Experimental study on combustion and flame spread characteristics in horizontal arrays of discrete fuels. *Combustion and Flame*, **225**, 136-146

Butler, B., R. Parsons, R., and W. Mell. (2015). Recent findings relating to firefighter safety zones. In *In: Keane, Robert E.; Jolly, Matt; Parsons, Russell; Riley, Karin. Proceedings of the large wildland fires conference; May 19-23, 2014; Missoula, MT. Proc. RMRS-P-73. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station, 73, 30-34.*

Cheney N.P., J.S. Gould, and W.R. Catchpole. (1998) Prediction of fire spread in grasslands. *International Journal of Wildland Fire*, **8**, 1–13. doi:10.1071/WF9980001.

Cheng, C. (2011). Study on forest fire induced breakdown of 500 kV transmission line in terms of characteristics and mechanism. *Environ. Sci. Eng.*

Cohen, J., (2008). The wildland urban interface fire problem: A consequence of the fire exclusion paradigm. *Forest Hist. Today*, 20-26.

Cohen, J. D. (2004). The International Crown Fire Modelling Experiment (ICFME) in Canada's Northwest Territories: Advancing the Science of Fire Behaviour. *Canadian Journal of Forest Research*, **34**, 161–173. <https://doi.org/10.1139/x03-193>.

- Cohen, J. D. (2004). Relating flame radiation to home ignition using modeling and experimental crown fires. *Canadian Journal of Forest Research*, **34**, no. 8, p.1616-1626.
- Davis, J. B. (1990). The wildland-urban interface: paradise or battleground? *J. Forestry*, **88**(1), 26- 31.
- Despain, D. G., D. L. Clark, and J. Reardon. 1996. Simulation of crown fire effects on canopy seed bank in lodgepole pine. *International Journal of Wildland Fire*, **6**, 45–49.
- Di Cristina, G., S. Kozhumal, A. Simeoni, N. Skowronski, A. Rangwala, and S.K. Im. (2021). Forced convection fire spread along wooden dowel array. *Fire Safety Journal*, **120**, 103090.
- FEMA. (2023). Mitigation Assessment Team Report Marshall Fire Building Performance, Observations, Recommendation and Technical Guidance. *FEMA P-320*, Technical Report, 160 pp.
- Filkov, A. I., et al. (2023). A review of thermal exposure and fire spread mechanisms in large outdoor fires and the built environment. *Fire safety journal*, 103871.
- Foot, E., Liu, J., and S.L. Manzano. (2011). Characterizing firebrand exposure during wildland urban interface fires. *Proceedings of Fire and Materials Conference*, Interscience Communications, London.
- Garner, J.M. and C.E. Kovacic. (2022). Extreme wildfire environments and their impacts occurring with offshore-directed winds across the Pacific Coast States. *Wea. Climate. Soc.*, **15**, 75-93.
- Giammanco, I.M., F. Hedayati, S.R. Hawks, X. Sanchez Monroy, and E. Sluder. (2023). The return of conflagration in our built environment. *Insurance Institute for Business & Home Safety*, Technical Report, 40 pp.
- Hayashi, Y., et al. (2014). Firebrand deposition and measurements of collected firebrands generated and transported from a full-scale burn test using a large wooden building. *AIJ Journal of Technology and Design* **20** (45), 605-610.
- Hedayati, F., X. Sanchez Monroy, E. Sluder, H. Fallahian, and M. Shabani. (2024). The 2023 Lahaina conflagration. *Insurance Institute for Business & Home Safety*, Technical Report, 69 pp.
- Himoto K. and T. Tanaka. (2008) Development and validation of a physics based urban fire spread model. *Fire Safety Journal*. **43**, 477-494. <https://doi.org/10.1016/j.firesaf.2007.12.008>.
- Himoto, K., and T. Iwami. (2021). Generalization framework for varying characteristics of the firebrand generation and transport from structural fire source. *Fire safety journal* **125**, 103418.
- Himoto, K. (2023). Large outdoor fire dynamics. *CRC Press*, 1st ed. Boca Raton, FL, 393 pp.
- Huang, Q., A. Razi, F. Afghah, and P. Fule. (2020) Wildfire spread modeling with aerial image processing. *2020 IEEE 21st International Symposium on "A World of Wireless, Mobile and Multimedia Networks" (WoWMoM)*, Cork, Ireland, 2020, pp. 335-340. doi: 10.1109/WoWMoM49955.2020.00063.
- Hurley, M. J., D. T. Gottuk, J. R. Hall Jr, K. Harada, E. D. Kuligowski, M. Puchovsky, J. M. Watts Jr and C. J. Wieczorak. (2015). *SFPE handbook of fire protection engineering*, Springer Inc. 3546 pp.
- Insurance Institute for Business & Home Safety. (2020). California Wildfires of 2017 and 2018. Technical Report, 17 pp. https://ibhs.org/wp-content/uploads/member_docs/camp-fire-report_ibhs-1.pdf.

Insurance Institute for Business & Home Safety. (2021). Suburban Wildfire Adaptation Roadmaps. Technical Report, 52 pp. https://ibhs.org/wp-content/uploads/member_docs/ibhs-suburban-wildfire-adaptation-roadmaps.pdf.

Jiang, W., Wang, F., Fang, L., Zheng, X., Qiao, X., Li, Z., Meng, Q. (2021). Modelling of wildland-urban interface fire spread with the heterogeneous cellular automata model. *Environmental Modelling & Software*, Volume 135, 2021, 104895, ISSN 1364-8152, <https://doi.org/10.1016/j.envsoft.2020.104895>.

Koo, J.H., W. Wootan, W.K. Chow, H.W.A, Yeung, and S. Venumbaka.(2001). Flammability studies of fire-retardant coatings on wood. *Fire and Polymers*, ACS Symposium Series, American Chemical Society, Washington, DC, 2001, **797**, 361–374.

Kremens, R.L., M.B. Dickinson, and A.S. Bova. (2012). Radiant flux density, energy density, and fuel consumption in mixed-oak forest surface fires . *Int. J. Wildland Fire*, **21**, 722– 730.

LANDFIRE. (n.d.). *Fuel*. U.S. Department of the Interior & U.S. Forest Service. Retrieved November 26, 2024, from <https://landfire.gov/fuel>.

Lareau, N.P., N.J. Nauslar, and J.T. Abatzoglou. (2018) The Carr Fire vortex: A case of pyrotornado genesis. *Geo. Phys. Res. Lett.*, **45**, 107-113. <https://doi.org/10.1029/2018gl080667>.

Lee, S.W., M.B. Lee, Y.G. Lee, M.S. Won, J.J. Kim, and S.K. Hong. (2009) Relationship between landscape structure and burn severity at the landscape and class levels in Samchuck South Korea. *Forest Ecol. Manage.*, **258**, 1594-1604. <https://doi.org/10.1016/j.foreco.2009.07.017>.

Manzello, S. L., et al. (2007). Measurement of firebrand production and heat release rate (HRR) from burning Korean pine trees. *Fire Safety Science*, **7**, 108.

Maranghides, A. and E.L. Johnson. (2008) Residential structure separation fire experiments. *National Institute of Standards and Technology*, NIST Technical Note 1600, US Department of Commerce, 42 pp. <https://doi.org/10.6028/NIST.TN.1600>.

Maranghides, A. (2022). Structure Separation Experiments: Shed Burns without Wind. *National Institute of Standards and Technology*, US Department of Commerce.

Maranghides, A., E.D. Link, S. Hawks, J. McDougald, S.L. Quarles, D.J. Gorham and S. Nazare. (2022). WUI Structure/Parcel/Community Fire Hazard Mitigation Methodology, *National Institute of Standards and Technology*, NIST Technical Note 2205, 77 pp. <https://doi.org/10.6028/NIST.TN.2205>.

Maranghides, A., D. McNamara, W. Mell, J. Trook, and B. Toman. (2013). A case study of a community affected by the Witch and Guejito Fires: Report# 2: Evaluating the effects of hazard mitigation actions on structure ignitions (NIST Technical Note 1796). National Institute of Standards and Technology

Masoudvaziri, N., F.J. Szasdi Bardales, O.K. Keskin, A. Sarreshtehdari, K. Sun, and N. Elhami Khorasani. (2021). Streamlined wildland-urban interface fire tracing (SWUIFT): modeling wildfire spread in communities, *Environmental Modelling and Software*, 143.

McArthur, A. G. (1965). Fire behaviour in Eucalypt forests. *9th Commonwealth Forestry Conference*, Australia Forestry and Timber Bureau, 35 pp.

- McGrattan, K., B. Klein, S. Hostikka, and J. Floyd. (2008). Fire dynamics simulator (version 5), user's guide. *NIST special publication*, 1019(6).
- Menning, K. M., and S. L. Stephens. (2007). Fire climbing in the forest: a semiquantitative, semiquantitative approach to assessing ladder fuel hazards. *Western Journal of Applied Forestry*, **22.2**, 88-93.
- Moore, H. (1981). Protecting residences from wildfires: a guide for homeowners, lawmakers, and planners. Gen. Tech. Rep. PSW-GTR-50. *U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station.*, 44. <https://doi.org/10.2737/PSW-GTR-50>.
- Morandini, F., Y. Perez-Ramirez, V. Tihay, P.-A. Santoni, and T. Barboni. (2013). Radiant, convective and heat release characterization of vegetation fire. *Int. J. Therm. Sci.*, **70**, 83-91.
- Narayanan, V., A. Cicione, A.D. Botha, and R.S. Walls. (2022) Reduced-scale experiments and numerical simulations of informal settlement dwelling fires. *Progress in Scale Modeling an International Journal*, **3** (1), <https://doi.org/10.13023/psmij.2022.03-01-01>.
- Nguyen, D., and N.B. Kaye. (2021). Experimental investigation of rooftop hotspots during wildfire ember storms. *Fire Safety Journal*, **125**, 103445.
- Parsons, R., B. Butler, and W. Mell, (2014). "Ruddy" Safety Zones and Convective Heat: Numerical Simulation of Potential Burn Injury from Heat Sources Influenced by Slopes and Winds; Imprensa da Universidade de Coimbra: Coimbra, Portugal; ISBN 978-989-26-0884-6.
- Purnomo Dwi, M. J., Y. Qin, M. Theodori, M. Zamaniaelaei, C. Lautenberger, A. Trouvé, and M.J. Gollner. (2024) Integrating an urban fire model into an operational wildland fire model to simulate one dimensional wildland-urban interface fires: a parametric study. *International Journal of Wildland Fire*, **33**, WF24102. <https://doi.org/10.1071/WF24102>.
- Östman B. and L.D. Tsantaridis. (2016). Durability of the reaction to fire performance for fire retardant treated (FRT) wood products in exterior applications – a ten years report. *MATEC Web of Conferences*. **46**. 05005. [10.1051/matecconf/20164605005](https://doi.org/10.1051/matecconf/20164605005).
- Overholt, K. J., J. Cabrera, A. Kurzawski, M. Koopersmith, and O.A. Ezekoye (2014). Characterization of fuel properties and fire spread rates for little bluestem grass. *Fire Technology*, **50**, 9-38. <https://doi.org/10.1007/s10694-012-0266-9>.
- Quarles, S.L. and C. Standohar-Alfano. (2017). Performance of fire-retardant coatings used in exterior applications. *Insurance Institute for Business & Home Safety*, Technical Report, 46 pp.
- Ramsay, G. C., N. McArthur, and V. Dowling. (1987). Preliminary results from an examination of house survival in the 16 February 1983 bushfires in Australia. *Fire and Materials*, **11**, 49-51.
- Rothermel, R.C., (1972). A mathematical model for predicting fire spread in wildland fuels. Rocky Mountain Research Station. *United States Department of Agriculture*. Res. Pap. INT-115, 40 pp.
- Scott, J. H., and R. E. Burgan. (2005). Standard fire behavior fuel models: A comprehensive set for use with Rothermel's surface fire spread model. *USDA Forest Service*, General Tech. Rep. RMRS-GTR-153, 72 pp., <https://doi.org/10.2737/RMRS-GTR-153>.

Shields, W.M. (2008). Urban conflagrations in the United States, Society of Fire Protection Engineers, Technical Report, 28 pp.

Syphard, A. D., T.J. Brennan, J.E. and Keeley. (2014). The role of defensible space for residential structure protection during wildfires. *International Journal of Wildland Fire*, **23**, 1165-1175.

Tarifa, C. Sánchez, P. Perez Del Notario, and F. García Moreno. (1965). On the flight paths and lifetimes of burning particles of wood. *Symposium on combustion*. **10** (1). Elsevier.

Tihay, V., P.-A. Santoni, A. Simeoni, J.-P. Garo, and J.-P. Vantelon (2009). Skeletal and global mechanisms for the combustion of gases released by crushed forest fuels. *Combust. Flame* **156** 1565–1575.

Tihay, V., F. Morandini, P.-A. Santoni, Y. Perez-Ramirez, and T. Barboni (2014). Combustion of forest litters under slope conditions: burning rate, heat release rate, convective and radiant fractions for different loads. *Combust. Flame*, **161**, 3237–3248.

Van Wagner, C.E. (1977). Conditions for the start and spread of crown fire. *Canadian Journal of Forest Research*, **7**, 23–34. doi:10.1139/X77-004.

Vogel M., and F.R. Williams. (1970). Flame propagation along matchstick arrays. *Combustion Science and Technology*, **1**, 429–436. doi:10.1080/00102206908952223.

Wadhvani, R., C. Sullivan, A. Wickramasinghe, M. Kyng, and K. Mounuddin (2022). A review of firebrand studies on generation and transport. *Fire Safety Journal*, **124**, 103674.

Weber R.O. (1990) A model for fire propagation in arrays. *Mathematical and Computer Modelling*, **13**, 95–102. doi:10.1016/0895-7177(90)90103-T.

Weise D.R., X. Zhou, L. Sun and S. Mahalingam. (2005) Fire spread in chaparral – ‘go or no-go’. *International Journal of Wildland Fire*, **14**, 99–106. doi:10.1071/WF04049.

Yuen A.C.Y, et al. (2021) Evaluating the fire risk associated with cladding panels: An overview of fire incidents, policies, and future perspective in fire standards. *Fire and Materials*. **45**, 663–689. <https://doi.org/10.1002/fam.2973>.

Zhou, B., H. Yoshioka, T. Noguchi, X. Wang, and C.C. Lam. (2018). Experimental study on fire performance of weathered cedar. *Int. J. Architectural Heritage*, **13**, 1195-1208. <https://doi.org/10.1080/15583058.2018.1501115>.

APPENDIX C
Practitioner guide

C1 Standard summary

C1.1 Applicability

Construction Types: This standard applies to typical single-family, duplex, and townhome construction types.

Structure spacing: This standard can be applied to a defined neighborhood when 90% or more *structures* are separated by greater than 10 feet and less than 100 feet.

C1.2 Requirements summary

Roof: All structures within the defined neighborhood must have a Class A roof covering. In addition, no wood roofing products of any kind are allowed.

C1.2.1 Neighborhood flame zone

The *neighborhood flame zone* is an area typically located from the boundary of the *neighborhood* inward for up to approximately 450 feet (distances are dependent on fuel characteristics) which has the highest likelihood of experiencing the most severe fire exposure resulting from external fuels.

The *neighborhood flame zone* is determined using the processes described in *Chapter 3*. It accounts for external fuels within 0.25 miles of the neighborhood boundary and how it may produce flames/radiant heat sufficient to ignite common building materials. Any *parcels* which fall on the *neighborhood flame zone* boundary are considered in the *neighborhood flame zone* and must meet its requirements.

Those structures located in the *neighborhood flame zone* must meet the requirements of an *IBHS Wildfire Prepared Home – Plus* as specified in the *IBHS Wildfire Prepared Home Technical Standard* (<https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>). This includes a fully 0-5 Foot Noncombustible Zone, ember or ember- and flame-resistant vents, fully noncombustible wall cover materials, noncombustible decks, double paned tempered glass windows, and no *auxiliary structures* within 30 feet, etc.

It is possible that external fuels and/or *fuelbreak/firebreak* features can result in the *neighborhood flame zone* not being needed and required.

Connective fuels: For *structures* located inside the *neighborhood flame zone*, there can be no *connective fuel pathway* to any neighboring *structures*. For *structures* that meet the *IBHS Wildfire Prepared Home – Plus* level there will typically be no connective fuel pathways to any side/elevation of a *structure*. However, care must be taken with regards to the impact of *ADUs* and *accessory structures* and their location relative to neighboring *structures*.

C1.2.2 Neighborhood ember zone

The *neighborhood ember zone* is the area, typically the remainder of the neighborhood not within the *neighborhood flame zone* which has a high likelihood of experiencing ember attack from *external fuels* and/or *structures* within the *neighborhood* should fire enter. It is determined by the processes described in *Chapter 3* and considers *external fuels* within 4.25 miles of the defined neighborhood.

Those structures located in the neighborhood ember zone must meet the requirements of an *IBHS Wildfire Prepared Home – Base* as specified in the *IBHS Wildfire Prepared Home Technical Standard* (<https://wildfireprepared.org/wp-content/uploads/WFPH-Standard.pdf>). This includes a fully 0–5 Foot Noncombustible Zone, Class A rated roof covering, noncombustible gutters and downspouts, 6-inch noncombustible vertical wall clearance, ember or ember- and flame-resistant vents, etc.

It is possible the *neighborhood ember zone* will not cover the entire *neighborhood*; this is contingent on neighborhood size and fuel characteristics.

C1.2.3 Connective fuels in the neighborhood ember zone and remainder of the neighborhood
Connective fuels are evaluated across clusters of homes as described in *Chapter 3*. In general, within the *neighborhood ember zone* and the remainder of the neighborhood, 90% or more homes must have 1 or less *connective fuel pathways* to any neighboring *structure*. It is possible that a home does not have any connective fuel pathways but does not meet the *IBHS Wildfire Prepared Home Base* or *Plus* levels, however all dwelling units which meet the *IBHS Wildfire Prepared Home Standard* (Base or Plus mitigation levels) will generally meet these criteria except for select circumstances likely involving *connective fuel elements*, *ADUs* and *auxiliary structures* and their relative location compared to dwelling units on neighboring *parcels*.

C1.3 New neighborhoods, builders, developers, and planners

The 100% application of *IBHS Wildfire Prepared Home Plus* construction across a new *neighborhood* development, provided the *structure spacing* applicability criteria is met, will generally meet the requirements of this standard except in special cases related to *ADUs*, *auxiliary structures*, and *connective fuels*.

C2 Critical variables

A sample table of critical variables that are required within the processes described in Chapter 3. Those fields which ensure applicability and compliance with the IBHS Wildfire Prepared Neighborhood Standard are shaded green.

Row number	Variable	Description	Value Options	Assigned value
Applicability				
1.	Construction type	Are all primary and accessory dwelling units in the defined neighborhood one of the three types listed in Chapter 1?	Yes or No? If yes, standard is applicable	
2.	Structure separation minimum	Are 90% or more structures within the defined neighborhood separated by a minimum distance of greater than 10 feet	Yes or No? If yes, standard is applicable	
3.	Structure separation maximum	Are less than 10% of structures within the neighborhood separated by a minimum distance of 100 feet or more	Yes or No? If yes, standard is applicable	
<i>If the answers to rows 1,2, and 3 are yes, continue to roof requirements. If no, the standard is not applicable</i>				
Roof				
4.	Class A roof cover compliance	Do all primary or accessory dwelling units in the defined neighborhood have a Class A roof covering? (note: wood shake, wood shingles of any kind are prohibited)	Yes or No? If Yes, neighborhood is compliant	
<i>If the answer to row 4 is Yes continue to external fuel assessments</i>				
Flame fuel assessment zone	Variable	Description	Value Options	Assigned value

Row number	Variable	Description	Value Options	Assigned value
FZ1a.	Sector 1 identified worst case fuel type flame intensity distance	Fuel model type in sector 1 with the longest distance from Table 3.2	Distance from column 2 Table 3.2 (feet)	
FZ1b.	Sector 1 final <i>FZ</i> value for use in Equation 4-1. Canopy Provision	Is the vegetation canopy provision met in sector 1	If Yes , distance assigned from column 4 of Table 3.2 if No , value from FZ1a. is used	
FZ2a.	Sector 2 identified worst case fuel type flame intensity distance	Fuel model type in sector 2 with the longest distance from Table 3.2 sector 2	Distance from column 2 Table 3.2 (feet)	
FZ2b.	Sector 2 final <i>FZ</i> value for use in Equation 4-1. Canopy Provision	Is the vegetation canopy provision met in sector 2	If Yes , distance assigned from column 4 of Table 3.2 if No , value from FZ2a. is used	
FZ3a.	Sector 3 identified worst case fuel type flame intensity distance	Fuel model type in sector 3 with the longest distance from Table 3.2 in sector 3	Distance from column 2 Table 3.2 (feet)	
FZ3b.	Sector 3 final <i>FZ</i> value for use in Equation 4-1. Canopy Provision	Is the vegetation canopy provision met in sector 3	If Yes , distance assigned from column 4 of Table 3.2 if No , value from FZ3a. is used	
FZ4a.	Sector 4 identified worst case fuel type flame intensity distance	Fuel model type in sector 4 with the longest distance from Table 3.2 sector 3	Distance from column 2 Table 3.2 (feet)	
FZ4b.	Sector 4 final <i>FZ</i> value for use in Equation 4-1. Canopy Provision	Is the vegetation canopy provision met in sector 4	If Yes , distance assigned from column 4 of Table 3.2 if No , value from FZ4a. is used	
FZ5a.	Sector 5 identified worst case fuel type flame intensity distance	Fuel model type in sector 5 with the longest distance from Table 3.2 in sector 5	Distance from column 2 Table 3.2 (feet)	
FZ5b.	Sector 5 final <i>FZ</i> value for use in Equation 4-1. Canopy Provision	Is the vegetation canopy provision met in sector 5	If Yes , distance assigned from column 4 of Table 3.2 if No ,	

Row number	Variable	Description	Value Options	Assigned value
			value from FZ5a. is used	
FZ6a.	Sector 6 identified worst case fuel type flame intensity distance	Fuel model type in sector 6 with the longest distance from <i>Table 3.2</i> in sector 6	Distance from column 2 <i>Table 3.2</i> (feet)	
FZ6b.	Sector 6 final <i>FZ</i> value for use in <i>Equation 4-1</i> . Canopy Provision	Is the vegetation canopy provision met in sector 6	If Yes , distance assigned from column 4 of <i>Table 3.2</i> if No , value from FZ6a. is used	
FZ7a.	Sector 7 identified worst case fuel type flame intensity distance	Fuel model type in sector 7 with the longest distance from <i>Table 3.2</i> in sector 7	Distance from column 2 <i>Table 3.2</i> (feet)	
FZ7b.	Sector 7 final <i>FZ</i> value for use in <i>Equation 4-1</i> . Canopy Provision	Is the vegetation canopy provision met in sector 7	If Yes , distance assigned from column 4 of <i>Table 3.2</i> if No , value from FZ7a. is used	
FZ8a.	Sector 8 identified worst case fuel type flame intensity distance	Fuel model type in sector 8 with the longest distance from <i>Table 3.2</i> in sector 8	Distance from column 2 <i>Table 3.2</i> (feet)	
FZ8b.	Sector 8 final <i>FZ</i> value for use in <i>Equation 4-1</i> . Canopy Provision	Is the vegetation canopy provision met in sector 8	If Yes , distance assigned from column 4 of <i>Table 3.2</i> if No , value from FZ8a. is used	

The values determined in rows FZ1b, FZ2b...FZ8b are used to create a polygon inside the defined neighborhood boundary which determines the *neighborhood flame zone*.

Once the *neighborhood flame zone* boundary is determined:

Row number	Variable	Description	Value Options	Assigned value
<i>Neighborhood flame zone</i>				
FRz1.	Structure separation	Are 10% or more <i>structures</i> within the <i>neighborhood flame zone</i> separated by a minimum distance of less than 30 feet	Yes or No? If yes, specific <i>connective fuel</i> provisions are required in this zone &	

Row number	Variable	Description	Value Options	Assigned value
			additional ember transport distances are also required (see <i>Table 3.3</i>)	
FRz2a.	<i>Neighborhood flame zone mitigation requirements – connective fuels</i>	If FRz1 is Yes: Does any primary or accessory dwelling unit in the neighborhood flame zone have one or more connective fuel pathways to any side/elevation?	Yes or No? If yes, the zone is non-compliant If no, the zone is compliant	
FRz2b.	<i>Neighborhood flame zone mitigation requirements – connective fuels</i>	If FRz1 is No: Does any primary or accessory dwelling unit in the neighborhood flame zone have more than one connective fuel pathways to any side/elevation?	Yes or No? If yes, the zone is non-compliant If no, the zone is compliant	
FRz3.	<i>Neighborhood flame zone structure mitigation requirements</i>	Do all primary and accessory dwelling units in the neighborhood flame zone meet the requirements of IBHS <i>WFPH Plus</i> ?	Yes or No? If yes, the zone is compliant If no, the zone is non-compliant	

The *neighborhood ember zone* is determined by the processes stated in *Chapter 3, Section 3.4*. For each sector vector length calculations are required for each sector to determine the final *neighborhood ember zone* provisions.

Row number	Variable	Description	Value Options	Assigned value
<i>Neighborhood ember zone</i>				
Ez1.	Sector 1 longest ember transport vector length	Sector 1 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	

Row number	Variable	Description	Value Options	Assigned value
		<i>centroid of the neighborhood</i>		
Ez2.	Sector 2 longest ember transport vector length	Sector 2 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the <i>centroid of the neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	
Ez3.	Sector 3 longest ember transport vector length	Sector 3 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the <i>centroid of the neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	
Ez4.	Sector 4 longest ember transport vector length	Sector 4 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the <i>centroid of the neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	
Ez5.	Sector 5 longest ember transport vector length	Sector 5 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the <i>centroid of the neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	
Ez6.	Sector 6 longest ember transport vector length	Sector 6 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	

Row number	Variable	Description	Value Options	Assigned value
		or through the <i>centroid</i> of the <i>neighborhood</i>		
Ez7.	Sector 7 longest ember transport vector length	Sector 7 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward or through the <i>centroid</i> of the <i>neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	
Ez8.	Sector 8 longest ember transport vector length	Sector 8 longest ember transport vector length measured from the boundary of the <i>neighborhood</i> directed radially inward toward or through the <i>centroid</i> of the <i>neighborhood</i>	Calculated distance using <i>Table 3.3</i> and the defined <i>neighborhood</i> boundary	

Row number	Variable	Description	Value Options	Assigned value
Neighborhood ember zone				
Ez9.	<i>Neighborhood ember zone coverage</i>	Does the <i>neighborhood ember zone</i> cover the remainder of the <i>neighborhood</i> not included in the <i>neighborhood flame zone</i> or if no <i>neighborhood flame zone</i> is present, is the entire neighborhood included in the <i>neighborhood ember zone</i> ?	Yes or No?	
Ez10.	<i>Neighborhood ember zone mitigation requirements</i>	Do all primary and secondary dwelling units located in the <i>neighborhood ember zone</i> meet the requirements of <i>IBHS WFPH Base</i> ?	Yes or No? If yes, the <i>neighborhood ember zone</i> is compliant. If no, the <i>neighborhood ember zone</i> is non-compliant	

Connective fuels are evaluated by identified *clusters* of *structures*. Each *cluster* is assigned its own integer identifier. If the *neighborhood flame zone* is present and 10% or more of its *structures* have a minimum spacing of less than 30 feet the *neighborhood flame zone* is evaluated separately for *connective fuels*.

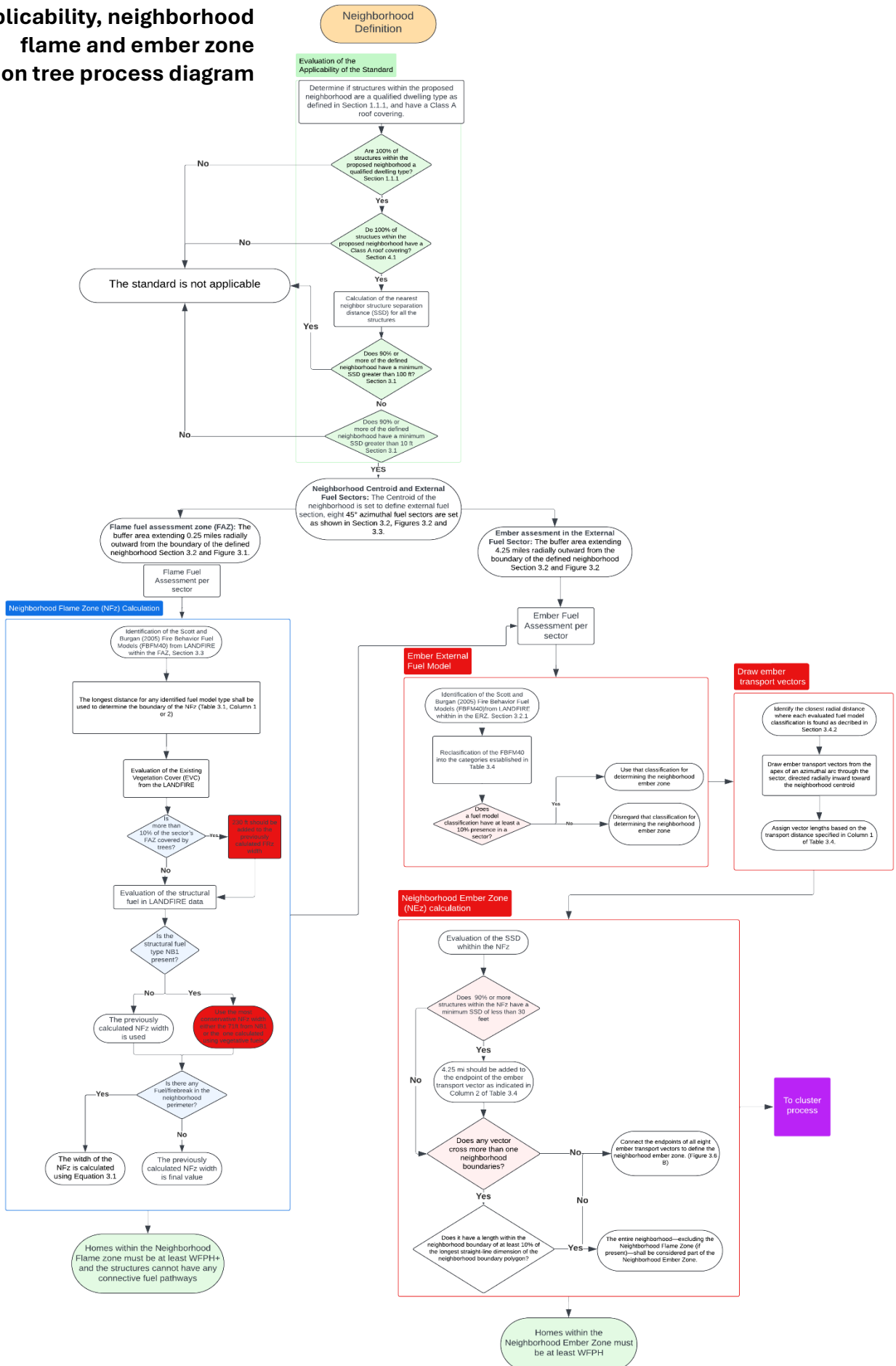
Row number	Variable	Description	Value Options	Assigned value
Connective Fuels				
CF1a.	Connective fuel flagged clusters	How many identified <i>structure clusters</i> were flagged for <i>connective fuels</i> ?	Integer	
CF1b.	Total structures in connective fuel flagged clusters	How many <i>primary or accessory dwelling units</i> are located in a <i>connective fuel flagged clusters</i> ?	Integer	
CF2a.	Connective fuel compliance	If NFz1 is Yes, Does the total number of	Yes or No?	

		<i>primary and accessory dwelling units</i> inside <i>connective fuel flagged clusters</i> AND not inside the <i>neighborhood flame zone</i> 10% or less than the total number of <i>dwelling units</i> in the <i>neighborhood</i>	If yes, the neighborhood not included in the <i>neighborhood flame zone</i> is compliant. If no, the area not included in the <i>neighborhood flame zone</i> is non-compliant	
CF2b.	Connective fuel compliance	If NFz1 is No , Does the total number of <i>primary and accessory dwelling units</i> inside connective fuel flagged clusters 10% or less than the total number of <i>dwelling units</i> in the <i>neighborhood</i>	Yes or No? If yes, the entire <i>neighborhood</i> is compliant. If no, the entire <i>neighborhood</i> is non-compliant	

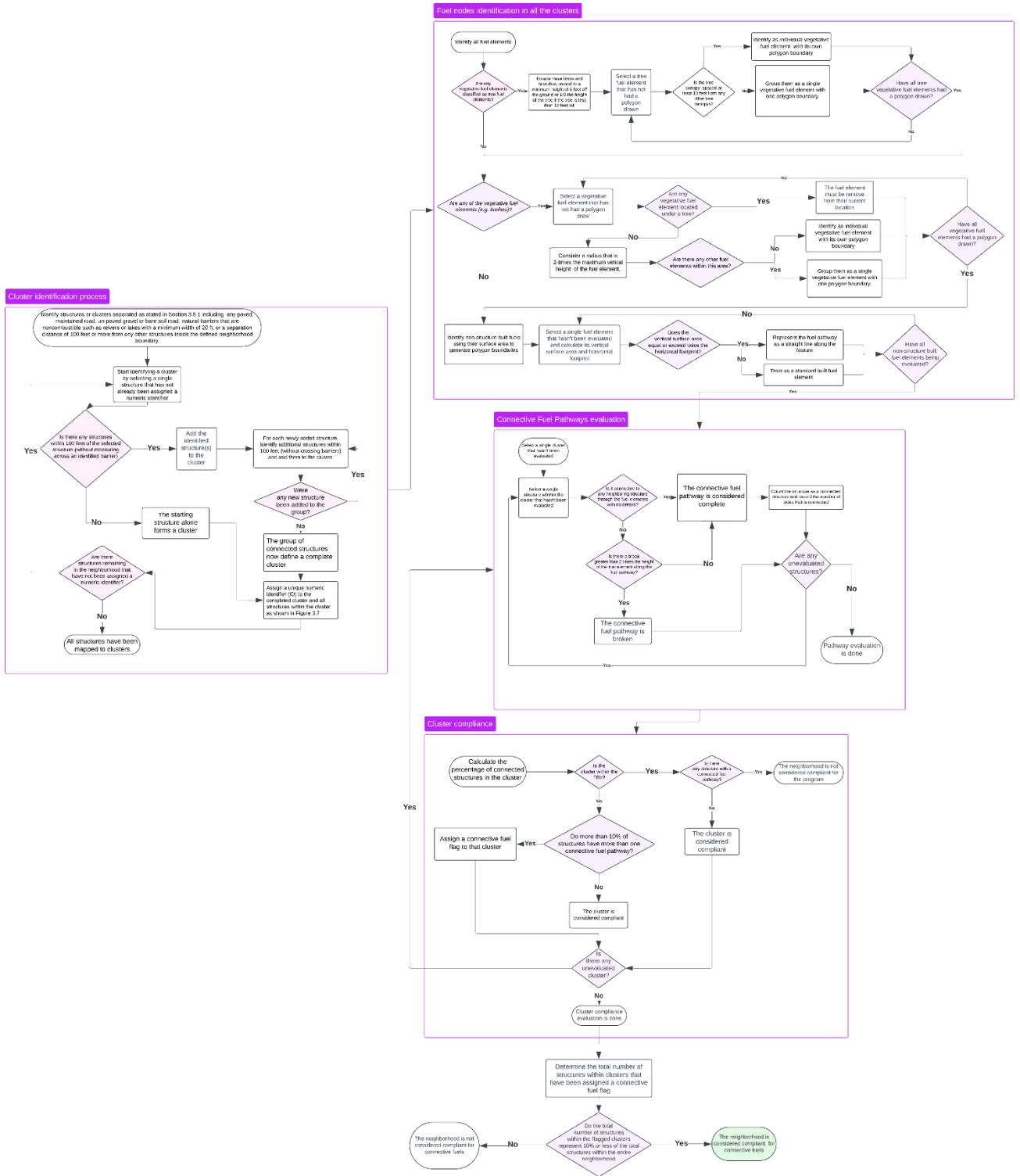
C3 Process diagrams

The decision-tree process diagrams for the standard applicability, neighborhood flame zone, neighborhood ember zone, cluster, and connective fuels are provided on pages 105–106 and available to download at wildfireprepared.org along with this standard.

Applicability, neighborhood flame and ember zone decision tree process diagram



Cluster and connective fuels process



Cameron Park Community Services District



Staff Report

DATE: June 2, 2026

FROM: Kalan Richards, Assistant Chief

AGENDA ITEM #3: Cameron Park Fire Department Logo Update

RECOMMENDED ACTION: Receive and file the presentation regarding the adoption of a new Cameron Park Fire Department logo for placement on the District's new Type III wildland fire engine and future fire apparatus, equipment, facilities, uniforms, and departmental materials

Background

As the Fire Department continues to modernize its fleet, staff has developed an updated logo that preserves the Department's heritage while providing a refreshed visual identity for future use. The new logo will first be displayed on the District's new Type III wildland fire engine, which is scheduled to enter service in June. The logo is also intended to become the standard departmental branding for future fire apparatus, vehicles, facilities, and other Fire Department materials.

Discussion

The proposed logo update reflects both the operational partnership between CAL FIRE and the Cameron Park Community Services District and the District's commitment to increasing public awareness of its role in providing local fire protection and emergency services.

Since entering into a cooperative fire protection agreement with CAL FIRE in 1996, the District has benefited from a highly successful partnership that combines local governance and community oversight with CAL FIRE's operational expertise and statewide resources. While the current department logo has served the community well, it does not clearly communicate the District's role as the local agency responsible for funding, governance, strategic planning, and oversight of fire services within Cameron Park.

The proposed logo combines the iconic CAL FIRE shield with the Cameron Park Community Services District seal. The design recognizes the longstanding relationship between the two organizations while identifying the District as the local provider of fire protection services. By incorporating the District's official logo into the department's branding, residents will have a clearer understanding that fire services are delivered through a partnership between CAL FIRE and the Cameron Park Community Services District.

Over time, this consistent visual identity will strengthen public recognition of both the Fire Department and the District's role in delivering essential emergency services to the community. This new logo will establish a branding standard that can be implemented on future apparatus and departmental materials.

The logo update is a branding and identification change only and does not alter the operational relationship, cooperative fire protection agreement, or service delivery model between the Cameron Park Community Services District and CAL FIRE.

Fiscal Impact

The initial cost associated with applying the new logo to the Type III fire engine is included within the vehicle budget. Future implementation costs will occur incrementally as new apparatus, vehicles, equipment, facilities, and materials are replaced or updated through normal operational processes.

Attachments:

3A – Proposed New Cameron Park CSD/CAL FIRE Logo

3B – Existing Cameron Park Fire Department/CAL FIRE Logo

New Logo



Existing Logo





Cameron Park Community Services District



Staff Report

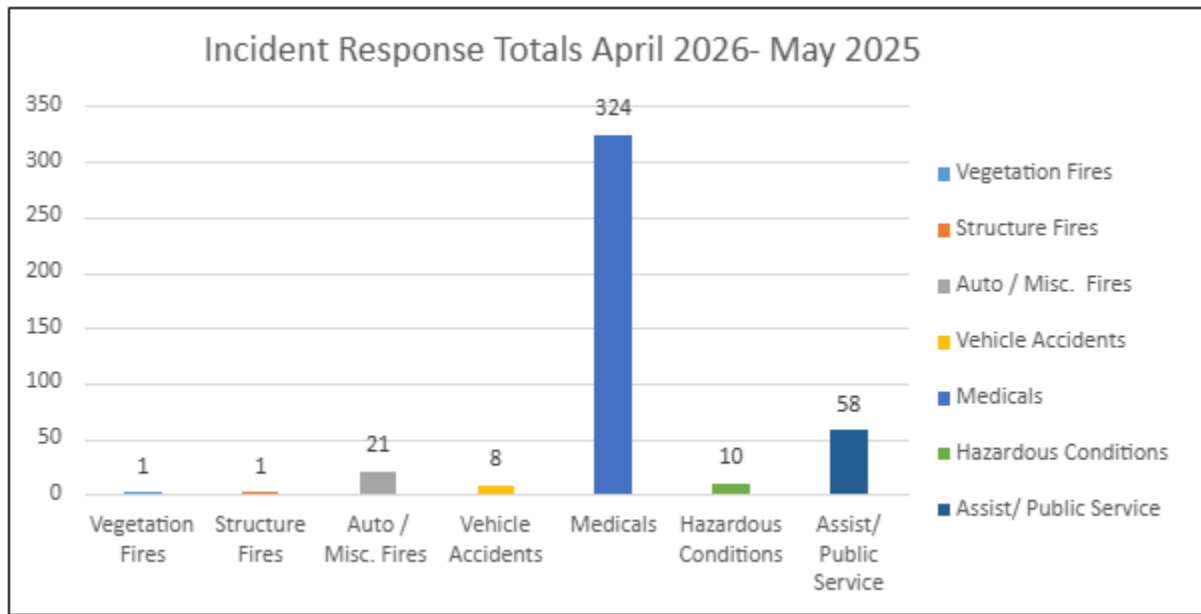
Date: June 2, 2026

From: Kalan Richards, Assistant Chief

Agenda Item #4A: Fire Department Report

Recommended Action: Receive and File

Incident Totals



Incident Comparatives

Monthly	Feb / March 2026	April / May 2026	Decrease
		467	423
Yearly	April / May 2025	April / May 2026	Increase
		398	423
YTD	YTD 2025	YTD 2026	Increase
		984	1079

Apparatus Maintenance and Tires

FY 25/26	
E89	\$11,518.68
E88	\$1,950.68
E289	\$18,686.71
E388	\$7,843.17
U89	\$529.48
B2715	\$1,367.12
U88	\$966.08
U289	\$1,406.80
Misc	\$1,114.96
Total	\$45,383.68
Budgeted	\$59,500.00
Remaining	\$14,116.32

Fire Apparatus & Swiftwater Rescue Team Revenue FY 25/26

E89	E88	E289	E388	U88	U89	U289	B2715	OES T/F	Overhead	Total
\$0.00	\$0.00	\$0.00	\$47,902.82	\$6,299.78	\$0.00	\$2,326.02	\$5,954.39	\$180,848.92	\$0.00	\$243,331.93

Engine E389 Has Arrived

The District's new Type III Engine was delivered on May 28th at Station 89. Over the next few weeks the team will be outfitting and equipping the engine with hose, emergency equipment, applying labeling and the logo as well as training on the apparatus.



Community Events

The Cameron Park Fire Department was proud to support the 30th annual Box Lunch event hosted by CASA El Dorado. Firefighters assisted with the delivery of lunches throughout the community, helping support an event that has grown into a countywide effort focused on compassion, community involvement, and advocacy for children in need. This year's event sold 2,440 lunches, was supported by 29 sponsors and over 50 volunteers, and provided donated meals to first responders, Upper Room, and survivors of violence and abuse in South Lake Tahoe. We are honored to partner with organizations like CASA El Dorado and appreciate the opportunity to support the important work they do for children and families across our community.



Cameron Park Community Services District



Staff Report

DATE: June 2, 2026
FROM: Alex Bourriague, Wildfire Mitigation Coordinator
AGENDA ITEM #4B: Wildfire Mitigation Coordinator (WMC) Report
RECOMMENDED ACTION: Receive and File

Unimproved Lots (Vacant Lots) – Inspections on unimproved lots are being completed. Final Notices are being mailed out with lots of property owners responding to them by calling in and completing the work or planning on having the work done. Property owners are encouraged to give updates to help prevent future abatements.

Summer Spectacular – Maps are being put together to help identify specific areas for vendors, staff and public.

CSD Parcels – Coordination is underway with maintenance to complete wildfire mitigation practices on properties.

Silver Springs – A meeting occurred within the new development of Silver Springs to discuss the planned IBHS designation that the new neighborhood is looking to achieve. This designation will be similar to what is established at the Stone Canyon development with KB homes.

Inspection History for April

AB38s -

5	33	5	36	1	4	0	0	0
Parcels Inspected	Parcels Inspected YTD	Inspections	Inspections YTD	Compliant	1st - NC	2nd - NC	3rd - NC	RTC

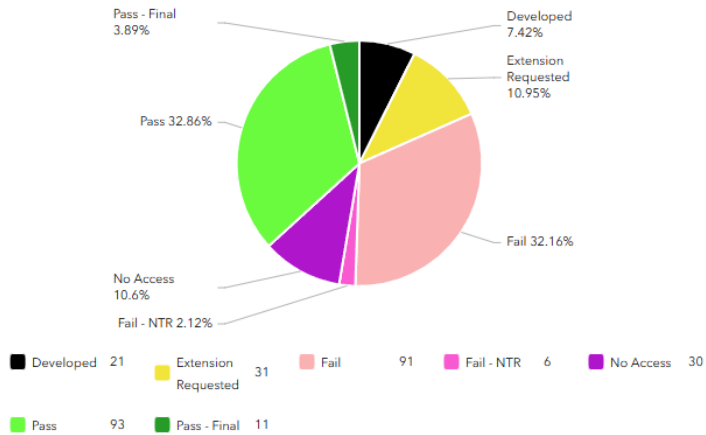
YTD = Year-to-Date, NC = Non-Complaint, RTC = Referred to County

County Complaints –

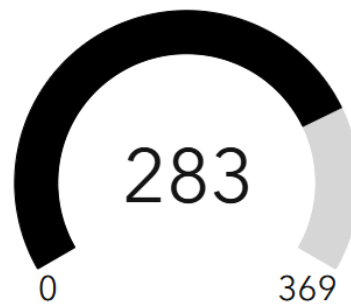
0	2	0	2	0	0	0	0	0
Parcels Inspected	Parcels Inspected YTD	Inspections	Inspections YTD	Compliant	1st - NC	2nd - NC	3rd - NC	RTC

YTD = Year-to-Date, NC = Non-Complaint, RTC = Referred to County

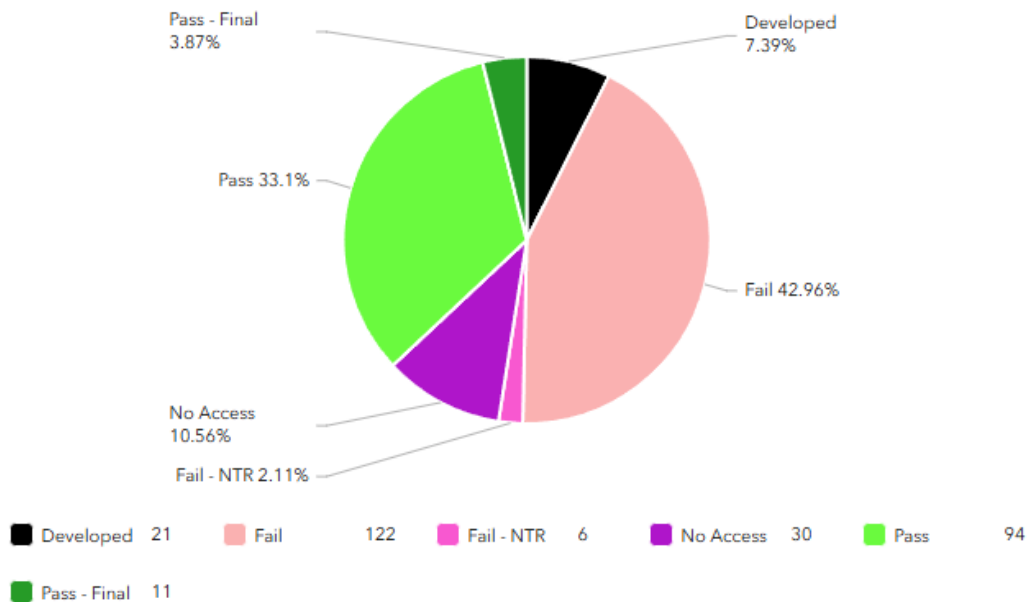
Parcels Inspection Status



Total Parcels Inspected



Inspection Records Status



Clear Grasses and Weeds; 4" minimum **Clear Rubbish**



Clear Other Hazardous Vegetation **Trees Limbed up; 6' minimum**



Nearby Structures have 100' of Clearance





INITIAL NOTICE

Unimproved Property Report Form



April 1st, 2026

\$(PRCL_ID)
\$(OWNER_NAME)
\$(MAIL_ADDR1)
\$(MAIL_ADDR2)

Dear Property Owner of APN \$(PRCL_ID),

California has a long history of wildfire disasters. The fire hazard in Cameron Park is seasonal, recurring, and must be cleared each year by the beginning of fire season. The Cameron Park Community Service District's (CPCSD) and Cameron Park Fire Department's (CPFD) goal is to make our community fire safe. Pursuant to the Cameron Park Weed and Rubbish Abatement Ordinance No. 025.05.01 all Unimproved parcels within the District shall comply with the following requirements:

1. Any Unimproved parcel of less than two acres (2 ac.) shall be cleared of all hazardous vegetation and rubbish. Weeds, non-cultivated pastures, or other hazardous vegetation shall be mowed and cut to maximum height of four inches (4 in.), so as to not constitute a fire hazard throughout the year.
2. Any Unimproved parcel, or multiple contiguous parcels under the same ownership, consisting of more than two acres (2 ac.) shall be cleared of all rubbish and shall either be cleared of all hazardous vegetation and mowed and cut to a maximum height of four inches (4 in.), or shall construct and maintain a minimum thirty-foot wide firebreak around the perimeter of the property. Firebreaks will be disked, and can also be scraped, provided that the scrapped material is removed or spread evenly over the remaining property.
3. Removed tree limbs six feet (6ft) from the ground.
4. The District's enforcement official or his/her designee may require a firebreak to a maximum of one hundred feet (100ft) in width, if the department is that the property or adjoining structures will be at risk from an approaching fire. These factors shall include fuel type(s), topography, and the environment where the property or adjoining structure(s) is located.
5. Dry leaves or wood chips located on parcels must be disked or turned under or evenly broadcast over the parcel area. If leaves or wood chips are being retained for the purpose of mulch or compost, they must be packed in a container so as to not constitute a fire hazard.

Inspections will start on May 4th, and process requires a notice of noncompliance (final notice) to be mailed certified to property owners who do not pass the initial inspection. Thirty (30) days will be given to correct the violation(s) found by the property owner, failure to comply may result in fines and abatement of the property. Such abatement will be made a legal charge against the owner or owners of the property and a lien imposed on and recorded against the property in the amount of such costs and such costs referred to the county tax collector for collection together with property taxes on such property pursuant to the provisions of Health and Safety Code sections 12875 through 14931, and Government Code sections 25845.

If you have any questions, contact us at (530) 677-2231 or wmc@cameronpark.org.

Sincerely,
Alex Bourriague
Wildfire Mitigation Coordinator
Cameron Park Community Service



FINAL INSPECTION NOTICE

Unimproved Property Report Form



\${PRCL_ID}
 \${OWNER_NAME}
 \${MAIL_ADDR1}
 \${MAIL_ADDR2}

Dear Property Owner,

An initial notice was mailed to you on April 1st informing you of Ordinance NO.2025.05.21 – “Weed and Rubbish Abatement” and the requirements your property is required to complete in order to be in compliance by May 1st, 2026.

This letter serves as your finale notice under Ordinance NO. 2025.05.21 – “Weed and Rubbish Abatement” that your property, Assessor’s Parcel Number (APN) **`\${PRCL_ID}`**, has been inspected and remains out of compliance with the ordinance requirements.

The reinspection date has been listed. Please ensure all work is completed on or before this date. Failure to pass the reinspection will result in the District moving forward with legal action.

Legal Consequences for Non-Compliance:

If your property is not in compliance by the reinspection date listed, the District will have to move forward with abatement work. Such abatement will be made a legal charge against the owner or owners of the property and a lien imposed on and recorded against the property in the amount of such costs and such costs referred to the county tax collector for collection together with property taxes on such property pursuant to the provisions of Health and Safety Code sections 12875 through 14931, and Government Code sections 25845.

Per the ordinance NO.2025.05.21, thirty (30) days must be given from the reinspection date before abatement work can be completed by the District. You will be notified if your property has failed the reinspection, which you will receive an “Abatement Appeal Notice” allowing you to appeal the scheduled abatement by the District.

Please notify us of any completed or planned work. If you have any questions, contact us at (530) 677-2231 or wmc@cameronpark.org.

Thank you for your immediate attention to this matter.

An attached inspection report outlines the present violation(s).

Sincerely,

Alex Bourriague
 Wildfire Mitigation Coordinator
 Cameron Park Community Services District



FINAL INSPECTION NOTICE

Unimproved Property Report Form



PROPERTY DETAILS

Assessor's Parcel Number (APN):	#{PRCL_ID}
Parcel Acreage:	#{ACREAGE}
Property Owner:	#{OWNER_NAME}
Mailing Address:	#{MAIL_ADDR1} #{MAIL_ADDR2}

INSPECTION DETAILS

Inspector:	#{Inspector}
Inspection Date:	#{InspectionDate}
Reinspection Date:	#{Reinspection}

INSPECTION RESULTS

Inspection Status: FAIL

#	Inspection Requirements	
1.	Grass and weeds cleared down to a four (4) inch minimum	<u>#{v1}</u>
2.	Rubbish is cleared	<u>#{v2}</u>
3.	Other hazardous vegetation is cleared	<u>#{v3}</u>
4.	Tree limbs are limbed up six (6) feet from the ground	<u>#{v4}</u>
5.	Structures within one hundred (100) feet have clearance	<u>#{v5}</u>

If any requirement has "Violation" next to it, that requirement is in violation and is required to be corrected. The property owner is responsible for correcting the violation(s) found.

General Line: (530)677-2231
Email Address: wmc@cameronpark.org

