FIRE PROTECTION PLAN

For The

West Lilac Farms Project

Located in Bonsall--Unincorporated San Diego County, CA

November 7, 2008, Revised November 6, 2009 &
January 20, 2010 Revision

Prepared For: James D. Pardee, Jr.
267 Stonecreek Ct.
Westlake Village, CA 91361

Prepared By: David C. Bacon

David C. Bacon
FIREWISE 2000, Inc.
26337 Sky Drive
Escondido, CA 92026
Telephone: (760) 745-3947
firewise2000@sbcglobal.net

WEST LILAC FARMS

FIRE PROTECTION PLAN
EXECUTIVE SUMMARY

This Fire Protection Plan (FPP) has been prepared for the West Lilac Farms project, located in the unincorporated community of Bonsall, County of San Diego. The plan addresses water supply; access; structural ignitability and fire resistive building features; fire protection systems and equipment; impacts to existing emergency services; defensible space; and, vegetation management.

This FPP evaluates the potential adverse effects to the West Lilac Farms project that could result from a wildland fire that occurs on or adjacent to the project. The Fire Protection Plan also evaluates the positive environmental effects that may occur by developing this particular property and provides basic guidance for homeowners in advance of and during a wildfire event.

This project complies with applicable fire regulations, including the California Fire Code, County Consolidated Fire Code, and the fire requirements of the Deer Springs Fire Protection District. The comprehensive Fire Protection Plan and the project are consistent with the San Diego County Department of Planning and Land Use recommendations including fuel modification.

Project Description. The West Lilac Farms project consists of the development of 28 homes on 28 lots ranging in size from 2.1 to 5.9 acres. The project includes the widening of two private roads (Aqueduct Road and Via Ararat Drive) connecting to West Lilac Road, a County maintained road for both primary and secondary access. The West Lilac Farms project site is located within the jurisdiction of the Deer Springs Fire Protection District (DSFPD). The DSFPD and the San Diego County Department of Planning & Land Use (DPLU) require a Fire Protection Plan that meets the requirements of County of San Diego Ordinance Numbers 9915, 10013 and Chapter 47, section 4703 of the County Consolidated Fire Code. Existing on-site uses consist of 90.93 acres of irrigated orchards and vineyards, and 1.85 acres of disturbed habitat within a well-defined watercourse that traverses the southwestern portion of the property crossing proposed parcels 1 through 5. A drainage supporting disturbed Southern Coast Live Oak Riparian Forest is present off-site to the northwest and southeast of the northeastern corner of proposed parcel 16. This Southern Coast Live Oak Riparian Forest does not extend into the project site. The project will result in the removal of approximately 32.43 acres of irrigated orchards and vineyards on-site and the removal of 1.85 acres of disturbed habitat for fire clearing and to accommodate the project development. Approximately 58.5 acres of the existing irrigated agricultural uses on-site will be retained, including the preservation of 22.6 acres of existing irrigated agricultural uses within a limited building zone.

On-site Vegetation. The West Lilac Farms project will consist of two (2) distinct areas: (1) the development area consisting of approximately 34.3 acres to accommodate the roads, driveways, building pads and leach fields; and, (2) the remaining 58.5 acres of irrigated agricultural uses on-site. A Fuel Model (FM) TL9 - Very High Load Broadleaf

Litter combined with FM SCAL18 - Sage/Buckwheat best describes this area for fire behavior purposes. This is the heaviest vegetation found within the project. The area being developed for roads, driveways and building pads consists of 25.2 acres of the 92.8 acre project site, representing approximately 27% of the project site. It will have little flammable vegetation due to planned grading and required fuel treatment. The 58.5 acres of agricultural uses that will remain on-site is existing irrigated organic avocado or citrus orchards. This includes 22.6 acres of irrigated agricultural uses within the agricultural preserve area on-site. A Combined Fuel Model of equal amounts of SCAL18 - Sage/Buckwheat and GR4 - Moderate Load Dry Climate Grass is most representative of this area.

Off-site Vegetation. Off-site open spaces located to the north, east, south and west of the West Lilac Farms project are a continuation of Fuel Model SCAL18 - Sage/Buckwheat and GR4 - Moderate Load Dry Climate Grass. While many of the adjacent properties today are planted and maintained groves of trees, ***FIREWISE* 2000, Inc**. assumed a worst case scenario in that these groves would at some point in the future be lost and replaced by native and non-native species. Two nurseries are located along a small portion of the northern boundary and large portion of the eastern project boundary. Several existing roadways abut the project including Via Ararat Drive to the west, Mount Ararat Way to the south and Aqueduct Drive along the eastern boundary.

Fire History. Data from the USGS Fire Planning and Mapping Tools was used to determine the fire history of wildland fire in the vicinity of the West Lilac Farms project. No wildland fires have burned the site in the past three decades. The West Lilac Farms project is located within a San Diego County DPLU Transitional Climate Zone. The vegetation within the West Lilac Farms project is consistent with this Climate Zone.

Defensible Space and Vegetation Management. As noted, the West Lilac Farms project has two (2) distinct on-site areas. The Development Area consists of 34.5 acres for roads, driveways, building pads and leach fields and the remaining 58.5 acres of irrigated agricultural uses. Fuel treatments, building setbacks, and siting are designed to not impact the protected habitat. This Development Area creates the greatest vegetative modification by removing non-native and native vegetation, restoration and enhancement.

Several scenarios were developed to determine the potential fire behavior of a wildland fire that might occur in the vicinity of the West Lilac Farms Project. Fire Behavior calculations were used to determine clearance requirements, allowable distances of vegetation treatment and maintenance requirements. The distances and requirements are delineated as Fuel Modification Zones (FMZ).

Only plant species listed in APPENDIX 'A' – *Project Specific County of San Diego DPLU Approved Plant List* or other recommended plant species meeting the criteria for fire resistive plant characteristics shall be planted within any fuel treatment zone and only after those plants have been certified by the applicant's landscape architect and fire consultant in conjunction with the Deer Springs Fire Protection District Fire Marshal. Plants not approved for planting in any fuel modification zone can be found in APPENDIX 'B'.

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Bonsall, California
November 7, 2008--Revised November 6, 2009 & January 20, 2010

INTRODUCTION

This Fire Protection Plan (FPP) has been prepared for the proposed West Lilac Farms Project (TM 5276) located between Via Ararat Drive and Aqueduct Road in an unincorporated portion of the County of San Diego known as Bonsall. The purpose of the FPP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate geology, combustible vegetation (fuel types), climatic conditions and fire history. The plan addresses water supply, access (including secondary access), structural ignitability and fire resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management. The plan identifies and prioritizes areas for hazard fuel reduction treatments and recommends the types and methods of treatment that will protect one or more-at-risk homes and essential infrastructures. The plan recommends measures that property owners will need to take to reduce the probability of ignition of structures throughout the area addressed by the plan.

CHAPTER 1: PROJECT LOCATION, DESCRIPTION AND ENVIRONMENTAL SETTING

1.1 Project Location

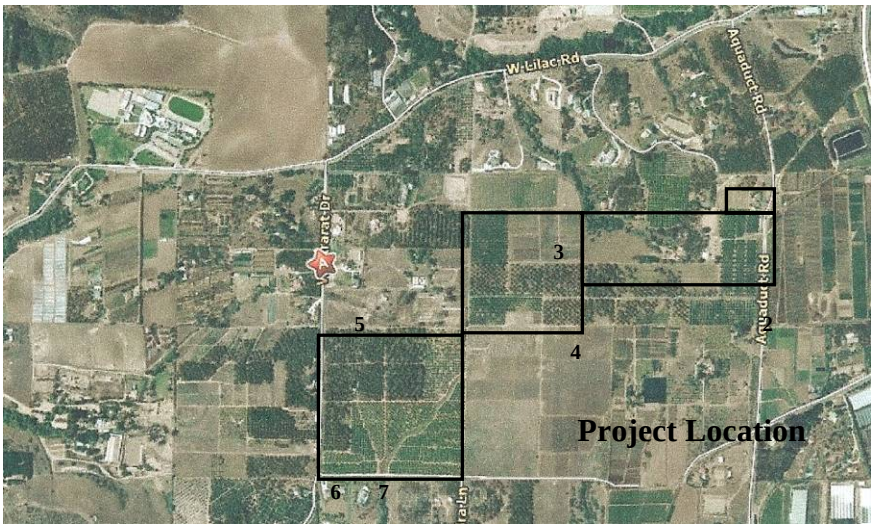
The project site is located within the community of Bonsall, an unincorporated area of northern San Diego County, California (See Photo No. 1). The site is located north of the City of Escondido and west of I-15 freeway between Aqueduct Road on the east and Via Ararat Drive to the west, south of Lilac Road and north of Mount Ararat Way. It includes Assessor's Parcel Numbers 127-271-28 and 127-290-05.

1.2 Project Description

The project includes a Tentative Map 5276 to develop 28 single family homes ranging from 2.1 to 5.9 acres on the 92.8 acre site owned by Mr. James Pardee, Jr. of Westlake Village, CA 91361. The project retains approximately 58.5 acres of irrigated agricultural uses on site. The development area consists of 34.3 acres to accommodate roads, driveways, the building pads and the leach fields. The site will consist of 28 homes and lots. Each structure will be no more than two (2) stories in height above grade. All public utilities will be installed below ground as an added fire protection measure.

General Plan Land Use Designations

The West Lilac Farms project site is within the jurisdiction of the Deer Springs Fire Protection District (DSFPD). The DSFPD and the San Diego County Department of Planning & Land Use (DPLU) require a Fire Protection Plan (FPP) that meets the requirements of County of San Diego Ordinance Numbers 9915 and 10013, and Chapter 47, section 4703 of the County Consolidated Fire Code. The FPP is to be submitted and approved by the DSFPD Fire Marshal, DPLU, and County of San Diego.



↑ **Photo 1: Aerial View Of The Irregularly Shaped West Lilac Farms Development. Note The Large Number of Orchards And Nurseries In The Area And Development North Of The Project. The Number Shown Represents The Approximate Location of Where The Respective Photos On The Following Pages Were Taken.**

↑ **Photo 2: North View Along Aqueduct Road. The West Lilac Farms Project Is Located To The Left and Currently Consists Of A Managed Orchard. A Nursery Abuts Aqueduct Road On The Right. The Road Is Paved Closer To Lilac Road.**

↑ **Photo 3: North View From South End Of Lot 16. Note The Southern Coast Live Oak Riparian Forest In The Center Of The Picture Adjacent To Avocado Groves. The Oak Forest Must Not Be Disturbed.**

↑ **Photo 4: Southwest View From Approximately Lot 19/20. Note The Current Light Vegetative Cover. The View Is Into Adjacent Property That Is Not A Part Of The Project But Owned By The Project Owner.**

↑ **Photo 5: North View From Near The Northern Lot Line For Lot 9. The Vegetation Is Light To Moderate On This Adjacent Parcel. A Home Is Located To The Right Of The Photo Out Of View. Via Ararat Drive, a Paved All Weather Private Roadway, Can Be Seen To The Left.**

↑ **Photo 6: North View Along Mount Ararat Way, From The Southern Boundary Of The Most Westerly Portion Of The Project (South End Of Lot 6). Note Several Existing Homes Are Located To The Right And To The Left. The Existing Irrigated Groves Are To Remain.**

↑ **Photo 7: Northeast View From Mount Ararat Way Of The Agricultural Limited Building Zone Easement Adjacent To Lots 1-5. A 100 Foot Wide Open Space Fire Clearing Easement Is Included To Protect The LBZ.**

1.3 Environmental Setting.

The West Lilac Farms proposed development is located within an interior Transitional Climate Zone approximately 14 miles inland from the Pacific Ocean. It is located northeast of the junction of Via Ararat Drive and Mount Ararat Way. The project extends east from Via Ararat Drive approximately 3,800' (ft.) to the east in an irregular shape (See Photo No. 1). The existing land use on the site consists of a managed organic orchard of avocados and citrus. Native vegetation on the project site ranges from a small area of Southern Coast Live Oak Riparian Forest and a highly disturbed intermittent streambed.

1.3.1 Topography and Roads. The topography of the project site consists of rolling terrain characterized by slopes from 5% - 20%. The lack of steep slopes will reduce fire impacts. All aspects of north, east, south and west are found within the project. Elevations range from 695+/- feet to 885+/- feet above mean sea level.

In general terms, the rolling terrain is dominated by irrigated and maintained orchards and small riparian woodland. The adjoining properties are similar in topography.

Currently, the project site is accessed by two (2) roadways. One (Via Ararat Drive, a paved roadway leading to West Lilac Road) located along the westerly edge of the property and the second (Aqueduct Road, located along the easterly edge of the project) leads northerly to West Lilac Road. None of the roads exceed a 15 percent grade.

1.3.2 On-site Vegetation. The determination of the on-site vegetation type is based upon field surveys done by the wildland fire consultant, review of the Biological Technical Reports; "Results of a Biological Resources Field Survey and Cumulative Impacts Analysis for West Lilac Farms I & II Tentative Map Project Site, TM 5276, Valley Center" prepared by Vincent N. Scheidt, dated August 12, 2009, and "Results of a Directed RPO Wetland Survey for the West Lilac I and II Project, TM 5276" dated August 12, 2009, also by Vincent N. Scheidt, Biological Consultant, and the likely climax plant community that would be found on the site without human intervention.

The project will result in two distinct areas: the 34.3 acre development area to accommodate roads, driveways, building pads and leach field areas and the 58.5 acre irrigated agricultural uses on-site that will remain. No biological open space easement is required on-site. 58.5 acres of agricultural uses will be retained including 22.6 acres that will be placed in an agricultural preserve easement on-site. A combined Fuel Model consisting of Fuel Model TL9 – Very High Load Broadleaf Litter (70%) and SC18 - Sage/Buckwheat (30%), best describes the area.

The 1.85 acres of disturbed habitat on the site will be preserved as part of the 22.6 acre agricultural preserve area designated on the project site.

This disturbed acreage contains grass species and weedy, herbaceous upland species such as Rupgut Brome, Tree Tobacco and Perennial Mustard. The drainage supports a handful of scrubby Southwestern Willows. This disturbed area on-site will be part of irrigated agricultural operations that will be conducted within the 22.6 acre agricultural preserve area on-site. A combined Fuel Model consisting of Fuel Model SCAL18 – Sage/Buckwheat (50%) and FM GR4 – Moderate Load Dry Climate Grass best describes the future area.

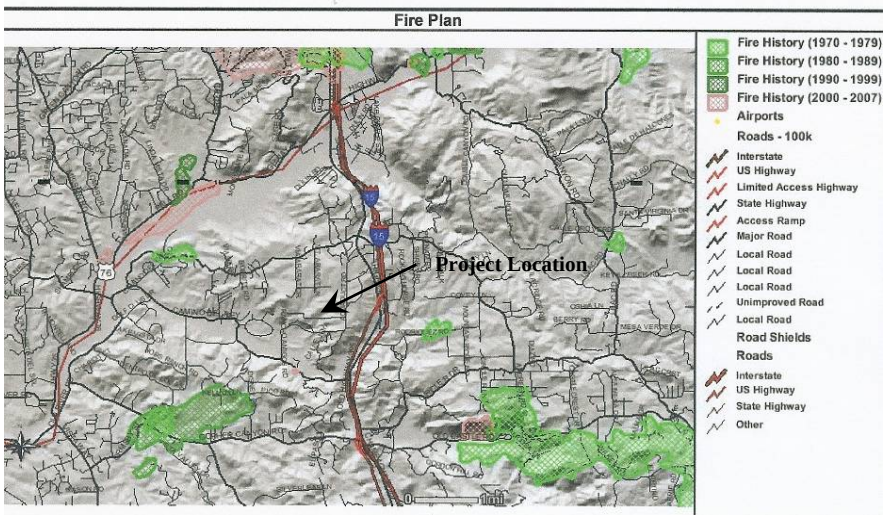
Last is the 34.3 acres planned for development. It consists of small areas that will not be graded for construction or fuel treated, and adjacent undeveloped properties or properties that may return to more natural vegetation should they be abandoned. Currently, 90.93 acres of the 92.8 acre project site consists of groves of citrus and avocado trees that are irrigated and maintained. For future fire behavior purposes, the climax vegetation was used for fire modeling that consists of a combined fuel model of FM SCAL 18 – Sage/Buckwheat with FM GR4 - Moderate Load Dry Climate Grass. Additional species such as tree tobacco and cactus may also establish themselves within this area but they do not readily contribute to fire behavior.

1.3.3 Off-site Vegetation. Areas surrounding the West Lilac Farms project are the same as those described in the on-site vegetation. It is assumed that the existing nurseries and groves may over time be lost and revert to natural and exotic plant species. Of benefit to the project is that existing roadways on the east, a portion of the south, and the west side abut the project. The vegetative fuel type in this off-site area is classified as a continuation of Fuel Model SCAL18 and GR4 noted in Section 1.3.2.

1.3.4 Fuel Loading. Several Fuel Models were considered for this project based on current and potential future climax vegetative cover including treated fuels. The Fuel Models selected were based on the descriptions presented in the enhanced Fuel Models developed and used in the BEHAVEPlus 3.0.2 program. For the West Lilac Farms project, the selected Fuel Models and loading are as follow:

Fuel Model	Description	1 hr Fuel Load tons/acre	10 hr Fuel Load tons/acre	100 hr Fuel Load tons/acre	Live Herbaceous Fuel Load tons/acre	Live Woody Fuel Load tons/acre	Fuel Bed Depth ft.	Dead Fuel Moisture of Extinction
GR1	Short Grass	0.10	0	0	0	0	0.4	15%
GR4	Moderate Load, Dry Climate Grass	0.25	0	0	0	0	2.0	15%
TL6	Moderate Load Broadleaf Litter	2.4	1.2	1.2	0	0	0.3	25%
TL9	Very High Load Broadleaf Litter	6.7	3.3	4.2	0	0	0.6	35%
SCAL 18	Sage / Buckwheat	5.5	0.8	0.1	0.75	2.5	3.0	25%

1.3.5 **<u>Fire History</u>**. To determine the history of wildland fire in the vicinity of the West Lilac Farms project, data from the California Fire Alliance Fire Planning and Mapping Tools was acquired. This internet-based tool provided a history of wildland fire occurring in 10-year increments.



↑ Map 1 – Large Fires (Over 100 Acres) Adjacent To The Project Between 1970 and 2007 Are Shown In Green.

1.3.6 ***FIRE****WISE* **2000, Inc.** chose to show large wildfires that were within approximately 3 miles of the project site. The 10-year periods used are: 1970-1979, 1980-1989, 1900-1999 and 2000-2007 (See Map 1).

Note: Map 1 shows a lack of significant large wildland fire history. The most notable recent fire located within 3 miles of the proposed project was the 2007 Rice Fire which is partially shown in the upper portion of the map in green. This 9,472 acre fire started October 22, 2007, and burned for several days, destroying over 200 homes and businesses. Many smaller fires have occurred which are not found on Map 1. Due to a combination of suppression activity, fuels treatment, natural and man-made barriers, weather and related factors, these fires never became as large or devastating as fires which occurred on October 22, 2007.

1.3.6 Climate/Weather. The West Lilac Farms project is located within a San Diego County DPLU Transitional Climate Zone. The general characteristic of this climate consists of mild, wet winters. The bulk of the annual precipitation (average of 13-15 inches per year) falls between January and March. Following the mild wet winter months are frequent periods of extended drought, and long hot and dry spring, summer and fall seasons.

The following chart represents the typical weather of a hot summer day in the Transitional Climate Zone, Santa Ana and "peak" (or worst case fire weather/climate conditions) elements for this Fire Protection Plan:

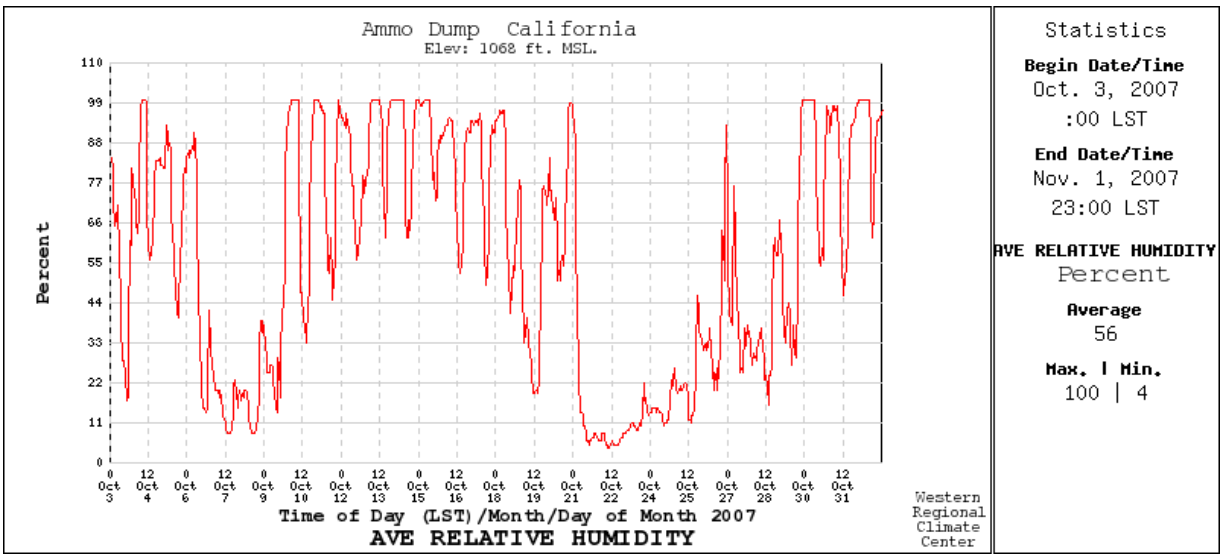
Period	Temperature	Relative Humidity	Sustained Wind Speed	Burning Index (99%)
Summer	90 – 109 deg F	10-14%	19 mph	119
Santa Ana	90 – 109 deg F	5 – 9%	28 mph	145
Peak	90 – 109 deg F	5 – 9%	41 mph	-

The BehavePlus 3.0.2 Fire Modeling Program to be discussed later in this plan utilizes fuel moisture levels in both live and dead vegetation, projected wind, topography and vegetation type to determine fire behavior. Temperature is not an input. Large fires may occur at much lower temperatures than shown above. Relative humidity of less than 5 percent may also occur. The Burning Index listed above is an indicator of the relative difficulty of fire control and is part of the National Fire Danger Rating Program. The higher the number, the more intense and severe a wildfire would be burning under the weather conditions described.

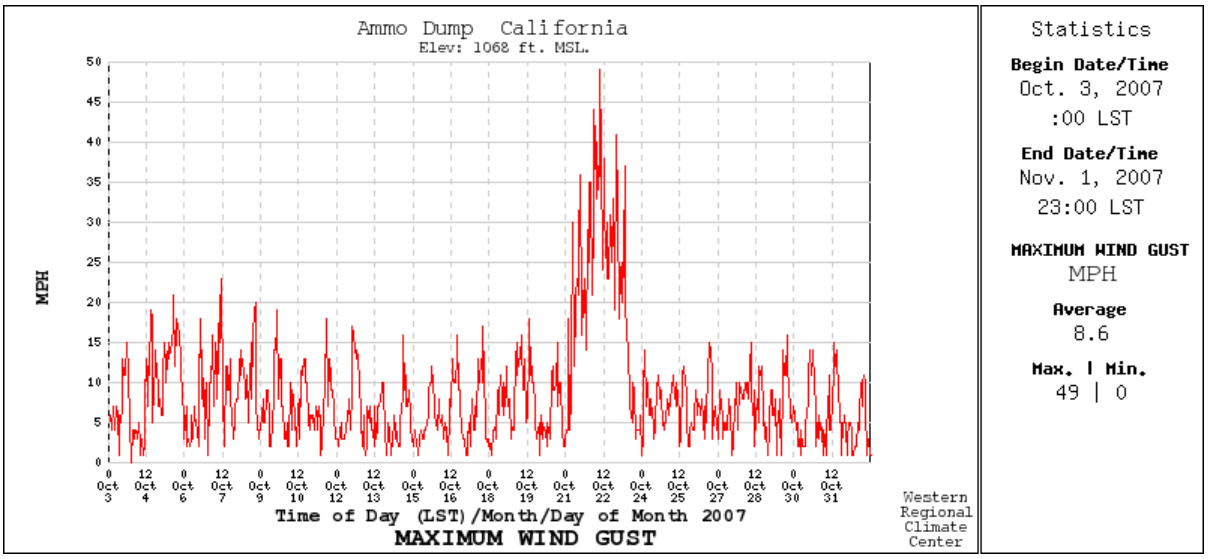
The key to how fast, how hot and at what intensity a wildland fire will burn is directly related to wind speed, wind direction, the age, composition and condition of burnable vegetative fuel and amount of moisture in the atmosphere. Wind direction usually determines how dry or moist (expressed as relative humidity) the air will be in the wind pattern. Local weather conditions (wind speed and live and dead fuel moistures) still are the key ingredients in determining fire intensity and rate of spread.

The most critical wind pattern to the West Lilac Farms is an off-shore wind coming out of the north/northeast, typically referred to as a Santa Ana wind. Such wind conditions are usually associated with strong (> 40-MPH), hot, dry winds with very low (< 15%) relative humidity. Santa Ana winds originate over the dry desert land and can occur anytime of the year. However, they generally occur in the late fall (September through November). This is also when non-irrigated vegetation is at its lowest moisture content.

Fire agencies throughout the western United States rely on a sophisticated system of Remote Automated Weather Stations (RAWS) to monitor weather conditions and aid in the forecasting of fire danger. The data acquired from RAWS is important to modeling wildland fire behavior. ***FIRE****WISE* **2000, Inc.** determined that the Ammo Dump RAWS located at LATITUDE: 33.3814. LONGITUDE: 117.2856 is the closest station to the project and has been in continuous operation since June of 2001. It captured significant weather data during the major southern California fires of October 2003 and most recently the fires of 2007, shown in Figures 1 and 2 which follow:



↑ **Figure 1: Ammo Dump RAWS Relative Humidity During The Fires of October, 2007. Note that the Rice Fire Started October 22, 2007. Humidity Was Recorded At 4 Percent That Day.**



↑ **Figure 2: Ammo Dump RAWS Wind Gusts During The Fires Of October, 2007. Note The Peak Wind Gust Of 49 Miles Per Hour Occurred During A Very Dry Period That Is Shown In Figure 1.**

In reviewing the two figures above, note that in late October the wind gusts were very strong and relative humidity was very low, an indicator of a Santa Ana wind event. For planning purposes, ***FIREWISE*** **2000, Inc.** utilized 60 MPH winds as the extreme or worst case wind likely at the West Lilac Farms project during low relative humidity. Higher wind speeds may occur during winter storms when humidity is high. Such winds are not a wildfire concern.

The Ammo Dump RAWS is located approximately 12 miles to the northwest of the project at an elevation of 1,068 feet. Data for all RAWS is archived in the Western Region Climate Center in Reno, Nevada. Weather data for all of October 2007 for Ammo Dump RAWS is presented in APPENDIX 'C', as an example of extreme fire weather. This historic weather data was used to help determine the more extreme fuel moisture regimes found later in this plan.

1.3.7 On-site and Off-site Land Uses. The on-site land use will be residential homes and irrigated agricultural crops. No commercial structures are planned.

Off-site land uses currently include several commercial landscape plant nurseries and scattered residential structures combined with irrigated agricultural uses.

1.3.8 Public and Private Ownership of Land in the Vicinity. All properties in the vicinity are under private ownership and are either residential or commercial ventures. There is little or no public ownership of lands in the vicinity. Along Aqueduct Road, a 125 foot wide San Diego County

Water Authority Water Line Easement exists. This feature should not have any impact on the FPP. Roadways in the area are private with the maintenance performed by an association.

1.3.9 Dates of Site Inspections/Visits conducted. ***FIRE****WISE* **2000, Inc.** has visited the site of the West Lilac Farms project on two occasions. The dates of visits and staff present are:

August 30, 2007	Preliminary site visit	David Bacon
June 24, 2008	Site inspection	David Bacon, Herbert Spitzer and Mel Johnson

CHAPTER 2: GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

This Fire Protection Plan (FPP) evaluates the potential adverse effects to the West Lilac Farms development that could result from a wildland fire occurring on, or adjacent to, the project. The FPP also makes appropriate recommendations to mitigate any adverse impacts and to ensure that development of this project does not unnecessarily expose people or structures to a significant risk of loss, injury or death because of a wildland fire. The FPP also evaluates the positive environmental effects that may occur by developing this particular property.

2.1 Analysis of Project Effects

This project complies with the California Fire Code, County Fire Code and fire department requirements of the Deer Springs Fire Protection District (DSFPD). The required fuel treatments of 100 feet can be established within the project when structures are setback from the project boundary a minimum of 100 feet or fuel treatment within the project is followed by off-site treatment that offers the same practical effect. Only the home on Lot 27 cannot achieve the required 100 feet of fuel treatment. Zone 1 has been enhanced to the property line or 90 feet to provide the same practical effect as 50 feet of Zone 1 followed by 50 feet of Zone 2 treatment. No fuel treatment will be required for the 58.5 acres of irrigated agricultural uses being retained on-site including the 22.6 acre agricultural preserve area.

Fire requirements for the project were evaluated by the Fire Marshal of the Deer Springs Fire Protection District (DSFPD). Those fire requirements are appended as EXHIBIT 'A' to this Fire Protection Plan. As discussed in more detail below, the project meets all fire requirements of the DSFPD with the exception of Lot 27 where only 90 feet of fuel treatment shall occur. A 100 foot fire buffer has

been provided around all sides of structures as mandated by the DSFPD. Access driveways have been provided with a minimum vertical clearance of 13 feet, six inches, Aqueduct Road will be improved to 24 feet and graded to 28 feet consistent with the requirements of the DSFPD and Via Ararat Drive will be widened to 22.5 feet which has been approved by the DSFPD. The project provides two points of access for fire and other emergency equipment via both Aqueduct Road and Via Ararat Drive. No locked gates have been proposed as part of the development. Driveways will have a minimum width of 16 feet with pavement meeting DSFPD requirements. Cul-de-sacs have been provided with a minimum turning radius of 40 feet graded and 36 feet improved consistent with DSFPD requirements. No driveways or roadways have been proposed exceeding a 15 percent grade. Driveways exceeding 15 percent grade will meet the mitigation requirements of the DSFPD.

Street name signs will be installed in accordance with San Diego County standards and in accordance with DSFPD requirements. The project includes the installation of nine fire hydrants as required by the DSFPD. Fire flow will meet DSFPD requirements of 1,500 gallons per minute at 20 PSI. Road and hydrant improvements will be installed and serviceable prior to the issuance of a building permit as mandated by the DSFPD.

2.2 Emergency Response Times and Standards

The West Lilac Farms Resort project is located within the DSFPD. The DSFPD is the Fire Authority Having Jurisdiction (FAHJ). The DSFPD covers an area of approximately 47 square miles and serves a population estimated at 13,000. The firefighting services of the District are provided under contract with CAL FIRE (aka California Department of Forestry and Fire Protection). The District currently has three fire stations.

The closest fire station is CAL FIRE Station No. 15, located on West Lilac Road. The next-in station would likely be DSFPD Station No. 1. The project is located within acceptable response time for the first two responding stations. Based on NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting 2007 Edition Table C.11 (b), the emergency response times in ascending order are as follow:

Station	Address	Distance	Travel time
CAL FIRE FS #15	9127 West Lilac Rd.	2.6 miles	4-6 minutes
DSFPD FS #11	8709 Circle ‘R’ Dr.	5.2 miles	9-12 minutes
DSFPD FS #12	1321 Deer Springs Rd.	11.6 miles	19-22 minutes

The Public Facility Element of the County General Plan includes emergency travel time criteria to minimize fire and emergency risks. For single-family residential lots of less than 2 acres and more intensive uses, the minimum required travel time is 5 minutes. For single-family residential lots from 2 acres to 4 acres in size, the minimum travel time is 10 minutes. For large lot, single-family residential and agricultural developments with lot sizes of greater than 4 acres, the minimum travel time is 20 minutes (Public Facility Element XII-11-12). The Public Facility Element specifies that in applying emergency time criteria "the proposed land uses and the smallest proposed residential lot will be used to determine the appropriate emergency travel time for each project proposal" (Public Facility Element XII-11-14). Thus, emergency response times required for any project are determined based upon the smallest proposed residential lots under the County's Public Facility Element.

In this case, the tentative subdivision map (TM 5276) proposes 28 residential lots ranging in size from 2.1 acres to 5.9 acres. Fifteen of the 28 proposed lots equal or exceed three acres in size and eight of these lots equal or exceed four acres in size. However, in applying the emergency response time criteria the smallest 2.1 acre lot has been utilized resulting in a maximum emergency response time of 10 minutes in accordance with the San Diego County Public Facility Element.

The closest fully staffed fire station to the project site is the CAL FIRE station at 9127 West Lilac Road located 2.6 miles from the project site. This CAL FIRE station is fully staffed 24 hours a day, seven days a week, and includes three firefighting personnel per shift. Firefighting apparatus consists of one Type 3 engine. The fire response from this fully staffed station to the project site is 4 to 6 minutes which is well below the 10 minute response time specified as adequate in the County's Public Facility Element. As a result, the project fully complies with the County's emergency response time travel requirements.

2.3 Primary and Secondary Access Roads

The project meets Fire Code requirements by providing both a primary and secondary means of access to and from the project site. The project site connects to West Lilac Road, a County maintained road, from its eastern boundary along Aqueduct Road and from its western boundary along Via Ararat Drive. The project site possesses rights to utilize both of these private roads. As part of the development, Aqueduct Road will be widened to 24 feet of pavement on 28 feet of graded width meeting both State and County Fire Code requirements. (14 Cal. Administrative Code §1273.01; County Fire Code §503.2.1). As part of the project, Via Ararat Drive to West Lilac Road will be widened to 22.5 feet which is acceptable to the DSFPD (See Exhibit 1). West Lilac Road links easterly to Old Highway 395 and westerly to Camino del Rey. The two streets have adequate space for fire apparatus to turn around. Street "D" intersects with Via Ararat Drive and extends to Street "A" within the project site. Street "E" will serve Lots 1 and 2 and end in a cul-de-sac. All on-site roads will provide a paved width of 30 feet and a graded width of 34 feet.

2.3.1 Access Road Widths. Streets within the project shall be constructed to an unobstructed improved width of 30 feet on a graded width of 34 feet exceeding all Fire Code requirements. The streets shall be surfaced with asphaltic concrete (ac) or an equivalent material. All access streets including driveway shall have an unobstructed vertical clearance of 13 ft. 6 in. This meets San Diego County Fire Code Requirements (§503.2.1 and 503.2.3) and the requirements of the DSFPD.

Separated lanes of one-way traffic are allowed for: fire access roadways, gated entrances with card readers, guard stations or center medians provided that each lane is not less than 12 feet wide.

2.3.2 Road and Driveway Surfaces. All streets shall be all-weather paved with capacity to support fire apparatus weighing up to 75,000 pounds meeting County Fire Code requirements (§503.2.3) and those of the DSFPD.

For driveways serving individual single-family dwellings, the minimum surfacing materials required shall vary with the slope of the fire apparatus access road as follows:

0-15% Slope 2" Asphaltic Concrete
16-20% Slope 3" Portland Cement

Note: Decompose Granite is not acceptable for roadway or driveway accesses.

The paving and sub-base shall be installed to the standards specified in Section I-M of the County of San Diego Off-street Parking Design Manual. A residential driveway constructed of 3½" Portland cement concrete may be installed on any slope up to 20% provided that slopes over 15% have a deep broom finish perpendicular to the direction of travel to enhance traction satisfying County Fire Code Section 503.2.3.1 and the fire requirements of the DSFPD.

2.3.3 Turning Radius. All streets meet the minimum 28-foot turning radius measured from the inside edge of the improvement width. (County Fire Code §503.2.4).

2.3.4 Dead Ends. *Refer to 2.2.1 for a description of access roads turn-around and terminus features.* All streets exceeding 150 ft. in length have an approved turn-around radius of 40 ft. graded and 38 ft. improved, and constructed to meet approved provisions for the turn around of emergency vehicles. Cul-de-sacs shall be provided when the dead end roadway serves more than two structures per County Fire Code Amendments of January 30, 2008 Section 503.2.5 and requirements of the DSFPD.

2.3.5 Speed Control Devices. Roadway design features (speed bumps, speed humps, speed control dips, etc.) which may interfere with emergency apparatus responses shall not be installed on fire access roadways unless they meet design criteria approved by the FAHJ.

2.3.6 Road and Street Grades. All street grades are 15% or less. Via Ararat Drive, Aqueduct Road and West Lilac Road do not exceed a 15 percent grade.

2.3.7 Street Signs and Markings. All streets shall be signed and marked according to County of San Diego Department of Public Works Design Standard #DS-13.

2.4 Premise Identification

The following requirements are designed to aid emergency responders in finding persons, buildings, etc., within West Lilac Farms. Approved numbers and/or addresses shall be placed and maintained on all buildings and at appropriate additional locations as to be plainly visible and legible from the street or roadway fronting the property from either direction of approach. Said numbers shall contrast with their background, and shall meet the following minimum standards as to size: 4" high with a 3/8” stroke for residential buildings.

2.5 Gates

No entrance gates are planned for this development.

2.6 Water Supply

The project will obtain water from the Rainbow Municipal Water District. DSFPD requires the fire flow to be 1,500 gallons per minute at 20 PSI residual pressure. The project will comply with the fire flow requirement. The water system for West Lilac Farms will include a loop system.

Fire hydrant locations and spacing shall meet the San Diego County Fire Code as amended January 30, 2008 per Sec. 903.4.2 requirements. For homes with Automatic Fire Sprinklers, fire hydrants shall be installed at intersections, at the beginning of cul-de-sacs, and at intervals along roadways found in the following table:

DISTANCE BETWEEN HYDRANTS FOR SINGLE FAMILY DWELLINGS WITH AUTOMATIC FIRE SPRINKLERS

Parcels 2½ acres and larger:	Every 1,300 feet
Parcels ½ to 2½ acres:	Every 850 feet
Parcels less than ½ acre:	Every 650 feet

Table 1 – Distance Between Fire Hydrants

2.7 Ignition Resistant Construction and Fire Protection Systems

All proposed (new) structures shall be built to current County of San Diego Fire and Building Code requirements, including the version of County Building Code Chapter 7A in effect at the time of Building Permit application. The HOA may refer to APPENDIX 'D' for the minimum Building Code requirements at the time of the writing of this FPP and thus may be incomplete. The final requirements are based upon the time the developer applied for a Building Permit, not the date of this plan. Refer to the County Final requirements for the complete list of ignition-resistive construction features.

2.8 Defensible Space and Vegetation Management

2.8.1 Off-site Fire Hazard and Risk Assessment. The project area is located in a moderately high fire hazard severity zone about fourteen (14) miles inland from the Pacific Ocean. The proposed single family homes are bordered by widely scattered single-family residential structures and undeveloped land to the north, south and along the west boundaries. A large nursery operation lies immediately to the east of Aqueduct Road. The principle wildland fire threat will come from a wildland fire burning in the off-site flammable native and non-native vegetation located off-site northeast of lot 16. This is undeveloped land with native Oaks and California Sagebrush. Firebrands from this area are likely to be carried a long distance (one mile or more) by fire drafts or strong winds. An additional wildfire threat is possible from the west or south under typical or extreme prevailing southwest wind conditions, as a portion of this land is also undeveloped at this time or in larger parcels with single family homes. Large tree groves currently break up wildland fuel continuity which is beneficial. However, the future presence of these groves cannot be guaranteed.

2.8.2 On-site Fire Hazard and Risk Assessment. If left undisturbed by natural events or without any fire hazard abatement practices, the project area's vegetation would likely reestablish itself as a mixed Perennial Mustard, non-native grass, California Buckwheat, and related weedy species. The only exception will be the off-site area located northeast of the project site where native live oaks and associated species exist within a riparian area.

The Perennial Mustard, non-native grass and related weedy species, as characterized by a Fuel Model SC 18 – Sage/Buckwheat, is of the most concern for the area during a worst case scenario northeastern wind pattern (Santa Ana) with an unusually hot dry wind speeds that could reach 60 MPH. These conditions would be similar to what was experienced during the October 2007 Rice Fire (See Figures 1 and 2). In this vegetation type, a high percentage of the vegetation would have an abundance of dead material. This is especially true of the black sage and buckwheat plants. This is due to the effects of the local Mediterranean climate where warm

wet winters promote new growth, and long, hot and very dry summer seasons sometimes occur. Occasionally, multi-year droughts cause significant parts of these plants to die back. All of these plants are adapted to the intense wildfires that they need for species regeneration. However, when fire occurs at too frequent intervals, the coastal sage scrub plant community reverts to a more flammable, less desirable community of short-lived annual grasses with little wildlife value and poor ability to protect the soil from erosion. The on-site wildland fire threat from this native vegetation can be mitigated within the development envelope for each planned structure with the required fuel modification and utilization of "*firewise*" landscaping criteria.

In summary, any wind or topography driven wildfire burning under a northeastern (*Santa Ana*) wind pattern from the north, northeast or east creates a moderate to high wildland fire hazard, especially for wildland fires starting north and/or east of the project site. Also, a "rare event" 30 MPH southwest wind will create a low to moderate wildland wildfire hazard. However, with the proposed fuel modification treatments, "*firewise*" landscaping, and the use of ignition resistive building construction standards, the wildfire threat will be mitigated to less than significant levels. As a result, the potential loss of any structure due to direct flame impingement, wind driven embers, or radiant heat around the perimeter of any planned house is extremely low.

2.9 Wildland Fire Behavior Assessment

The minute-by-minute movement of a wildland fire will probably never be totally predictable; certainly not from weather conditions forecast many hours before the fire. Nevertheless, practice and experienced judgment in assessing the fire environment coupled with a systematic method of calculating fire behavior yields surprisingly good results (Rothermel 1983).

The BehavePlus Fire Modeling System (Version 3.0.2) has been used to predict the wildland fire behavior (rate-of-spread, fireline intensity and flame length) for the northeastern and southwestern boundary vegetative fuels. The BEHAVE: Fire Behavior Prediction and Fuel Modeling System–Burn Subsystem, Part 1 by Patricia L. Andrews, is one of the best systematic methods for predicting wildland fire behavior. The BEHAVE fire behavior computer modeling system was developed by USDA–Forest Service research scientists at the Intermountain Forest Fire Laboratory, Missoula, Montana, and is utilized by wildland fire experts nationwide. Since the model was designed to predict the spread of a fire, the fire model describes the fire behavior only within the flaming front. The primary driving force in the fire behavior calculations is the dead fuel less than one-fourth inch in diameter; these are the fine fuels that carry the fire. Fuels larger than three (3) inches in diameter are not included in the calculations at all (Andrews 1986).

BehavePlus, Version 3.0.2, is an updated and enhanced form of the original BEHAVE System. The BEHAVE fire model describes a wildfire spreading through surface fuels, which are the burnable materials within six (6') feet of the ground and contiguous to the ground. Regardless of the limitations expressed, experienced wildland fire managers can use the BEHAVE modeling system to project the expected fire intensity, rate-of-spread and flame lengths with a reasonable degree of certainty for use in fire protection planning purposes.

The ***FIREWISE*** **2000, Inc.** evaluation team used the computer based BEHAVE Plus 3.0.2 Fire Behavior Prediction Model to make the fire behavior assessments and projections for the current and forecast hazardous vegetative fuels located in proximity and within the proposed residential building lots (See APPENDIX 'E' for actual calculations). The projections are based on scenarios that are "worst case" San Diego County fire assumptions for the climax vegetation and weather.

Nine (9) different fire scenarios are presented based on "worst case" fire weather assumptions for the project area. Each fire scenario displays the expected Rate of Fire Spread (expressed in feet per minute), Fireline Intensity (expressed in British Thermal Units per foot per second) and Flame Length (expressed in feet). For the longest flame lengths along the north and south exposures, separate BEHAVE Plus predications were made for the treated fuels following the completion of the required fuel modification work. The tables also include the calculation inputs used in the BEHAVE Plus program which were obtained from project site observations and fuel moisture levels typically observed during the local fire season.

In the tables which follow are projections for the Treated Fuels in Thinning Zone B. The fire behavior in Irrigated Zone 1 would be substantially lower. Zone 1 would also be very difficult to ignite when properly maintained due to low fuel volume fire restistant plants with high moisture content.

Table 2 ***Fire Scenario # 1 - North Boundary*** ***(Late Fire Season - 60 MPH North, Northeast And East Wind Conditions)***	
Fire Behavior Calculation Input Data • 20 percent slope • 60 mph 20-foot wind speed • 180° aspect from north • 45° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of .....2% * 10-Hour Fuel Moisture of.....3% * 100-Hour Fuel Moisture of .....5% * Live Herbaceous Fuel Moisture of ...30% * Live Woody Fuel Moisture of 50%
Expected Fire Behavior – Wildland Fuels Combined Fuel Model [SCAL 18 – Sage/Buckwheat 50% and GR4 - Moderate Load Dry Climate Grass 50%]	
Rate of Spread - 1,104 feet/minute	
Fireline Intensity - 22,467 BTU's/foot/second	
Flame Length - 45.2 feet in length	
Expected Fire Behavior – Treated Fuels Combined Fuel Model [TL6 – Moderate Load Broadleaf Litter 50% and GR1 Short, Sparse Dry Climate Grass]	
Rate of Spread - 79 feet/minute	
Fireline Intensity - 934 BTU's/foot/second	
Flame Length - 10.5 feet in length	

Table 3 is representative of the Oak Riparian Forest area off-site located northeast of Lot 16. No treated vegetation is shown as the area will exist over 100 feet from any West Lilac Farms structure.

Table 3 ***Fire Scenario # 1 - East Boundary*** ***(Late Fire Season - 60 MPH North, Northeast And East Wind Conditions)***	
Fire Behavior Calculation Input Data • 15 percent slope • 60 mph 20-foot wind speed • 345° aspect from north • 45° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of .....2% * 10-Hour Fuel Moisture of.....3% * 100-Hour Fuel Moisture of .....5% * Live Herbaceous Fuel Moisture of....30% * Live Woody Fuel Moisture of.....50%
Expected Fire Behavior – Wildland Fuels Combined Fuel Model [TL9 – Very High Load Broadleaf Litter 70% and SCAL 18 - Sage/Buckwheat 30%]	
Rate of Spread - 145 feet/minute	
Fireline Intensity - 17,500 BTU's/foot/second	
Flame Length - 40.3 feet in length	

Table 4 *Fire Scenario # 2 - South Boundary* *(A Rare Event 30 MPH South, West and Southwest Wind Conditions)*	
Fire Behavior Calculation Input Data • 40 percent slope • 30 mph 20-foot wind speed • 0° aspect from north • 195° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of ……..…2% * 10-Hour Fuel Moisture of...……..……3% * 100-Hour Fuel Moisture of ……..……5% * Live Herbaceous Fuel Moisture of…....30% * Live Woody Fuel Moisture of…….....60%
Expected Fire Behavior – Wildland Fuels **Combined Fuel Model [GR4 - Moderate Load Dry Climate Grass (50%) and SCAL 18 - Sage/Buckwheat (50%)]**	
Rate of Spread - 431 feet/minute	
Fireline Intensity - 11,166 BTU's/foot/second	
Flame Length - 32.8 feet in length	
Expected Fire Behavior – Treated Fuels **Combined Fuel Model** **[TL6 – Moderate Load Broadleaf Litter 50% and GR1 Short, Sparse Dry Climate Grass]**	
Rate of Spread - 39 feet/minute	
Fireline Intensity - 339 BTU's/foot/second	
Flame Length - 6.6 feet in length	

Table 5 *Fire Scenario #2 - West Boundary* *(A Rare Event 30 MPH South, West and Southwest Wind Conditions)*	
Fire Behavior Calculation Input Data • 20 percent slope • 30 mph 20-foot wind speed • 335° aspect from north • 225° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of ……..…2% * 10-Hour Fuel Moisture of...……..……3% * 100-Hour Fuel Moisture of ……..……5% * Live Herbaceous Fuel Moisture of…....30% * Live Woody Fuel Moisture of…….....60%
Expected Fire Behavior – Wildland Fuels **Combined Fuel Model [GR4 – Moderate Load Broadleaf Litter (50%) and SCAL 18 - Sage/Buckwheat (50%)]**	
Rate of Spread - 427 feet/minute	
Fireline Intensity - 11,032 BTU's/foot/second	
Flame Length - 32.6 feet in length	

No treated vegetation fire behavior is shown in Table 5 as flame lengths in Fire Scenario #2 are the greatest for the Southern Fuels found in Table 4. The fuel modifications will create equal to or lesser fire behavior than those shown in Table 4 – Treated Fuels.

Table 6 ***Fire Scenario # 1 - Agricultural Preserve Area*** ***(Typical 60 MPH North, Northeast, East Wind Conditions)***	
Fire Behavior Calculation Input Data • 8 percent slope • 60 mph 20-foot wind speed • 225° aspect from north • 45° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of ……..2% * 10-Hour Fuel Moisture of.....……..…3% * 100-Hour Fuel Moisture of ……..…5% * Live Herbaceous Fuel Moisture of……..30% * Live Woody Fuel Moisture of…….....50%
Expected Fire Behavior – Wildland Fuels Combined Fuel Model [SCAL 18 - Sage/Buckwheat (50%) and GR4 – Moderate Load Dry Climate Grass (50%)]	
Rate of Spread - 750 feet/minute	
Fireline Intensity - 17,382 BTU's/foot/second	
Flame Length - 40.1 feet in length	

Note: The Agriculture Preserve vegetation will not be treated beyond current management practices and therefore no calculations for treated fuels are presented. Structure setbacks of over 100 feet, fuel modification around each home and construction standards are designed to mitigate the wildfire threat.

Table 7 ***Fire Scenario #3 - West Boundary*** ***(Typical Summer Day - 10 MPH South, West Or Southwest Wind Condition)***	
Fire Behavior Calculation Input Data • 20 percent slope • 10 mph 20-foot wind speed • 335° aspect from north • 225° wind direction from north	**Anticipated Fuel Moistures** * 1-Hour Fine Fuel Moisture of ……..4% * 10-Hour Fuel Moisture of.....……..…6% * 100-Hour Fuel Moisture of ……..…8% * Live Herbaceous Fuel Moisture of…….50% * Live Woody Fuel Moisture of…….....60%
Expected Fire Behavior – Wildland Fuels Combined Fuel Model [GR4 – Moderate Load Broadleaf Litter (50%) and SCAL 18 - Sage/Buckwheat (50%)]	
Rate of Spread - 66 feet/minute	
Fireline Intensity - 2,852 BTU's/foot/second	
Flame Length - 17.5 feet in length	
Expected Fire Behavior – Treated Fuels Combined Fuel Model [TL6 – Moderate Load Broadleaf Litter 50% and GR1 Short, Sparse Dry Climate Grass]	
Rate of Spread - 13 feet/minute	
Fireline Intensity - 47 BTU's/foot/second	
Flame Length - 2.7 feet in length	

2.10 Summary of Fire Behavior

The two worst case fire behavior calculations (from the north/east and south/west) are shown in Tables 8A and 8B including the reduction in flame length that fuel treatment in Thinning Zone 2 will provide.

TABLE 8A (Fire Scenario #1 – 60 mph Northeast Wind)
North and East Exposures

Prior to Fuel Treatment		VS.	After Fuel Treatment	
Rate of Spread	1,104 ft/min		Rate of Spread	79 ft/min
Fireline Instensity	22,467 BTU/ft/sec		Fireline Instensity	934 BTU/ft/sec
Flame Length	**45.2 Feet**		Flame Length	**10.5 Feet**

TABLE 8B (Fire Scenario #2 – 30 mph Southwest Wind)
South & West Exposures

Prior to Fuel Treatment		VS.	After Fuel Treatment	
Rate of Spread	432 ft/min		Rate of Spread	39 ft/min
Fireline Instensity	11,166 BTU/ft/sec		Fireline Instensity	339 BTU/ft/sec
Flame Length	**32.8 Feet**		Flame Length	**6.6 Feet**

2.11 Required Fuel Modification Zones for Buildings, Structures and Access Roads

Projects located in Hazardous Fire Areas shall include Fuel Management Zones (FMZ) surrounding all structures that are greater than 250 square feet in size. San Diego County Code stipulates that the FMZ be a minimum of a 100-foot area surrounding and extending in all directions from all structures, in which flammable vegetation or other combustible growth is cleared away or modified, **except for:**

- Single specimens of trees or other vegetation that is well-pruned and maintained.
- Grass and other vegetation located more than 50 feet from the structure and less than 18 inches in height above the ground.
- All ornamental landscaping that is consistent with San Diego County Wildland Urban Interface plant list (See APPENDIX 'A'*).*

Maintenance of fuel treatment zones is highly important. Latham (1989) found that ember ignitions were primarily a function of ground fuels, especially litter depth. Also imporant to ignition of a ground fuel is moisture content, size of the litter material as well as the mineral content of the dead vegetation. To the benefit of the eventual homeowners, ground fires burn with less intensity than an aerial fuel. However, a ground fire may carry to adjacent aerial fuels which is a concern.

Below are the detailed definitions and required treatments for FMZ's. There are two fuel modifcation zones required for the West Lilac Farms Project, each one 50 feet in width, for a total of 100 feet of fuel treatment around each residence. In addition, the edge of each driveway and along roadways are to be treated to prevent ignition starts and to provide relatively safe ingress and egress should a wildfire occur for both residents and emergency responders. Each of these zones is described below in greater detail. When the required 100-feet of fuel treatment cannot be achieved within a lot, see Section 3.1.2 – One Hundred Foot Fuel Modification Zones.

All distances in this report are measured horizontally. These distances are depicted on the Fuel Treatment Location Map included herein as Exhibit 1. Prior to construction on any building site, each driveway for this development shall be accepted by the DSFPD Fire Marshal.

The responsibility for the fuel modification maintainence defined below shall remain with each lot owner and any subsequent owners, and as such shall run with the land and the HOA for the common areas. In the event a lot is repossessed or sold, the unit/agency holding title to the lot will be responsible for such maintenance.

Fuel Modification Zone 1 - *(Shown as Blue on the Fuel Treatment Location Map)*

Defined

Zone 1 comprises the first 50 feet around a structure (front, back and side yards) and is commonly called the defensible space zone. It is an irrigated zone and shall be free of all combustible construction including balconies, carports, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages, projections and materials.

Required Landscaping

Zone 1 will be cleared of all existing native vegetation and replanted with drought tolerant and irrigated fire resistant lawns, ground covers and shrubs. Landscaping shall be irrigated and primarily consist of fire resistive, maintained native or ornamental plantings usually less than 18 inches in height. However, this zone may contain occasional fire resistant trees and single well spaced ornamental shrubs up to 48 inches in height, intermixed with ground covers and lawn. Shrubs and ground covers may be located no closer than five (5) feet from the structure provided these plants will not carry fire to the structure. Non-flammable concrete patios, driveways, swimming pools, walkways, boulders, rock, and gravel can be used to break up fuel continuity within Zone 1. Non-combustible structures (gazebos, patio covers, decks, etc.) are allowable. Examples of these structures can be found in APPENDIX 'F'.

Plants in this zone need to be fire resistive and should not include any pyrophytes that are high in oils and resins such as pines, eucalyptus,

cedar, cypress or juniper species. Thick, succulent or leathery leaf species with high moisture content are the most "fire resistant". Refer to APPENDIX 'A' for a list of San Diego County desirable plants and APPENDIX 'B' for the prohibited plants.

Trees must be planted so that when they reach maturity the tips of their branches are at least 10 feet away from any structure and must have a minimum of six (6) feet of vertical separation from low growing irrigated vegetation beneath the canopy of the tree.

Required Maintenance

The lot shall be maintained year round by the individual property owner(s) within their property boundary (lot lines) as required by this FPP or the DSFPD. Shrubs and trees are to be annually maintained free of dead material. Trees will be maintained so that their crown cover will be more than ten (10) feet from any structure. All tree crowns will be separated per Table 9 below:

Table 9 - DISTANCE BETWEEN TREE CANOPIES
Distance between Tree Canopies by Percent Slope

Percent of Slope	Required Distances Between Edge of Mature Tree Canopies
0 - 20	**10 Feet**
21 - 40	**20 Feet**
Over 41	**30 Feet**

Trees shall be maintained to keep a separation of six (6) feet between the ground fuels (shrubs and ground covers) and the lower limbs. All trees must be maintained to the current ANSI A300 standards [*Tree, Shrub, and Other Woody Plant Maintenance —Standard Practices (Pruning)]* (see http://www.treecareindustry.org/public/gov_standards_a300.htm).

Fuel Modification Zone 2 - *(Shown as Orange on the Fuel Treatment Location Map)*

Defined

Fuel Modification Zone 2 is the area beginning at the outer edge of Zone 1, 50 feet from each structure. It is a non-irrigated thinning zone 50 feet in width and includes all natural and manufactured slopes. Thinning zones are utilized to reduce the fuel load of a wildland area adjacent to urban developments thereby reducing the radiant and convective heat of wildland fires. The intent is to achieve and maintain an overall 50 percent reduction of the canopy cover spacing and a 50 percent reduction of the original fuel loading by reducing the fuel in each remaining shrub

or tree without substantially decreasing the canopy cover or the removal of tree holding root systems. In addition, all dead and dying plant material is removed. Combustible construction (i.e., gazebos, trellises, shade covers, etc.) is not allowed in Zone 2. See APPENDIX 'F' for examples of non-combustible construction.

Required Landscaping

All exotic and flammable native plants (see San Diego County Prohibited Plant List in APPENDIX 'B') shall be removed with the original canopy and fuel loading reduced by 50%.

Should a lot owner wish to maintain an existing or establish a new avocado or citrus orchard, the avocado and citrus trees located within Zone B must be pruned to 3 feet above ground level and irrigated. Surface vegetation shall not exceed 8 inches in height in the orchard. This action is necessary to make sure that any wildland fire running toward a house through avocado or citrus groves will not become a crown fire. Avocado and citrus trees rarely burn during high intensity wildfire when irrigated and maintained. However, they will scorch as leaf litter under the trees is consumed by fire. Irrigation maintains high moisture content in the trees and understory vegetation which in turn reduces fire intensity. It is understood that avocado fruit production will likely be reduced for those trees that are located within fuel treatment Zone B.

Required Maintenance

- Low growing plants and ground covers are to be maintained to a height of 18 inches or less.
- Each tree will be limbed to maintain a separation of 6 feet between the ground fuels (shrubs and ground covers) and the lower limbs (See exception above for orchard trees located within Zone B).
- Maintenance will be on-going throughout the year as needed with continuous removal and/or thinning of undesirable combustible vegetation to maintain 50% thinning, limbing and shaping of the retained fire resistive native plants (See APPENDIX 'A').
- Native annual and perennial grasses will be allowed to grow and produce seed during the winter and spring. As grasses begin to cure (dry out), they will be cut to 8 inches or less in height.
- Continuous removal of all dead and dying vegetation and highly flammable species (See APPENDIX 'B').

Thinning Zone 2 Easement – Owner Maintained (*Shown as Yellow on the Fuel Treatment Location Map*)

Required Maintenance

An area outside of the project area which is owned by the project owner will be established as an easement 50 feet in width for the benefit of Lots 20 and 21. The adjacent lot owner within the tract shall be allowed to enter upon and perform maintenance of the vegetation within the easement to Zone 2 criteria.

Driveways – Lot Owner Maintained *(Shown as Grey on the Fuel Treatment Location Map)*

Required Maintenance

Clearance of brush or vegetative growth along new and existing on and off-site roadways will comply with the Consolidated Fire Code for the 17 Fire Protection Districts in San Diego County. A property owner adjacent to a public or private road or driveway constructed after January 30, 2008, shall clear combustible vegetation thirty (30) feet from each side of the road or driveway to create a Fuel Modification Zone. Alternatively, the area may be treated and maintained to Zone 1 criteria.

Roadsides – HOA Maintained *(Shown as Lavender on the Fuel Treatment Location Map)*

Required Maintenance

See above for the driveway maintenance requirements for lot owners.

Roadsides – Property Owner Maintained (*Shown as Brown on the Fuel Treatment Location Map*)

Required Maintenance

Each property owner shall clear combustible vegetation from the side of the road to create a Fuel Modification Zone. Existing roadways are required to be maintained for a horizontal distance of twenty (20) feet from the edge of the pavement or roadway surface.

2.12 Proposed Plant Species

Only plant species listed in APPENDIX 'A' – County of San Diego DPLU Approved Plant List shall be used. Other recommended plant species meeting the criteria for fire resistant plant characteristic may be planted within any fuel treatment zone only after these plants have been certified by the applicant's landscape architect and fire consultant in conjunction with the DSFPD fire marshal. The list in the APPENDIX 'A' of this FPP is shorter than what the

County of San Diego's DPLU provides as it has been customized to the specific climatic zone for the project that is found in the Western Garden Book. The list is thus shorter than what the County provides. Additional explanatory material is found in the APPENDIX.

2.13 Cumulative Impact Analysis

Emergency response time to the project site from the CAL FIRE station at 9127 West Lilac Road is 4 to 6 minutes, approximately one-half of the response time of 10 minutes deemed adequate in the County Public Facility Element. As part of the project, both Aqueduct Road and Via Ararat Drive will be widened, thereby assisting fire and emergency responses to the project area. With the fire measures proposed, the project will not result in any significant fire impacts either individually or cumulatively. All but one structure will be located 100 feet from wildland fuels found in protected open space. The FM that best represents the area of greatest concern is the combined FM of SCAL 18-Sage-Buckwheat (50%) GR4-Moderate Load Dry Climate Grass (50%) that can produce flame lengths of approximately 45 feet under worst case Santa Ana wind conditions. To obtain the required fuel treatment of 100 feet or more for the home built on Lot 27, Zone 1 is to extend outward from the home 90 feet to the rear lot property line will mitigate this threat to less than significant levels. The nine (9) additional fire hydrants being provided by the project and enhanced road access for firefighting and emergency responders will assist in reducing the potential for loss due to wildland fires in the area. The combination of residential structures with enhanced fire resistive features and irrigated agricultural lands included as part of the project will provide a break in native fuel continuity, thereby reducing the fire hazards in the area.

CHAPTER 3: MITIGATION MEASURES AND DESIGN CONSIDERATIONS

3.1 Specific Mitigation Measures and Design Considerations

3.1.1 San Diego County Building Code Ignition Resistive Building Materials. All newly constructed structures will be built to ignition-resistive building requirements found in the San Diego County Building Code Chapter 7A. The installation of automatic interior sprinkler systems (National Fire Protection Association – NFPA Standard (13D) will be required. An additional requirement for all structures is that tempered glass shall be used in at least one panel of all windows and openings in the outer walls.

3.1.2 One hundred-foot Fuel Modification Zones. A minimum of 100 ft. of fuel treatment shall be placed around all structures that abut flammable native vegetation with the exception of the 90 foot fuel modification area for Lot 27. It is the intent that the first 50 feet from a structure be

landscaped and irrigated, plus an additional 50 feet of fuel treatment (non-irrigated thinning zone).

In cases where that 100 feet of fuel modification requirement cannot be met within the project, either offsite roadways will be utilized as part of the required 100 feet of fuel treatment, easements created in the adjoining lot or additional Zone 1 fuel treatment shall be required (See Table 10).

Table 10 – Perimeter Lots - Home Setbacks From Project Boundary

Lot Numbers	Side of Lot	Min. Setback (Feet)	Comment
8, 9, 10, 11, 13, 14, 15, 16, 25, 26 & 28	North	100	Standard Requirement
1, 2, 3, 16, 17, 24 & 25	East	100	Standard Requirement
5, 6, 19, 22, 23 & 24	South	100	Standard Requirement
6, 7, 12 & 13	West	100	Standard Requirement
27	North	90	Zone 1 fuel treatment shall extend from the home to the northern property line, a minimum of 90 feet. *FIREWISE* 2000, Inc. has determined that this enhanced Zone 1 fuel treatment will provide the same practical effect as 100 feet of fuel treatment (50 feet of Zone followed by 50 feet of Zone 2).
1	South	70	Mount Ararat Way, a 50 foot wide private roadway easement, lies south of Lot 1. Off-site roadway fuel treatment combined with on-site fuel treatment will provide the required 100 feet of fuel treatment.
20 & 21	South	50	An offsite fuel treatment easement of 50 feet in width to be created. The owner of West Lilac Farms owns this adjacent parcel which guarantees its creation.
8	West	80	The 80 feet of fuel treatment within Lot 8 plus 20 feet of fuel treatment west of the project boundary within the roadway easement for Via Ararat Drive will provide the required 100 feet of fuel treatment.

3.1.3 Requirements for Inclusion in the CC&R's:

1. Each lot owner is personally responsible for all fuel treatment measures within their property lot. Where these zones extend onto an adjoining lot within the development, the lot owner benefiting from

the fuel treatment shall be allowed to perform the work on the adjacent property.

2. All property owners will be members of a Home Owners' Association (HOA) and will financially support the annual maintenance of all required Fuel Modification Areas within the common areas of the subdivision.

3. All roadside fuel treatment within the subdivision as shown on the Fuel Modification Zone Map (Section 3.2) is the maintenance responsibility of the HOA or applicable property owner except for private driveways which is the sole maintenance responsibility of the individual lot owners.

4. All property owners will financially support their share of the annual maintenance of all required roadside fuel treatment of private roads leading from West Lilac Farms to West Lilac Drive.

5. The HOA Board will have the authority for enforcing required fuel treatment measures on all lots and restrictions on combustible structures on all areas.

6. **TRASH DUMPING OR DISPOSAL OF YARD TRIMMINGS IN THE FUEL TREATMENT ZONES SHALL NOT BE ALLOWED.**

7. The Fuel Treatment Zones, as depicted on the Fuel Treatment Location Map, shall be shown on the CC&R's and recorded against all lots. The HOA will be responsible for enforcing all required fuel modification treatments on all lots.

8. The HOA Board and each lot owner will be responsible to the Deer Springs Fire Protection District Fire Marshal for the completion of all required Fuel Modification Treatments prior to the annual fire season. This includes the perpetual management of invasives (exotics) in any Zone within this development.

9. All individual yard landscaping plans, including additional structures, shall be approved by the HOA Board and will comply with the Fire Protection Plan. Any disputes relating to HOA Board approval of individual yard landscaping, with regard to interpretation of the Fire Protection Plan, will be decided by the Deer Springs Fire Protection District Fire Marshal. The Fire Marshal's decision will be final and binding on the landowner.

10. Trees shall be placed and maintained so that their crown cover at maturity will be more than ten (10) feet from any structure.

11. All plants will be in accordance with the San Diego County recommended plant list (See APPENDIX ‘A’), or as approved by the San Diego County Fire Marshal.

12. Upon the sale of a lot to a new owner, a copy of the Fire Protection Plan shall be provided as a condition of the sale.

13. The Deer Springs Fire Protection District will be designated as a third party beneficiary of a homeowners' association's duty to perform "Fire Prevention Maintenance" (as defined below) for all portions of the Association Property (or Common Area) that constitute Fuel Modification Zones to be maintained by the homeowners' association, and of any Owner's duty to comply with any Fuel Modification Zone restrictions applicable to their lot. Additionally, the DSFPD shall have the right, but not the obligation, to enforce the HOA Board’s and lot owner’s duty to perform such Fire Prevention Maintenance, and to enforce compliance by any Owner with any Fuel Modification Zone restrictions applicable to their lot. In furtherance of such right, the DSFPD shall be entitled to recover its costs of suit, including its actual attorneys' fees, if it prevails in an enforcement action against a homeowners' association and/or an individual lot owner.

14. As used herein, "Fire Prevention Maintenance" shall mean the following:

    a. All portions of the Association Property (or Common Area) that constitute Fuel Modification Zones shall be regularly maintained by the homeowners association on a year round basis in accordance with the Fuel Modification Plan on file with the property manager for the development.

    b. The irrigation system for Fuel Modification Zones shall be kept in good condition and proper working order at all times.

15. Firewood shall not be stored in unenclosed space beneath a building or structure, on a deck or under eaves, a canopy or other projection or overhang. When required by the fire code official, firewood or other combustible material stored in the defensible space surrounding a structure shall be located at least 30 feet from any structure and separated from the crown of any trees by a minimum of 15 feet, measured horizontally. Firewood and combustible materials not for use on the premises shall be stored so as not to pose a fire hazard.

3.1.4 Additional Requirements:

- Brush/tree removal shall be completed prior to allowing any combustible material being delivered to the building site and the owner shall maintain the fuel modification zone during the duration of the project. During construction, at least 50 feet of clearance around the structures shall be kept free of all flammable vegetation as an interim fuel modification zone during construction of structures. No occupancy permit for any structure shall be issued until all the required fuel modifications zones specified in Section 2.11 are established.

- If the landowner is aware of any state or federal listed species on their property, the U.S. Fish and Wildlife Service should be notified prior to the abatement.

- Debris and trimmings produced by thinning and pruning will be removed from the site, or, if left, shall be converted into mulch and evenly dispersed to a maximum depth of four inches. Such trimmings will not be within 50 feet of structures.

- Any damaged or replacement window, siding, roof coverings, vent, and specific non-combustible wall will meet or exceed the original intent of the fire protection discussed in this plan.

- This plan and its requirements shall be incorporated by reference into the final project Conditions of Approval.

- The off-site fuel treatment easement located south of lots 20 and 21 shall be conveyed to the County of San Diego prior to recordation of the final map.

3.1.5 Resident Education. The West Lilac Farms Project homeowners, by reviewing this Fire Protection Plan, shall be aware of the herein described fire protection measures; the types of non-combustible construction; and, the plant materials that are allowed within their lot boundary. The HOA shall annually provide lot owners with information regarding the wildfire mitigation efforts necessary for community fire safety that are contained within this FPP. Of particular importance are APPENDICES 'A', 'B', 'D', and 'F' of this plan. These appendices provide guidance in the types of plants that are allowed to be established in landscaped areas, those that are prohibited, and appropriate construction materials for use within fuel modification zones. Plant selection and construction materials are critical as embers often travel over a mile during Santa Ana wind events.

A copy of this plan shall be provided to each lot owner by the builder/developer at the time of the initial sale to the first owner. Upon sale of the property to a new homeowner, the new property owner shall be provided with a copy of this FPP by the HOA to insure continued compliance with all Fuel Modification Zone maintenance and construction requirements.

In the event of a wildfire, the homeowner should perform the following:

- Close all windows and doors that lead outside to prevent sparks from entering the house.
- Close all doors within the house in case the house does catch on fire; this will slow down the spread of the fire from room to room.
- Move all combustible materials in the home away from windows to prevent the possibility of heat from a fire radiating through windows and glass doors and catching flammable materials inside the home on fire. This includes drapes, curtains and furniture.
- Close windows and all Venetian blinds or noncombustible window coverings.
- Turn on the lights in each room, porch, and yard. This aids in visibility when the smoke gets thick and darkens the sky.
- Fill all sinks, bathtubs, and buckets with water in case the power goes out and water cannot be drawn from hoses or faucets.
- Shut off any gas valves within or outside the house.
- Open the damper on fireplaces to stabilize inside/outside pressure, but close fireplace screens to keep sparks from igniting the house.
- Have all important papers and valuables including family pets ready for transport should the need to relocate occur.
- Place any vehicle to be utilized to relocate in the driveway facing the road until the fire threat has passed.

For additional information, consult with the local Fire Department.

3.2 Fuel Treatment Location Map

Attached is a folder containing Exhibit 3, the FUEL TREATMENT LOCATION MAP, depicting the location of all proposed fuel modification treatment locations on and adjacent to all lots.

CHAPTER 4: CONCLUSIONS

4.1 Ignition Resistive Building Materials

The implementation of the County Building Code Chapter 7A ignition-resistive building materials and county fire code road access requirements by design will reduce the projected fire impacts to a less than significance level.

4.2 Fuel Management Zones

The use of properly planned and maintained fuel modification zones will provide 100 ft. of fuel treatment around all structures where applicable, and using the combined FM GR1 - Space Short Dry Climate Grass and FM TL6 – Moderate Load Hardwood with Litter and requiring that grass be kept to 8 in. stubble height will significantly mitigate the fire threat in Zone 2. These types of fuel treatment would be more than twice the expected flame lengths created during a "peak" wildland fire event. Therefore, the threat of loss of life and property would be reduced to a "less than significant" level.

4.3 Secondary Road Access

There are two means of access into the West Lilac Farms development. Both roadways access West Lilac Road to the north of the project. From this location, residents may go either east or west over all-weather roadways to relocate should the need arise.

4.4 Fire Department Emergency Response

The development will have adequate emergency response in terms of access and construction standards for roadways and streets. In additional to the DSFPD engines, CAL FIRE and nearby fire departments (through mutual aid) will provide fire protection. Response times and the proximity of the development to the Wildland Urban Interface (WUI), and a subdivision in a moderate to high fire hazard severity zone require fire sprinklers to be installed in all residences. This will mitigate longer response times which might be expected during "worst case" weather when several wildfires may be burning simultaneously.

CHAPTER 5: LIST OF PREPARERS, PERSONS AND ORGANIZATIONS CONTACTED

5.1 List of Preparers

The principal author and preparer of this Fire Protection Plan was Herbert Spitzer, Senior Wildland Fire Associate - ***FIRE****WISE* **2000, Inc**. Final review and certification by David C. Bacon, President - ***FIRE****WISE* **2000, Inc**., a San Diego County DPLU certified wildland fire consultant. Other team members contributed peer review and comments.

5.2 List of Persons contacted During the Course of this Project

1. Ernie Barley, Walsh Engineering, Inc.
2. Susan Magdaleno, Deer Springs Fire Protection District
3. Sophia Habl Mitchell, HDL, Inc.
4. James Pardee Jr., Owner/Subdivider
5. Wes Peltzer, Law Offices of Wesley W. Peltzer
6. Larry Walsh, Walsh Engineering, Inc.

CHAPTER 6: DEFINITIONS

For the purposes of this Fire Protection Plan, the following definitions apply to the terms used in this document. Where terms are not included, common usage of the terms shall apply:

AUTHORITY HAVING JURISDICTION (AHJ) – An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

CLIMAX VEGETATION - The final stage in ecological plant succession in which a relatively constant environment is reached and species composition no longer changes in a directional fashion, but fluctuates about some mean, or average, community composition.

COMBUSTIBLE – Any material that, in the form in which it is used and under the conditions anticipated will ignite and burn or will add appreciable heat to an ambient fire.

COMBUSTIBLE VEGETATION – Material that in its natural state that will readily ignite, burn, and transmit fire from native or landscape plants to any structure or other vegetation. Combustible vegetation includes dry grass, brush, weeds, litter or other flammable vegetation that creates a fire hazard.

CONVECTIVE HEAT – The upward flow of air originating from a fire or hot object. Frequently contains hot gasses, smoke and debris, some of which may be burning.

CURING – Drying and browning of herbaceous vegetation or slash.

DEFENSIBLE SPACE – An area either natural or manmade where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and the loss to life, property, or resources. In practice, "defensible space" is defined as an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation.

EXTREME FIRE BEHAVIOR – "Extreme" implies a level of fire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, sometimes dangerously.

FIRE RESISTIVE PLANTS – Those plants that do not readily ignite from a flame or other ignition sources. These plants can be damaged or even killed by fire; however, their foliage and stems do not significantly contribute to the fuel and, therefore, the fire's intensity.

FIRE BEHAVIOR – The manner in which a fire reacts to the influences of fuel, weather and topography.

FIRE HAZARD SEVERITY ZONES – In California, these are geographical areas designated pursuant to California Public Resources Code sections 4201 through 4204 and classified as Very High, High and Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code sections 51175 through 51189. The California Code of Regulations, Title 14, Section 1280 entitles maps of these geographical areas as "Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California."

FIRE RESISTIVE CONSTRUCTION – Construction designed to provide reasonable protection against fire.

FLAME LENGTH – The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

FUEL MOISTURE – The quantity of moisture in vegetative fuels expressed as a percentage of the weight when thoroughly dried at 212 degrees F.

FUEL LOAD - Quantity of fuels, particularly vegetation, in a given area available for combustion. For fire behavior computation purposes, fuel load is generally measured in tons/acre.

FUEL MODEL – Simulated fuel complex (or combination of vegetation types) for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified. Fuel models are utilized in the BehavePlus Fire Model to aid in forecasting fire behavior.

FUEL MODIFICATION – Any manipulation or removal of fuels to reduce their likelihood of ignition or the resistance to fire control.

FUEL MODIFICATION ZONE - A strip of land where combustible vegetation has been thinned, modified or both and partially or totally replaced with approved drought tolerant, fire-resistant, and/or irrigated plants to provide an acceptable level of risk from vegetation fires. Fuel modification reduces radiant and convective heat on a structure and provides valuable defensible space for firefighters to make an effective stand against an approaching fire front.

HAZARDOUS FIRE AREA - Any geographic area mapped by the State or local jurisdiction as a moderate, high, or very high fire hazard area, or as set forth by the FAHJ has determined is a hazardous fire area, because the type and condition of vegetation, topography, weather and structure density increase the probability that the area will be susceptible to a wildfire.

LADDER FUELS – Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.

MITIGATION – Action that moderates the severity of a fire hazard or risk.

RADIANT HEAT – Transfer of heat in straight lines through a gas or vacuum other than by heating of the intervening space.

RELATIVE HUMIDITY – A weather term, the amount of moisture in the air as a percentage of the maximum the air will hold at a given temperature. The amount of moisture in a given parcel of air expressed as a percentage of the maximum amount that same parcel of air could hold at the same air temperature.

REMOTE AUTOMATED WEATHER STATION – A combination of sensors, radios and related electronic equipment installed in a wildland area that is designed to monitor the weather and provide hourly weather data that assists land management agencies with a variety of projects such as monitoring air quality, fire danger rating, and providing information for research applications.

RESPONSE TIME – The elapsed time from the fire department's receipt of the first alarm to when the first fire unit arrives at the scene.

RISK (Insurance) – The measure of the probability and severity of adverse effects that result from an exposure to a wildland fire (direction flames, radiant heat, or firebrands (embers).

RISK (Fire) – The chance of a fire starting from any cause.

SAME PRACTICAL EFFECT – An exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for firefighter safety, including access for emergency wildland fire equipment.

SLOPE – The variation of terrain from the horizontal; the number of feet, rise or fall per 100 feet, measured horizontally, expressed as a percentage.

STRUCTURE – That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some manner.

WILDFIRE – Any uncontrolled fire spreading through vegetative fuels that threaten to destroy life, property, or resources as defined in Public Resources Code sections 4103 and 4104.

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

WILDLAND-URBAN INTERFACE – The area where structures and other human developments meet or intermingle with undeveloped wildland.

CHAPTER 7.0 - REFERENCES

1. Andrews, Patricia L. 1986. BEHAVE: Fire behavior prediction and fuel modeling system-burn subsystem, part 1. Gen Tech. Rep. INT-194. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 130 pages.

2. Andrews, P. L. and C. H. Chase. (1989) Behave: Fire Behavior Prediction and Fuel Modeling System - BURN Subsystem, Part 2. USDA Forest Service General Technical Report INT-260. Ogden, UT. 96 pages.

3. ANSI A-300 - *Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices.* A series of maintenance and management practices. Tree Care Industry Association. Londonderry, NH 03053.

4. *BehavePlus Fire Modeling System, Version 3.0.2.* General Technical Report RMRS-GRT-106WWW. June 2003. Patricia L. Andrews, Collin D. Bevins. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

5. California Code of Regulations [CCR] Title [T] – 24 part 2 Article 86 (8601 & International Urban – Wildland Interface Code, 2003, 2003 edition, Ordinance 2004-003.

6. County of San Diego. *Consolidated Fire Code.* Created on October 14, 2009 with passage of County Ordinance 10013. County Health and Safety Code Section §*13869.7.*

7. County of San Diego. *Guidelines for Determining Significance and Report Format and Content Requirements Wildland Fire and Fire Protection Land Use and Environment Group Department of Planning and Land Use, Department of Public Works, March 19, 2007.*

8. County of San Diego Ordinance No. 9915 – *An Ordinance Amending Appendix II-A of the County Fire Code Relating to Wildland/Urban Interface Standards.*

9. County of San Diego. *Plant List and Acceptable Plants for a Defensible Space in Fire Prone Areas.* Department of Planning and Land Use, December 15, 1998.

10. County of San Diego. *Standards for Private Roads."* Department of Public Works, Adopted June 30, 1999.

11. Fire Planning and Mapping Tools. California Fire Alliance. Web site is available at: http://wildfire.cr.usgs.gov/fireplanning/

12. *Guidance Document Ignition Resistant Eave Construction*. County of San Diego, Department of Planning and Land Use, Building Division, DPLU # 198 (3-21-2005).

13. Latham, D. J. and J. A. Schleiter. (1989) Ignition Probabilities of Wildland Fuels Based on Simulated Lightning Discharges. USDA Forest Service General Technical Report INT-411, Ogden, UT. (6,497 KB; 20 pages)

14. National Fire Protection Association - NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire (2008 Edition). 30 pages.

15. National Fire Protection Association - NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting, 2007 Edition. 64 pages.

16. Rothermel, R. (1983), "How to Predict the Spread and Intensity of Forest Fire and Range Fires", Gen. Tech. Rep. INT-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station.

17. Scott, Joe H.; Burgan, Robert E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 pages.

18. Western Garden Book 2001 Edition. Editor: Kathleen Norris Brenzel. ISBN-0376039175 Sunset Publishing Corporation. Menlo Park, CA. 768 pages.

19. Western Region Climate Center. *Historic Climate Data from Remote Automated Weather Stations.* RAWS USA Climate Archive. Reno, NV. Data for all Remote Automated Weather Stations is available at: http://www.raws.dri.edu/index.html.

20. *Wildland/Urban Interface Development Standards.* San Diego County Fire Chief's Association, originally Developed by Orange County Wildland/Urban Interface Task Force Subcommittee on Open Space Management, July, 1994, Modified by the San Diego County Wildland/Urban Interface Task Force, November, 1995, Revised August, 1997.

EXHIBIT ‘1’

Road Improvement Exception

Via Ararat Drive

Larry Walsh

From: Susan [firemar@dsfd.sdcoxmail.com]
Sent: Monday, October 02, 2006 12:02 PM
To: Larry Walsh
Subject: FW: TM 5276-Via Ararat Drive improved and graded width

-----Original Message-----
From: Susan [mailto:firemar@dsfd.sdcoxmail.com]
Sent: Tuesday, September 26, 2006 6:48 AM
To: 'Moriarty, Jerry'
Subject: RE: TM 5276-Via Ararat Drive improved and graded width

Jerry,

Deer Springs Fire has no issues with the proposed exception on Via Ararat to West Lilac Rd. 22.5 feet is acceptable.

Sincerely,
Capt. S. Magdaleno
Fire Marshal
Deer Springs Fire Protection District

> -----Original Message-----
> **From:** Moriarty, Jerry [mailto:Jerry.Moriarty@sdcounty.ca.gov]
> **Sent:** Monday, September 25, 2006 2:07 PM
> **To:** firemar@dsfd.sdcoxmail.com
> **Cc:** Fogg, Mindy; Areigat, Nael
> **Subject:** TM 5276-Via Ararat Drive improved and graded width
>
> Susan,
>
> Please see attached cross-sections of Via Ararat Drive per the exception request that the County approved in September '05 with your support (below). Based on this approved exception, DPW has required TM 5276 to improve Via Ararat from their access onto Via Ararat northerly to W. Lilac Road as follows. Please advise of your comments regarding these specified improvement requirements (believe that the current DSFPD letter specifies 24' paved width).
>
> <<via ararat dr 5276 x-sec.tif>>
>
> *improve or agree to improve and provide security for the private easement road, Via Ararat Drive from the project access road, Street 'D' to W. Lilac Road to a graded width of twenty-four feet (24') and to an improved width of twenty-two and one-half feet (22.5') with asphalt concrete pavement over approved base with asphalt concrete dike at two and one-half feet (2.5') westerly of easement centerline. Existing utility poles are to be relocated such that adjoining edge of pole shall be a minimum of one and one-half feet (1 ½') westerly of face of dike.* The *improvement and design standards of Section 3.1(C) of the County Standards for Private Streets for one hundred one (101) to seven hundred fifty (750) trips shall apply. All of the above shall be to the direction of the Director of Public Works.*
>
> Thank you,
>
> Jerry

858-495-5141

From: Susan [mailto:firemar@dsfd.sdcoxmail.com]

Sent: Monday, August 29, 2005 1:46 PM

To: Moriarty, Jerry

Subject: RE: Requested exception, TM 5276-Via Ararat Drive improved and

graded width.

Jerry,

After reviewing the information you had sent, I don't have a problem with the "Request for Exception" as long as the utility easement information is legit. If I understand the info correctly, this is what is keeping them from moving the power poles further out to meet our roadway width requirements.

Capt. Susan Magdaleno

Fire Marshal

Deer Springs Fire Protection District

-----Original Message-----

From: Moriarty, Jerry [mailto:Jerry.Moriarty@sdcounty.ca.gov]

Sent: Monday, August 29, 2005 11:36 AM

To: firemar@dsfd.sdcoxmail.com

Subject: Requested exception, TM 5276-Via Ararat Drive improved and

graded width.

Susan,

Would like your comments on requested exception,

TM 5276-Via Ararat Drive improved and graded width.

Attached please see the one-page exception request and

the Cross-section showing the requested-related road improvements.

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Please advise of your comments- support or non-support of this request.

Thank you,

Jerry

Jerry Moriarty, Civil Engineer

County of San Diego, Department of Public Works

Land Development Division

5201 Ruffin Road, Ste D

San Diego, CA 92123

858-495-5141; fax: 858-495-5516

APPENDIX ‘A’

Acceptable Plants for Defensible Space in Fire Prone Areas

APPENDIX 'A'

COUNTY OF SAN DIEGO
ACCEPTABLE PLANTS FOR DEFENSIBLE SPACE
IN FIRE PRONE AREAS

ALL NATIVE PLANTS ON THE FOLLOWING LIST are considered to be drought-tolerant in the particular climate zone they are found. Those that grow best in riparian areas, as indicated by the "R", are generally the least drought-tolerant plants on the list.

SPECIAL NOTE: When planting, it is necessary to water deeply to encourage the plant roots to seek natural moisture in the soil. This watering should continue for at least three years to allow the plants to naturalize. More water should be provided in summer and less (if any) in the winter. These plants should be weaned off the supplemental irrigation and become less dependent on it over the establishment period.

No plant is totally fire resistant. The plants listed were chosen to due to their high water content, minimum amount of flammable resins and/or low fuel volume.

Definitions:

Defensible Space: The area around a structure, where material capable of causing fire has been cleared, reduced or changed, to act as a barrier between an advancing fire and the structure.

Drought-Tolerant Plant Materials: Trees, shrubs, groundcovers, and other vegetation capable of sustained growth and reproduction with only natural moisture. Occasional supplemental irrigation is necessary only in extreme drought situations.

Establishment Period: The time it takes for a plant to become drought-resistant. This is usually a period of three years and is the time when supplemental irrigation is necessary.

Native or Naturalizing Plant Species: Plant species native to the region or introduced which, once established, are capable of sustaining growth and reproduction under local climatic conditions without supplemental irrigation.

FIRE ***WISE*** **2000, Inc. Note:** The plant list which follows was developed using the plants found on the San Diego County approved plant list. This list was then compared to those plants which are suitable for the climatic zone in which the project is located. Only those plants suitable for the project area listed below. The list is therefore shorter than that provided by the County. By providing this custom list, plants that are likely to be killed or seriously damaged by frost or will not perform in hot dry conditions have been eliminated. ***FIRE*** ***WISE*** **2000, Inc**. believes that the planting of species suited to the site is essential to fire management goals and is a environmentally sound practice.

San Diego County
Customized Acceptable Plant List
For The West Lilac Farms Project

No.	Type	Genus	Species	Common Name
1	Annual	Lupinus spp.	nanus	Lupine
2	Groundcover	Achillea		Yarrow
3	Groundcover	Aptenia	cordifolia	Aptenia
4	Groundcover	Arctostaphylos spp.		Manzanita
5	Groundcover	Cerastium	tomentosum	Snow-in-Summer
6	Groundcover	Coprosma	kirkii	Creeping Coprosma
7	Groundcover	Cotoneaster spp.		Redberry
8	Groundcover	Drosanthemum	hispidum	Rosea Ice Plant
9	Groundcover	Dudleya	brittonii	Britton's Chalk Dudleya
10	Groundcover	Dudleya	pulverulenta	Chalk Dudleya
11	Groundcover	Dudleya	virens	Island Live-Forever
12	Groundcover	Eschscholzia	californica	California Poppy
13	Groundcover	Ferocactus	viridescens	Coast Barrel Cactus
14	Groundcover	Gaillardia	grandiflora	Blanket Flower
15	Groundcover	Gazania spp.		Gazania
16	Groundcover	Helianthemum spp.		Sunrose
17	Groundcover	Lantana spp.		Lantana
18	Groundcover	Lasthenia	californica	Common Goldfields
19	Groundcover	Lasthenia	glabrata	Coastal Goldfields
20	Groundcover	Lupinus spp.		Lupine
21	Groundcover	Myoporum spp.		Myoporum
22	Groundcover	Pyracantha spp.		Firethorn
23	Groundcover	Rosmarinus	officinalis	Rosemary
24	Groundcover	Santolina	chamaecyparissus	Lavender Cotton
25	Groundcover	Santolina	virens	Santolina

No.	Type	Genus	Species	Common Name
26	Groundcover	Trifolium	frageriferum	O'Connor's Legume
27	Groundcover	Verbena	rigida	Verbena
28	Groundcover	Viguiera	laciniata	San Diego Sunflower
29	Groundcover	Vinca	major	Periwinkle
30	Groundcover	Vinca	minor	Dwarf Periwinkle
31	Perennial	Coreopsis	gigantea	Giant Coreopsis
32	Perennial	Coreopsis	grandiflora	Coreopsis
33	Perennial	Coreopsis	maritima	Sea Dahlia
34	Perennial	Coreopsis	verticillata	Coreopsis
35	Perennial	Heuchera	maxima	Island Coral Bells
36	Perennial	Iris	douglasiana	Douglas Iris
37	Perennial	Kniphofia	uvaria	Red-Hot Poker
38	Perennial	Lavandula spp.		Lavender
39	Perennial	Limonium	californicum perezii	Coastal Statice
40	Perennial	Limonium	californicum var. mexicanum	Coastal Statice
41	Perennial	Oenothera spp.		Primrose
42	Perennial	Penstemon spp.		Penstemon
43	Perennial	Satureja	douglasii	Yerba Buena
44	Perennial	Sisyrinchium	bellum	Blue-Eyed Grass
45	Perennial	Sisyrinchium	californicum	Golden-Eyed Grass
46	Perennial	Solanum	xantii	Purple Nightshade
47	Perennial	Zauschneria	'Catalina' ?	Catalina Fuschia
48	Perennial	Zauschneria	californica	California Fuschia
49	Perennial	Zauschneria	cana ?	Hoary California Fuschia
50	Shrub	Agave	americana	Desert Century Plant
51	Shrub	Agave	Amorpha fruticosa	False Indigobush
52	Shrub	Agave	deserti	Shaw's Century Plant
53	Shrub	Agave	shawii	NCN
54	Shrub	Agave		Century Plant
55	Shrub	Arctostaphylos spp.		Manzanita
56	Shrub	Atriplex	canescens	Hoary Saltbush
57	Shrub	Baccharis	pilularis	Coyote Bush
58	Shrub	Baccharis	salicifolia	Mule Fat "R"
59	Shrub	Carissa	macrocarpa	Natal Plum
60	Shrub	Ceanothus spp.		California Lilac

No.	Type	Genus	Species	Common Name
61	Shrub	Cistus spp.		Rockrose
62	Shrub	Cneoridium	dumosum	Bush rue
63	Shrub	Comarostaphylis	diversifolia	Summer Holly
64	Shrub	Convolvulus	cneorum	Bush Morning Glory
65	Shrub	Dalea	attenuata v orcuttii	Orcutt's Delea
66	Shrub	Elaeagnus	pungens	Silverberry
67	Shrub	Encelia	californica	Coast Sunflower
68	Shrub	Encelia	farinosa	White Brittlebush
69	Shrub	Eriobotrya	deflexa	Bronze Loquat
70	Shrub	Eriophyllum	confertiflorum	Golden Yarrow
71	Shrub	Escallonia spp.		Escallonia
72	Shrub	Feijoa	sellowiana	Pineapple Guava
73	Shrub	Fremontodendron	californicum	Flannelbush
74	Shrub	Fremontodendron	mexicanum	Southern Flannelbush
75	Shrub	Galvezia	juncea	Baja Bush-Snapdragon
76	Shrub	Galvezia	speciosa	Island Bush-Snapdragon
77	Shrub	Garrya	elliptica	Coast Silktassel
78	Shrub	Garrya	flavescens	Ashy Silktassel
79	Shrub	Heteromeles	arbutifolia	Toyon
80	Shrub	Lantana spp.		Lantana
81	Shrub	Lotus	scoparius	Deerweed
82	Shrub	Mahonia spp.		Barberry
83	Shrub	Malacothamnus	clementinus	San Clemente Island Bush Mallow
84	Shrub	Malacothamnus	fasciculatus	Mesa Bushmallow
85	Shrub	Melaleuca spp.		Melaleuca
86	Shrub	Mimulus spp.		Monkeyflower
87	Shrub	Nolina	parryi	Parry's Nolina
88	Shrub	Photinia spp.		Photinia
89	Shrub	Pittosporum	crassifolium	NCN
90	Shrub	Pittosporum	rhombifolium	Queensland Pittosporum
91	Shrub	Pittosporum	tobira 'Wheeleri'	Wheeler's Dwarf
92	Shrub	Pittosporum	undulatum	Victorian Box
93	Shrub	Pittosporum	viridiflorum	Cape Pittosporum
94	Shrub	Plumbago	auriculata	Cape Plumbago
95	Shrub	Prunus	caroliniana	Carolina Laurel Cherry

No.	Type	Genus	Species	Common Name
96	Shrub	Prunus	ilicifolia	Hollyleaf Cherry
97	Shrub	Prunus	lyonii	Catalina Cherry
98	Shrub	Puncia	granatum	Pomegranate
99	Shrub	Pyracantha spp.		Firethorn
100	Shrub	Quercus	dumosa	Scrub Oak
101	Shrub	Rhamus	alaternus	Italian Buckthorn
102	Shrub	Rhamus	californica	Coffeeberry
103	Shrub	Rhaphiolepis spp.		Rhaphiolepis
104	Shrub	Rhus	continus	Smoke Tree
105	Shrub	Rhus	integrifolia	Lemonade Berry
106	Shrub	Rhus	laurina	Laurel Sumac
107	Shrub	Rhus	ovata	Sugarbush
108	Shrub	Rhus	trilobata	Squawbush
109	Shrub	Romneya	coulteri	Matilija Poppy
110	Shrub	Rosa	californica	California Wild Rose
111	Shrub	Rosa	minutifolia	Baja California Wild Rose
112	Shrub	Salvia spp.		Sage
113	Shrub	Sambucus spp.		Elderberry
114	Shrub	Symphoricarpos	mollis	Creeping Snowberry
115	Shrub	Syringa	vulgaris	Lilac
116	Shrub	Tecomaria	capensis	Cape Honeysuckle
117	Shrub	Teucrium	fruticans	Bush Germander
118	Shrub	Verbena	lilacina	Lilac Verbena
119	Shrub	Xylosma	congestum	Shiny Xylosma
120	Shrub	Yucca	schidigera	Mojave Yucca
121	Shrub	Yucca	whipplei	Foothill Yucca
122	Tree	Acer	macrophyllum	Big Leaf Maple
123	Tree	Acer	saccharinum	Silver Maple
124	Tree	Alnus	rhombifolia	White Alder "R"
125	Tree	Arbutus	unedo	Strawberry Tree
126	Tree	Archontophoenix	cunninghamiana	King Palm
127	Tree	Brahea	armata	Blue Mexican Palm
128	Tree	Brahea	edulis	Guadalupe Palm
129	Tree	Ceratonia	siliqua	Carob
130	Tree	Cercis	occidentalis	Western Redbud

No.	Type	Genus	Species	Common Name
131	Tree	Cornus	stolonifera	Redtwig Dogwood
132	Tree	Eriobotrya	japonica	Loquat
133	Tree	Erythrina	caffra	Kaffirboom Coral Tree
134	Tree	Gingko	biloba "Fairmount"	Fairmount Maidenhair Tree
135	Tree	Juglans	californica	California Walnut
136	Tree	Lagerstroemia	indica	Crape Myrtle
137	Tree	Ligustrum	lucidum	Glossy Privet
138	Tree	Liquidambar	styraciflua	Sweet Gum
139	Tree	Liriodendron	tulipifera	Tulip Tree
140	Tree	Lyonothamnus	floribundus ssp. Asplenifolius	Fernleaf Catalina Ironwood
141	Tree	Melaleuca spp.		Melaleuca
142	Tree	Myoporum spp.		Myoporum
143	Tree	Nerium	oleander	Oleander
144	Tree	Parkinsonia	aculeata	Mexican Palo Verde
145	Tree	Pistacia	chinensis	Chinese Pistache
146	Tree	Pistacia	vera	Pistachio Nut
147	Tree	Pittosporum	phillyreoides	Willow Pittosporum
148	Tree	Pittosporum	viridiflorum	Cape Pittosporum
149	Tree	Platanus	acerifolia	London Plane Tree
150	Tree	Platanus	racemosa	California Sycamore "R"
151	Tree	Populus	alba	White Poplar
152	Tree	Populus	fremontii	Western Cottonwood "R"
153	Tree	Populus	trichocarpa	Black Cottonwood "R"
154	Tree	Prunus	caroliniana	Carolina Laurel Cherry
155	Tree	Prunus	cersifera ‘Newport’	Newport Purple-Leaf Plum
156	Tree	Prunus	ilicifolia	Hollyleaf Cherry
157	Tree	Prunus	lyonii	Catalina Cherry
158	Tree	Prunus	xblireiana	Flowering Plum
159	Tree	Quercus	agrifolia	Coast Live Oak
160	Tree	Quercus	engelmannii	Engelmann Oak
161	Tree	Quercus	suber	Cork Oak
162	Tree	Rhus	lancea	African Sumac
163	Tree	Salix spp.		Willow "R"
164	Tree	Tristania	conferta	Brisbane Box
165	Tree	Ulmus	parvifolia	Chinese Elm
166	Tree	Ulmus	pumila	Siberian Elm

No.	Type	Genus	Species	Common Name
167	Tree	Umbellularia	californica	California Bay Laurel "R"
168	Vine	Antigonon	leptopus	San Miguel Coral Vine
169	Vine	Distictis	buccinatoria	Blood-Red Trumpet Vine
170	Vine	Keckiella	cordifolia	Heart-Leaved Penstemon
171	Vine	Lonicera	japonica ‘Halliana’	Hall’s Honeysuckle
172	Vine	Lonicera	subspicata	Chaparral Honeysuckle
173	Vine	Solanum	jasminoides	Potato Vine

APPENDIX ‘B’

Undesirable Plant List

APPENDIX 'B'

UNDESIRABLE PLANT LIST

The following species are highly flammable and should be avoided when planting within the first 50 feet adjacent to a structure. The plants listed below are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio. Many of these species, if existing on the property and adequately maintained (pruning, thinning, irrigation, litter removal, and weeding), may remain as long as the potential for spreading a fire has been reduced or eliminated.

BOTANICAL NAME	COMMON NAME
Abies species	Fir Trees
Acacia species	Acacia (trees, shrubs, groundcovers)
Adenostoma sparsifolium**	Red Shanks
Adenostoma fasciculatum**	Chamise
Agonis juniperina	Juniper Myrtle
Araucaria species	Monkey Puzzle, Norfolk Island Pine
Artemesia californica**	California Sagebrush
Bambusa species	Bamboo
Cedrus species	Cedar
Chamaecyparis species	False Cypress
Coprosma pumila	Prostrate Coprosma
Cryptomeria japonica	Japanese Cryptomeria
Cupressocyparis leylandii	Leylandii Cypress
Cupressus forbesii**	Tecate Cypress
Cupressus glabra	Arizona Cypress
Cupressus sempervirens	Italian Cypress
Dodonea viscosa	Hopseed Bush
Eriogonum fasciculatum**	Common Buckwheat
Eucalyptus species	Eucalyptus
Heterotheca grandiflora**	Telegraph Plant
Juniperus species	Junipers
Larix species	Larch
Lonicera japonica	Japanese Honeysuckle
Miscanthus species	Eulalia Grass
Muehlenbergia species**	Deer Grass
Palmae species	Palms
Picea species	Spruce Trees
Pickeringia Montana**	Chaparral Pea
Pinus species	Pines
Podocarpus species	Fern Pine
Pseudotsuga menziesii	Douglas Fir
Rosmarinus species	Rosemary
Salvia mellifera**	Black Sage
Taxodium species	Cypress
Taxus species	Yew
Thuja species	Arborvitae
Tsuga species	Hemlock
Urtica urens**	Burning Nettle

**San Diego County native species

APPENDIX 'B' References:

Gordon, H. White, T.C. 1994. Ecological Guide to Southern California Chaparral Plant Series. Cleveland National Forest.

Willis, E. 1997. San Diego County Fire Chief's Association. Wildland/Urban Interface Development Standards

City of Oceanside, California. 1995. Vegetation Management. Landscape Development Manual. Community Services Department, Engineering Division.

City of Vista, California 1997. Undesirable Plants. Section 18.56.999. Landscaping Design, Development and Maintenance Standards.

www.bewaterwise.com. 2004. Fire-resistant California Friendly Plants.

www.ucfpl.ucop.edu. 2004. University of California, Berkeley, Forest Products Laboratory, College of Natural Resources. Defensible Space Landscaping in the Urban/Wildland Interface. A Compilation of Fire Performance Ratings of Residential Landscape Plants.

County of Los Angeles Fire Department. 1998. Fuel Modification Plan Guidelines. Appendix I, Undesirable Plant List, and Appendix II, Undesirable Plant List.

APPENDIX ‘C’

Weather Station Summary

Weather Station Summary

Ammo Dump California

Monthly Summary for: October, 2007

Day of Month	Day of Year	Wind Ave. mph	Wind V. Dir. Deg	Wind Max. mph	Air Temperature Mean Deg. Fahrenheit	Air Temperature Max Deg. Fahrenheit	Air Temperature Min Deg. Fahrenheit	Fuel Temperature Mean Deg. Fahrenheit	Fuel Temperature Max Deg. Fahrenheit	Fuel Temperature Min Deg. Fahrenheit	Humidity Mean Percent	Humidity Max Percent	Humidity Min Percent	Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip. inches
1	274	5.8	86	15	70	85	60	63	82	52	57	92	26	52	59	0
2	275	6.2	60	14	72	90	60	64	87	49	59	95	31	55	61	0
3	276	6.5	57	15	71	87	60	60	82	45	54	81	17	51	59	0
4	277	7.0	143	19	63	75	56	54	68	42	80	100	56	56	59	0
5	278	10.7	155	21	60	69	53	51	61	42	71	93	40	50	54	0
6	279	6.2	**330**	**18**	64	75	50	58	81	39	44	91	**14**	36	49	0
7	280	10.1	**328**	**23**	72	86	61	65	84	50	15	**23**	**8**	21	47	0
8	281	9.0	**13**	**20**	71	90	60	59	79	41	20	39	**8**	24	48	0
9	282	7.3	**76**	**19**	66	81	53	54	73	42	47	100	**14**	40	52	0
10	283	7.7	83	13	61	75	48	51	70	39	75	100	33	50	54	0
11	284	6.0	87	18	61	75	50	51	67	40	79	100	45	54	57	0
12	285	6.7	139	17	61	70	56	50	63	43	77	96	56	53	56	0
13	286	4.4	50	10	60	70	56	49	61	42	94	100	62	58	58	**0.35**
14	287	5.5	114	16	62	73	54	51	66	42	89	100	62	58	59	0
15	288	5.0	150	12	61	67	58	48	57	44	91	100	72	58	59	0
16	289	6.5	146	16	61	71	56	50	65	41	81	95	52	55	57	0
17	290	5.3	156	17	61	72	55	48	59	40	84	96	49	55	57	0
18	291	6.2	1	15	66	79	52	52	68	41	68	97	36	54	58	0
19	292	8.7	41	18	74	91	61	60	82	46	43	84	19	47	58	0
20	293	6.5	174	15	65	77	57	52	67	43	74	99	50	55	59	0
21	294	**22.0**	**331**	**36**	74	83	59	57	70	42	**13**	64	**5**	14	47	0
22	295	**30.3**	**344**	**49**	78	85	72	60	79	52	**6**	**8**	**4**	**6**	47	0
23	296	11.2	**16**	**37**	83	92	77	69	78	60	**12**	**22**	**9**	25	53	0
24	297	6.5	**318**	14	82	96	75	63	85	51	**16**	26	**10**	31	54	0
25	298	6.4	**14**	12	75	90	63	56	73	45	24	46	**11**	33	52	0
26	299	7.0	23	15	67	82	57	53	68	43	41	93	20	40	52	0
27	300	6.1	327	10	70	78	55	54	63	44	37	76	25	41	53	0
28	301	7.4	360	15	76	96	63	63	87	51	39	67	**16**	47	58	0
29	302	6.9	63	16	68	82	59	59	77	50	59	100	27	50	57	0
30	303			14	61	71	54	55	71	45	85	100	54	56	58	0
31	304	6.0	90	15	62	75	51	55	74	44	82	99	46	55	57	0

MONTHLY STATISTICS - AMMO DUMP (AUGUST 2004)
Page 2

	Wind			Air Temperature			Fuel Temperature			Humidity			Dew	Wet	Total
	Ave.	V. Dir.	Max.	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Point	Bulb	Precip.
	mph	Deg	mph	Deg. Fahrenheit			Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total															0.35
Ave.	8.2	47	18.2	67.6	80.3	58.1	55.9	72.5	44.8	55	80	32	44	55	
Max.	**30.3**		**49**	83	96	77	69	87	60	94	100	72	58	61	0.35
Min.	4.4		10	60	67	48	48	57	39	**6**	**8**	**4**	**6**	47	0

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.
° 1 KW-hr/m² = 86.011 ly. = 86.011 cal/cm² = 3600 KJ/cm² = 316.99 BTU/ft²

Discussion

Daily or monthly average weather data do not show the duration of peak afternoon winds. Only the Maximum mph is indicative of the worst case wind for the particular time period. The Ammo Dump RAWS, is located at Latitude (dd mm ss) 33 ° 22 ' 53 " N Longitude (dd mm ss) 117 ° 17 ' 08 " W at an elevation of 1068 feet, approximately 250 higher in elevation than the West Lilac Farms Project site and several miles distant. Values shown in bold at deemed significant wildfire indicators. Data not shown is missing.

***FIRE WISE* 2000, Inc.**
26337 Sky Drive
Escondido, California 92026
Telephone: (760) 745-3947

APPENDIX ‘D’

San Diego County

Ignition-Resistive Construction Requirements in High Fire Zones

APPENDIX 'D'

As of the date of this FPP the following are the San Diego County requirements for Ignition- Resistive Construction Requirements in high fire zones. The following Ignition-Resistive Construction Requirements are required for all residential structures on all lots as per the San Diego County Planning and Land Use, Building Division; the San Diego County Fire Code and the San Diego Consolitated Fire Code of 2009. The Ignition-Resistive Construction Requirements are as follows:

Ignition-Resistive Construction Requirements

1. All structures will be built with a Class A Roof Assembly, including a Class A roof covering, and attic or foundation ventilation louvers or ventilation openings in vertical walls shall not exceed 144 square inches per opening and shall be covered with 1/4-inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection. Attic ventilation shall also comply with the requirements of the Uniform Building Code (U.B.C.). Ventilation louvers and openings may be incorporated as part of access assemblies.

2. Paper-faced insulation shall be prohibited in attics or ventilated spaces.

3. All chimney, flue or stovepipe openings will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, 12 gauge minimum thicknesses or other material found satisfactory by the Fire Protection District, having ½-inch perforations for arresting burning carbon or sparks. It shall be installed to be visible for the purposes of inspection and maintenance.

4. All residential structures will have automatic interior sprinklers installed according to the National Fire Protection Association (NFPA) 13D- *Standard for the Installation of Sprinkler Systems in One and Two-family Homes and Manufactured Homes* and Deer Springs Fire Protection District standards.

5. All glass or other transparent, translucent or opaque glazing materials including skylights shall be constructed multi-layered glazed panels one layer of which must be tempered glass.

6. The exterior walls surface materials shall be non-combustible or an approve alternate. In all construction, exterior walls are required to be protected with 2-inch nominal solid blocking between rafters at all roof overhangs.

   Exception: Livestock stables less than 2,000 square feet total floor area and without restrooms are exempt from the non-combustible wall requirement if constructed a minimum of 100 feet from the property line, from any open space easement, and from any dwelling on the parcel. If a dwelling or addition to a

dwelling is subsequently proposed to be constructed closer than 100 feet from a stable constructed under this exemption, the stable must be retrofitted with non-combustible exterior wall covering or be removed.

7. All eaves, fascias and soffits will be enclosed (boxed) with non-combustible materials. This shall apply to the entire perimeter of each structure.

8. All rain gutters, down spouts and gutter hardware shall be constructed from metal or other noncombustible material to prevent wildfire ignition along eave assemblies.

9. Gutters shall be designed to reduce the accumulation of leaf litter and debris that contribute to roof edge ignition.

10. All side yard fence and gate assemblies (fences, gate and gate posts) when attached to the home shall be of non-combustable material. The first five feet of fences and other items attached to a structure shall be of non-combustible material.

11. No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas.

12. Venting of vertical walls and roofs including roof vents, dormer vents, gable vents, foundation ventilation openings, ventilation openings in vertical walls, or other similar ventilation openings shall be louvered and covered with 1/4-inch, noncombustible, corrosion-resistant metal mesh or other approved material that offers equivalent protection. Turbine attic vents shall be equipped to allow, one-way direction rotation only; they shall not free spin in both directions.

13. All projections (exterior balconies, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections) on specified lots shall be of non-combustible construction, one-hour fire resistive construction on the underside, or heavy timber construction. When such appendages and projections are attached to exterior ignition-resistive walls, they shall be constructed to maintain the ignition-resistive integrity of the wall.

    Decking surfaces, stair treads, risers, and landings of decks, porches & balconies shall be constructed of non-combustible construction, exterior fire-retardant-treaded wood, modified heavy timber construction as described in guidance documents prepared by the FAHJ, one-hour fire-resistant construction, or alternative decking that passes the performance testing requirements of State Fire Marshal standard 12-7A-4.

14. Exterior doors shall be approved non-combustible construction, solid core wood not less than 1 ⅜ inches thick or have a fire protection rating of not less than 20 minutes.

15. Vinyl window assemblies are deemed acceptable if the windows have the following characteristics:

    - Frame and sash are comprised of vinyl material with welded corners
    - Metal reinforcements in the interlock area
    - Glazed with insulating glass, annealed or tempered
    - Frame and sash profiles are certified in AAMA Lineal Certification Program
    - Certified and labeled to ANSI/AAMA/NWWDA 101/I.S.2-97 for Structural Requirements
    - All windows shall be provided with 1/8 inch mesh metal or similar non-combustible screens to prevent embers from entering the structure during high wind conditions

APPENDIX ‘E’

Fire Behavior

Fire Analysis Worksheet
BEHAVE Fire Modeling

Table 1

Fire Analysis Worksheet
BEHAVE Fire Modeling-APPENDIX 'E'

Northern Boundary Fuels

Project:	West Lilac Farms Fire Protection Plan
Location:	Aquaduct Road X Via Ararat Drive Bonsall, CA 92003

			Worst Case	Extreme Summer Day	Typical Summer Day
Inputs:	**Fuel Moisture**				
	1-Hr.		2	2	4
	10-Hr.		3	3	6
	100-Hr.		5	5	8
	Live Herbaceous Fuel Moisture		30	30	50
	Live Woody Fuel Moisture		50	60	60
	Fuel Model (s) Primary	50 %	**GR4**	**NA**	**NA**
	Secondary	50 %	**SC18**	**NA**	**NA**
	20 Foot Windspeed:		60		
	Terrain Slope (Percent)		20		
	Wind Direction From North		45		
	Aspect		180		
Outputs:	**Rate of Spread in Feet/Minute**		**1,104**	NA	NA
	Fireline Intensity in BTU/FT^2/S		**22,467**	NA	NA
	Flame Length in Feet		**45.2**	NA	NA

Comments:

FIRE WISE 2000, Inc.

26337 Sky Drive • Escondido, CA 92026 • Telephone: (760) 745-3947

APPENDIX ‘F’

Non-Combustible & Fire Resistant Building Materials for Balconies, Carports, Decks, Patio Covers and Floors

APPENDIX 'F'

Non-Combustible & Fire Resistant Building Materials For Balconies, Carports, Decks, Patio Covers and Floors

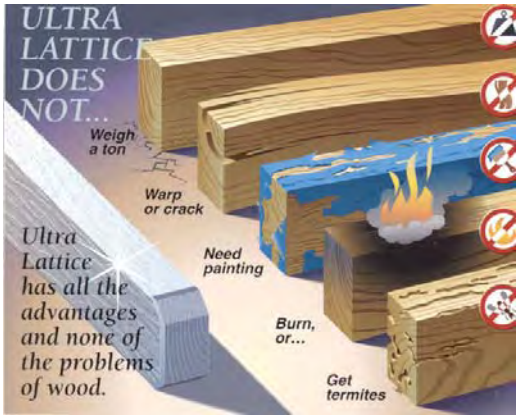
Examples of non-combustible & fire resistant building materials for balconies, carports decks, patio covers and floors are as follow:

I. NON-COMBUSTIBLE HEAVY GAGE ALUMINUM MATERIALS - *Metals*
USA Building Products Group - Ultra-Lattice

Ultra-Lattice Stand Alone Patio Cover

Ultra-Lattice Attached Patio Cover

Ultra-Lattice Solid Patio Cover



Ultra-Lattice Vs. Wood

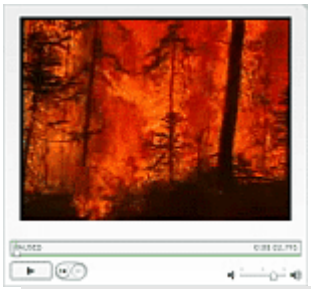
II. FRX Exterior Fire-Retardant Treated Wood

Exterior Fire Retardant Treated (FRT) Wood

FRX® fire retardant treated wood may be used in exterior applications permitted by the codes where: public safety is critical, other materials would transfer heat or allow fires to spread, sprinkler systems cannot easily be installed, corrosive atmospheres necessitate excessive maintenance of other materials, or fire protection is inadequate or not readily available. The International Building, Residential and Urban-Wildland Interface Codes and regulations permit the use of fire retardant treated wood in specific instances. See below for typical exterior uses and typical residential uses.

Typical Exterior Uses

- Balconies
- Decks



Homeowners and Residential Architects: See this 2-minute video and the diagram below.

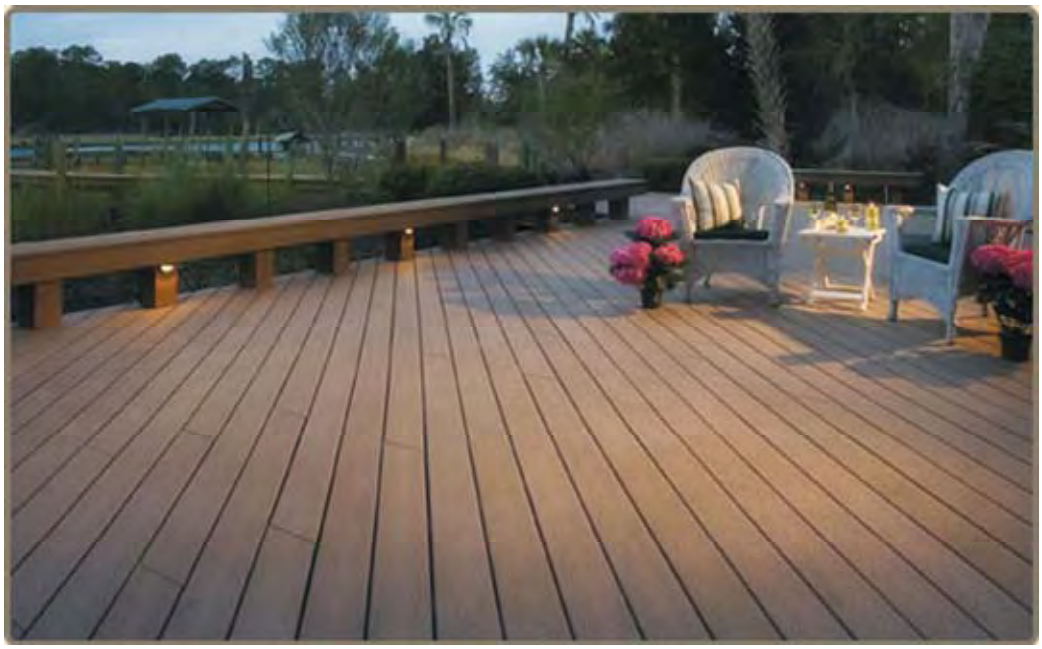
For information on fire retardant treated wood for exterior uses, visit www.frxwood.com.

III. TREX COMPANY, INC –"Trex Accents ®: Fire Defense ™ " wood and polyethylene composite deck board, nominal 5/4" thick x 5-1/2" width, nominal density of 0.036 lb/in^3.

Trex Accents®: Fire Defense™

The perfect blend of beauty and brawn.

Trex's #1 selling platform, Trex Accents®, exceeds the strict fire regulations set by the State of California and San Diego County.



- Offers superior safety performance:
  - Exceeds ASTM E84 Class B Flame Spread.
  - Exceeds 12-7A-4 Part A (underflame) and Part B (Burning Brand).
- Self-extinguishing even under extreme fire exposure.
- Approved for use by the California State Fire Marshal's Office and San Diego County. Read the California Department of Forestry and Fire Protection, Office of the State Fire Marshal WILDLAND URBAN INTERFACE (WUI)PRODUCTS Report. (PDF)

IV. SOLID "WOOD" DECKING

◊Company Name: Various Manufacturers
Product Description: Solid "Wood" decking: "Redwood", "Western Red Cedar", "Incense Cedar", "Port Orford Cedar", and "Alaska Yellow Cedar".
Sizes: Minimum nominal 2" thickness (American Softwood Lumber Standard PS 20).
Lumber grades: Construction Common and better grades for Redwood, 3 Common and better grades for Cedars, and commercial decking or better grades for both Redwood and Cedars.

Special instructions: Solid wood decking shall be installed over solid wood joists spacing 24" or less on center.

APPENDIX ‘G’

Project Facility Availability Forms:

Fire

and

Deer Springs Fire Protection District Requirements

COUNTY OF SAN DIEGO
DEPT. OF PLANNING & LAND USE
5201 RUFFIN ROAD, SUITE B
SAN DIEGO, CA 92123-1666
(858) 565-5981 • (888) 267-8770

PROJECT FACILITY AVAILABILITY FORM

FIRE

Please type or use pen

James D. Pardee, Jr. (805) 373-5555
Owner's Name Phone

267 Stonecreek Court
Owner's Mailing Address Street

Westlake Village, CA 91361
City State Zip

ORG _____
ACCT _____
ACT _____
TASK _____
DATE _____ AMT $ _____

DISTRICT CASHIER'S USE ONLY

SECTION 1. PROJECT DESCRIPTION — TO BE COMPLETED BY APPLICANT

A. [X] Major Subdivision (TM) [ ] Specific Plan or Specific Plan Amendment
[ ] Minor Subdivision (TPM) [ ] Certificate of Compliance: _____
[ ] Boundary Adjustment
[ ] Rezone (Reclassification) from _____ to _____ zone.
[ ] Major Use Permit (MUP), purpose: _____
[ ] Time Extension ... Case No. _____
[ ] Expired Map ... Case No. _____
[ ] Other _____

B. [X] Residential ..... Total number of dwelling units 28
[ ] Commercial ..... Gross floor area _____
[ ] Industrial ..... Gross floor area _____
[ ] Other ..... Gross floor area _____

C. Total Project acreage 95 Total lots 28 Smallest proposed lot 2

Assessor's Parcel Number(s)
(Add extra if necessary)

1	2	7	2	7	1	2	8
1	2	7	2	9	0	0	5

Thomas Bros. Page 1048 Grid H-7

Project address Aqueduct Road
Street

Bonsall 92003
Community Planning Area/Subregion Zip

OWNER/APPLICANT AGREES TO COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: James D. Pardee Jr. Date: 5/16/2006

Address: 267 Stonecreek Court, Westlake Village, CA 91361 Phone: (805) 373-5555

(On completion of above, present to the district that provides fire protection to complete Sections 2 and 3 below.)

SECTION 2. FACILITY AVAILABILITY — TO BE COMPLETED BY DISTRICT

District name: Deer Springs Fire Protection District

Indicate the location and distance of the primary fire station that will serve the proposed project:

Deer Springs Sta 1 @ 8709 Circle R. Dr. 6-8 miles

A. [X] Project is in the District and eligible for service.
[ ] Project is not in the District but is within its Sphere of Influence boundary, owner must apply for annexation.
[ ] Project is not in the District and not within its Sphere of Influence boundary.
[ ] Project is not located entirely within the District and a potential boundary issue exists with the _____ District.

B. [X] Based on the capacity and capability of the District's existing and planned facilities, fire protection facilities are currently adequate or will be adequate to serve the proposed project. The expected emergency travel time to the proposed project is 5-8 minutes.
[ ] Fire protection facilities are not expected to be adequate to serve the proposed development within the next five years.

C. [X] District conditions are attached. Number of sheets attached: _____
[ ] District will submit conditions at a later date.

SECTION 3. FUELBREAK REQUIREMENTS

Note: The fuelbreak requirements prescribed by the fire district for the proposed project do not authorize any clearing prior to project approval by the Department of Planning and Land Use.

[X] Within the proposed project 100 feet of clearing will be required around all structures.
[X] The proposed project is located in a hazardous wildland fire area, and additional fuelbreak requirements may apply. Environmental mitigation requirements should be coordinated with the fire district to ensure that these requirements will not pose fire hazards.

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Susan Magdaleno — Susan Magdaleno Fire Marshal — 760 7498001 — 5-23-06
Authorized signature — *Print name and title* — *Phone* — *Date*

On completion of Sections 2 and 3 by the District, applicant is to submit this form with application to: Zoning Counter, Department of Planning and Land Use, 5201 Ruffin Road, Suite B, San Diego, CA 92123

RECEIVED
MAY 31 2006
DEPARTMENT OF PLANNING AND LAND USE

DPLU #398F (7/1/04)

Deer Springs
Fire Protection District

8709 Circle "R" Drive
Escondido, California 92026
(760) 749-8001 Fax: (760) 749-6572

DEER SPRINGS REFERENCE # TM5276RPL3

ASSESSORS PARCEL NUMBER: ~~127-270-95~~; 127-290-05 127-271-28
S.D.Co. PLANNING CASE NUMBER: TM5276RPL3
(DATE) May 23, 2006 PAGE 1 OF 3

(NAME) Pardee
Concerning Fire Department requirements for a TPM; TM; and/or PM at or near:
(ADDRESS) Aquaduct Rd. and Via Ararat

Listed below are the systems and /or modifications required for your project. Compliance of the following items are a condition of FINAL APPROVAL OF THE TENTATIVE PARCEL MAP and/or TRACT MAP and/or PARCEL MAP.
These conditions are required as acceptable solutions to the adverse fire conditions impacting fire fighting and emergency operations for the site/project and **shall be added to the map.**

1. THIS PROJECT IS PROTECTED BY THE DEER SPRINGS FIRE PROTECTION DISTRICT / CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION. PRIOR TO ANY CONSTRUCTION OCCURRING ON ANY PARCEL, THE APPLICANT SHALL CONTACT THIS FIRE DEPARTMENT FOR VERIFICATION OF CURRENT FIRE PROTECTION DEVELOPMENT REQUIREMENTS. ALL NEW CONSTRUCTION SHALL COMPLY WITH THE EXISTING UNIFORM FIRE CODE REQUIREMENTS AND ALL APPLICABLE STATUTES, CODES, ORDINANCES OR STANDARDS OF THE DEER SPRINGS FIRE PROTECTION DISTRICT.

2. THIS AREA IS CONSIDERED A HIGH FIRE HAZARD AREA AND HAS LARGE QUANTITIES OF NATIVE BRUSH ADJACENT TO THE PROJECT SITE. THIS CREATES AN EXTREME FIRE HAZARD. (DSFPD ORD. 2002-03)

3. A FUEL BREAK OF ONE HUNDRED FEET (100') BRUSH AND WEED CLEARANCE, ON ALL SIDES OF STRUCTURE, IS REQUIRED PRIOR TO CONSTRUCTION. THE CLEARANCE IS TO BE MAINTAINED ALL YEAR LONG. (DSFPD ORD. 2002-03)
NOTE: ANY BIOLOGICAL / ARCHEOLOGICAL OPEN SPACE, RIPARIAN ZONES OR OTHER ENVIRONMENTAL LAND RESTRICTIONS SHALL NOT HINDER THE REQUIRED FUEL CLEARANCE AROUND A STRUCTURE. NO MITIGATIONS WILL BE CONSIDERED.

- ☐ ALL TM, TPM, GRADING, AND IMPROVEMENT MAPS (PLANS) SHALL INDICATE 100 FEET OF FIRE BUFFER ZONE AROUND ALL SIDES OF STRUCTURE.
NOTE: STRUCTURES SHALL HAVE A MINIMUM SET-BACK OF 30 FEET FROM PROPERTY BOUNDARIES. FIRE RESISTIVE CONSTRUCTION MAY

BE REQUIRED.
ALL PLANNING MAPS SHALL INDICATE ANY BIOLOGICAL / ARCHEOLOGICAL OPEN SPACE EASEMENTS NEAR OR WITHIN THE PROJECT.

- ☐ **ACCESS ROADWAY(S)/DRIVEWAY(S)** SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF THIRTEEN FEET, SIX INCHES (13' 6") – WIDTH OF ACCESS.

- ☐ **ROADWAY(S)** SHALL BE A GRADED WIDTH OF THIRTY-FOUR FEET (34') WITH AN IMPROVED WIDTH OF THIRTY FEET (30').
  OFF-SITE IMPROVEMENTS ARE REQUIRED ON AQUADUCT ROAD AND VIA ARARAT. ROADWAYS SHALL BE IMPROVED TO 24 FEET AND GRADED TO 28 FEET.

- ☐ **NO PARKING, FIRE LANE"** SIGNS SHALL BE INSTALLED ON ACCESS DRIVES AND ROADWAYS. THESE SIGNS SHALL BE POSTED AT LOCATIONS DESIGNATED BY THE DSFPD FIRE MARSHAL.
  FIRE LANE CURBS SHALL BE PAINTED RED.

- ☐ THE PROJECT / DEVELOPMENT AND EACH PHASE THEREOF SHALL HAVE A MINIMUM OF TWO (2) POINTS OF ACCESS FOR FIRE AND OTHER EMERGENCY EQUIPMENT, AND FOR ROUTES OF ESCAPE WHICH WILL SAFELY HANDLE EVACUATIONS. NO LOCKED GATES ALLOWED.
  PER DSFPD ORD. 2002-01 SEC. 902.2.2.2.8

- ☐ **DRIVEWAY(S)** SHALL BE A MINIMUM WIDTH OF SIXTEEN FEET (16').
  DRIVEWAY(S) SHALL BE UNOBSTRUCTED AND PAVED WITH EITHER ASPHALT OR CONCRETE WITH A MINIMUM DEPTH OF TWO INCHES (2").
  DRIVEWAY(S) AND ROADWAY(S) EXCEEDING 150 FEET IN LENGTH, SHALL HAVE AN APPROVED "TURN-AROUND" AT THE TERMINUS. SEE "CUL-DE-SAC" REQUIREMENTS.

- ☐ **CUL-DE-SACS** SHALL HAVE A MINIMUM TURNING RADIUS OF FORTY FEET (40') GRADED AND THIRTY-SIX FEET (36') IMPROVED.
  CUL-DE-SACS, HAMMER-HEADS AND 'T'-TURNS ARE ACCEPTABLE "TURN-AROUNDS" FOR DRIVEWAYS ONLY.
  CUL-DE-SACS SHALL BE REQUIRED FOR ACCESS ROADWAYS WHEN DETERMINED BY DSFPD.

- ☐ **DRIVEWAY(S) / ROADWAY(S) SHALL NOT, AT ANY POINT, EXCEED 20% GRADE. AVERAGES ARE NOT ACCEPTED.**
  GRADES EXCEEDING 20% SHALL BE RE-ENGINEERED BELOW 20% PRIOR TO CONSTRUCTION.
  THIS REQUIREMENT SHALL BE STRICTLY ENFORCED BY DSFPD.

- ☐ **DRIVEWAY(S) / ROADWAY(S)** EXCEEDING 15% GRADE WILL BE ACCEPTED ONLY WITH A MITIGATION OF A SURFACE OF PORTLAND CEMENT CONCRETE (PCC), WITH A RAKE FINISH, PERPENDICULAR TO THE DIRECTION OF TRAVEL.

- ☐ **STREET NAMES SIGNS** SHALL BE INSTALLED AS PER SAN DIEGO COUNTY STANDARDS.

- ☐ THE PUBLIC AND/OR PRIVATE EASEMENT ROADS SERVING THIS PROJECT SHALL BE NAMED.

- ☐ (9) FIRE HYDRANT(S) SHALL BE INSTALLED PRIOR TO COMBUSTIBLES AT PROJECT SITE.
  LOCATION IS DEPICTED ON PLOT MAP.
  MINIMUM EIGHT INCH (8") MAINS WITH SIX INCH (6") RISER, WITH ONE 4" AND ONE 2 1/2" OUTLETS.
  SPACING SHALL BE 600 FT.
  REQUIRED FIRE FLOW TO BE 1500 GPM AT 20 PSI.

- ☐ APPLICANT / DEVELOPER SHALL, PRIOR TO ANY FRAMING, PROVIDE DSFPD FIRE MARSHAL WITH A LETTER FROM THE WATER DISTRICT, VERIFYING FINANCIAL ARRANGEMENTS HAVE BEEN MADE FOR THE REQUIRED WATER IMPROVEMENTS.

- ☐ ANY NEW DEVELOPMENT SHALL BE REQUIRED TO PROVIDE MAP UPDATES IN A FORMAT (1": 400' SCALE) COMPATIBLE WITH CURRENT DEPARTMENT MAPPING SERVICES, AND SHALL BE CHARGED A REASONABLE FEE FOR UPDATING ALL RESPONSE MAPS.

ROAD AND HYDRANT IMPROVEMENTS ARE TO BE INSTALLED AND SERVICEABLE PRIOR TO ISSUANCE OF BUILDING PERMIT.

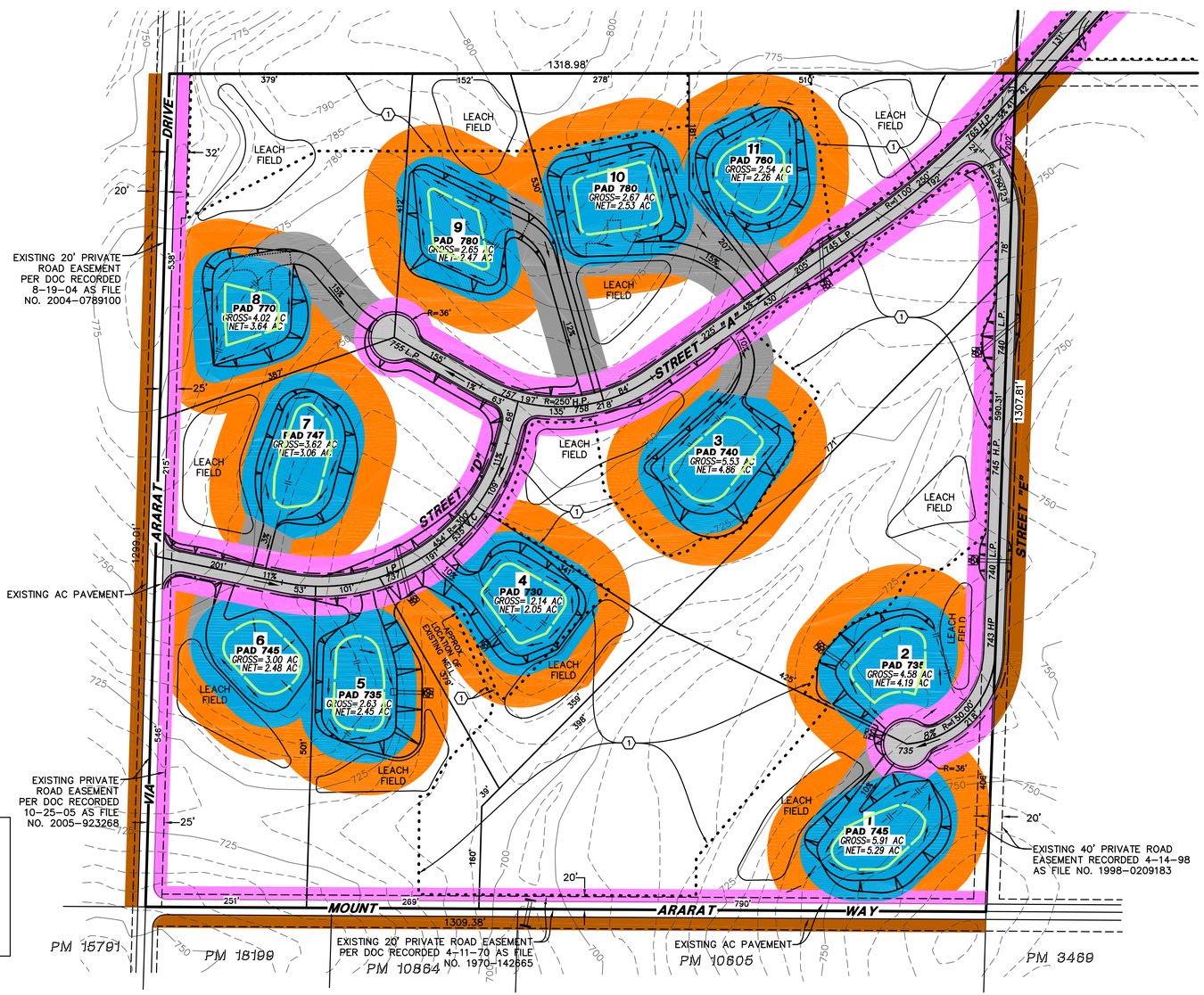
If you have any questions or concerns regarding the above or wish to discuss other mitigation alternatives, contact Susan Magdaleno.

Susan Magdaleno

Susan Magdaleno, Fire Marshal
Deer Springs Fire Protection District

FUEL TREATMENT LOCATION MAP

SEE SHEET 2



LEGEND

(1) PROPOSED LIMITED BUILDING ZONE EASEMENT

FUEL TREATMENT LOCATION
FOR
WEST LILAC FARMS
COUNTY OF SAN DIEGO, CALIFORNIA

IRRIGATED ZONE 1 (OWNER MAINTAINED) – THE AREA WITHIN 50 FEET OF A HOUSE OR TO THE NORTHERN PROPERTY LINE FOR THE HOME BUILT ON LOT 27 SHALL BE MAINTAINED TO IRRIGATED ZONE 1 CRITERIA. A PERMANENT IRRIGATION SYSTEM SHALL BE INSTALLED AND MAINTAINED WITHIN THIS ZONE. ONLY PLANTS FROM THE APPROVED SAN DIEGO COUNTY PLANT LIST ARE TO BE INSTALLED. ALL COMBUSTIBLE BUILDING MATERIALS INCLUDING COMBUSTIBLE DECKS, PATIO COVERS AND GAZEBOS WILL BE PROHIBITED IN THIS ZONE. SEE FIRE PROTECTION PLAN FOR DETAILS.

THINNING ZONE 2 (OWNER MAINTAINED) – ZONE 2 BEGINS AT THE OUTER EDGE OF ZONE 1 AND EXTENDS FOR A DISTANCE OF 50 FEET. IT IS A NON-IRRIGATED THINNING ZONE AND INCLUDES ALL NATURAL AND MANUFACTURED SLOPES. ALL EXOTIC AND FLAMMABLE NATIVE PLANTS SHALL BE REMOVED WITH THE ORIGINAL CANOPY AND FUEL LOADING REDUCED TO 50%. MAINTENANCE WILL BE ON-GOING THROUGHOUT THE YEAR AS NEEDED WITH CONTINUOUS REMOVAL AND/OR THINNING OF UNDESIRABLE COMBUSTIBLE VEGETATION TO MAINTAIN 50% THINNING, AND LIMBING AND SHAPING, OF THE RETAINED FIRE RESISTANT NATIVE PLANTS. NATIVE ANNUAL AND PERENNIAL GRASSES WILL BE ALLOWED TO GROW AND PRODUCE SEED DURING THE WINTER AND SPRING. AS GRASSES BEGIN TO CURE (DRY OUT), THEY WILL BE CUT TO 4 INCHES OR LESS IN HEIGHT. SEE FIRE PROTECTION PLAN FOR DETAILS.

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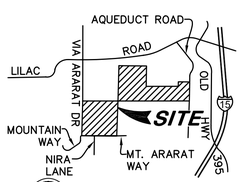
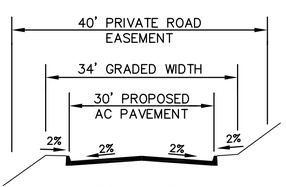
DRIVEWAYS (LOT OWNER MAINTAINED) – AN AREA THIRTY (30) FEET IN WIDTH ALONG EACH SIDE OF THE DRIVEWAY SHALL BE CLEARED OF FLAMMABLE VEGETATIVE GROWTH AND MAINTAINED AT A MINIMUM TO ZONE 2 CRITERIA.

ROADSIDE FUEL TREATMENT (H.O.A. MAINTAINED). AN AREA ALONG A ROAD LOCATED WITHIN THE PROJECT WHERE THE VEGETATION SHALL BE CLEARED OF ALL COMBUSTIBLE VEGETATION. ALL NEW ROADS SHALL BE MAINTAINED WITHIN 30 FEET OF THE ROADWAY. EXISTING ROADS SHALL BE MAINTAINED WITHIN 20 FEET OF THE PAVEMENT EDGE.

ROADSIDE FUEL TREATMENT (UNDERLYING PROPERTY OWNER MAINTAINED). AN AREA ALONG AN EXISTING ROAD OUTSIDE THE PROJECT AREA THAT SHOULD BE CLEARED OF COMBUSTIBLE VEGETATION BY THE UNDERLYING PROPERTY OWNER FOR A DISTANCE OF NOT LESS THAN 20 FEET FROM THE EDGE OF THE PAVEMENT.

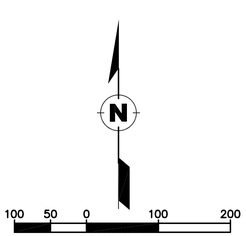


VICINITY MAP
NO SCALE
THOMAS BRO MAP NO. 1048, G-7 & H-7
AND NO. 1068, G-1 & H-1



TYPICAL SECTION

STREETS "A" - "E" (PRIVATE ROADS)
NO SCALE



OWNER/SUBDIVIDER:

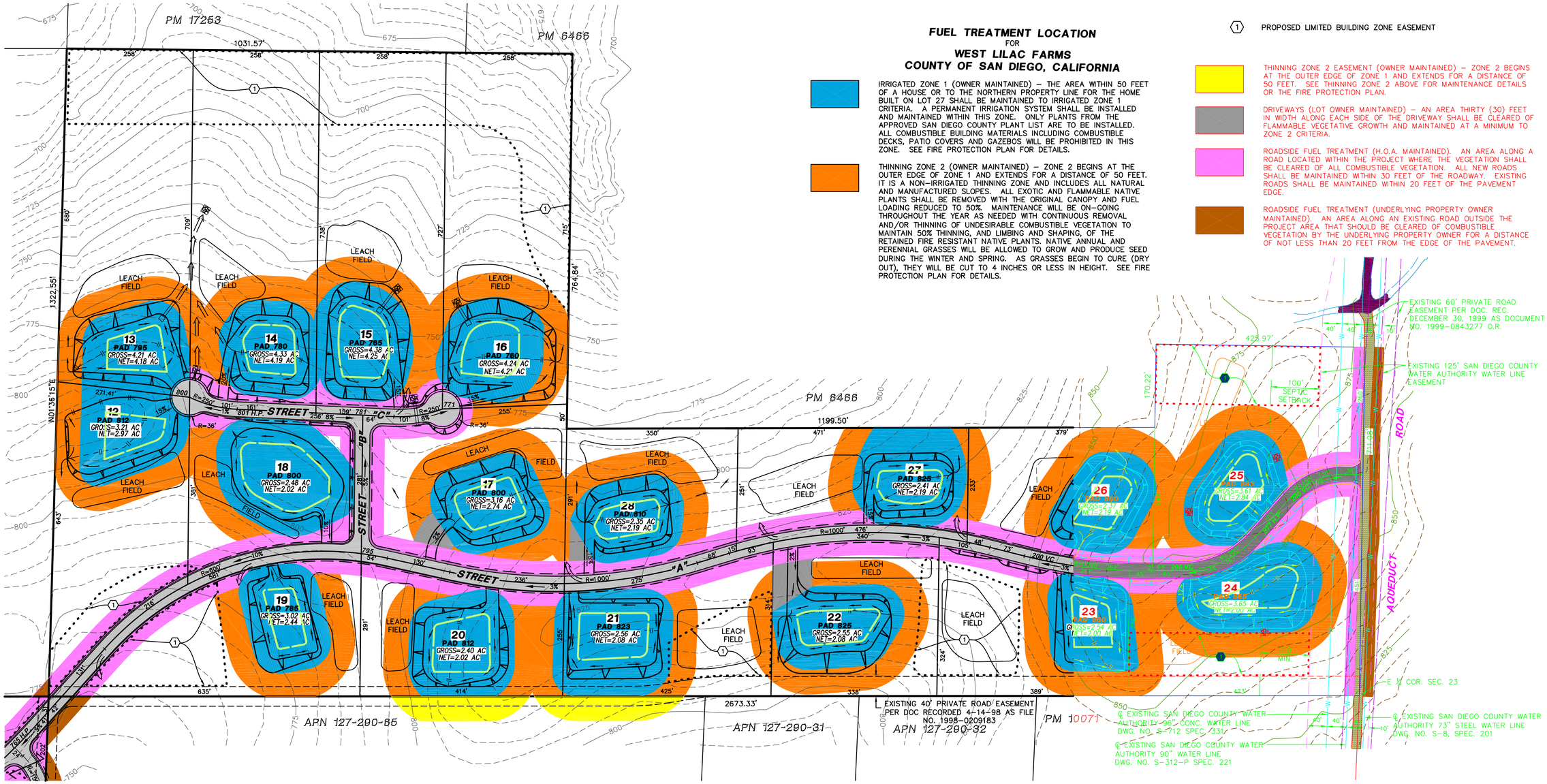
JAMES D. PARDEE, JR.
WEST LILAC FARMS II, LLC
269 STONECREEK COURT
WESTLAKE VILLAGE, CA 91361
1-805-373-5555

PREPARED BY:

DAVID C. BACON, PRESIDENT DATE

FIREWISE 2000, INC.
26337 SKY DRIVE
ESCONDIDO, CA 92026
TELEPHONE: 760-745-3947
E-MAIL: FIREWISE2000@SBCGLOBAL.NET

FUEL TREATMENT LOCATION MAP



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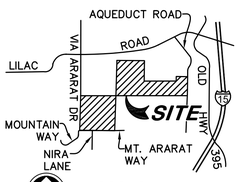
SEE SHEET 1



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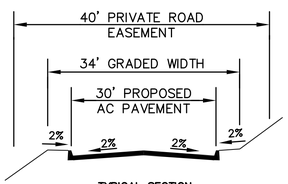

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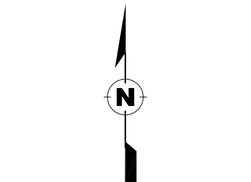

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