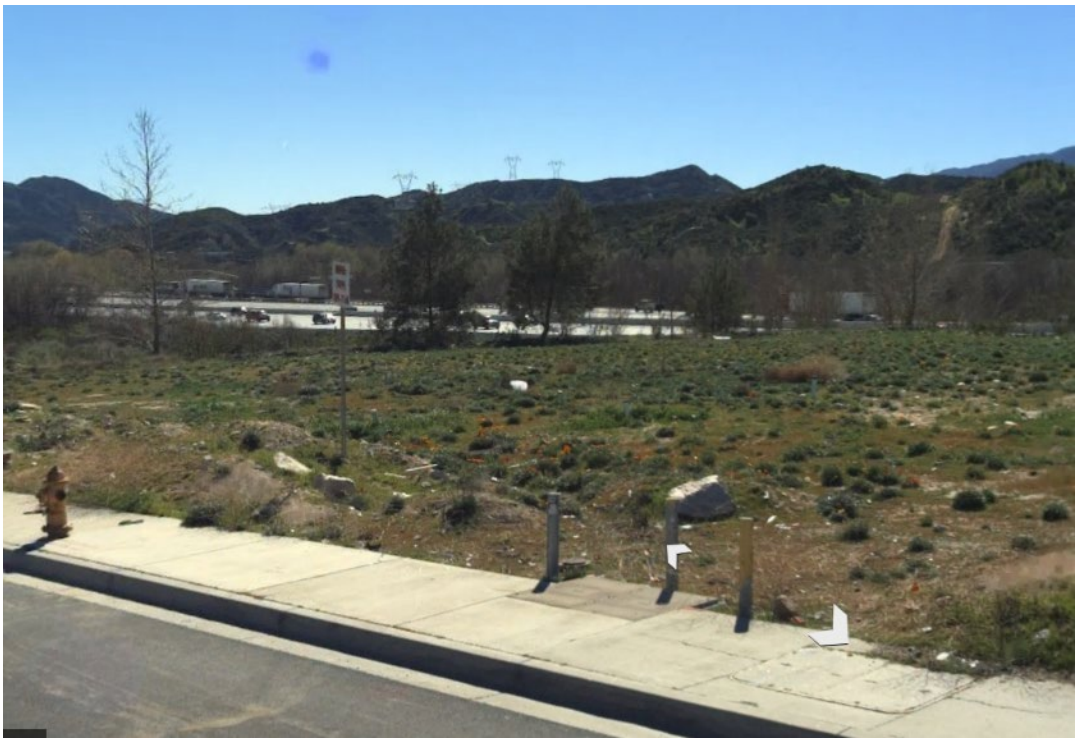
NAB OIL WAGON GAS STATION
DRAFT FIRE PROTECTION PLAN
PHELAN, CA 92371

Prepared for the County of San Bernardino and the San Bernardino County Fire Protection District



April 21, 2023

Applicant: **NAB OIL WAGON, INC.**
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Newport Beach, CA 92660

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NAB Oil Wagon Gas Station
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April 21, 2023

EXECUTIVE SUMMARY

This Fire Protection Plan (FPP) prepared by ***FIREWISE*** **2000, LLC** evaluates the proposed development of a convenience store, gas station and Tesla Supercharger station project to ensure it does not unnecessarily expose people or structures to wildland fire risks and hazards. The FPP identifies and prioritizes the measures necessary to adequately mitigate those impacts. The FPP has considered the property location, topography, geology, combustible vegetation (fuel types), climatic conditions and fire history. It considers water supply, access, structure ignitability and fire resistive building materials, fire protection systems and equipment, impacts to existing emergency services, defensible space and vegetation management.

This FPP also lists fuel modification requirements to mitigate the exposure of people or structures from a significant risk of loss, injury or death from wildland fires. Zone 0 is the first five feet surrounding any structure, avoid anything combustible, this includes woody plants, mulch, woodpiles, combustible trellises, and stored items. Zone 0 is an excellent location for walkways, or hardscaping with pavers, rock, or pea gravel. Zone 1 is an irrigated landscaped zone beginning at the edge of Zone 1. The goal within Zone 1 is to eliminate connectivity between islands of vegetation by spacing trees, removing lower branches of trees and shrubs, and creating areas of irrigated vegetation. Fire resistive, irrigated plants should be maintained by removing dead, dry, and down material. Normally, Zone 2 is the area beyond Zone 1 where the goal is to moderate potential fire behavior by reducing the density of the native trees, shrubs, and plants or grasses by 50% to slow fire spread and reduce flame heights. However, due to lack of onsite wildland vegetation and insufficient space, the entire project area outside of Zone 0 will be an irrigated Zone 1 fuel modification zone. Zone 2 is a thinning zone that is located on adjacent property. The property owners and any successors will be responsible to the San Bernardino Fire Protection District Fire Marshal for the completion and maintenance of all designated fuel modification treatments.

Finally, this plan and its requirements will be incorporated by reference into the final project Conditions of Approval to ensure compliance with codes/regulations and significance standards.

1.0 INTRODUCTION

This Fire Protection Plan (FPP) has been prepared for the proposed development of a convenience store, gas station, and Tesla Supercharger station herein after called the "Project". The purpose of the FPP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate those impacts. As part of the assessment, the plan has considered the property location, topography, geology, combustible vegetation (fuel types) climatic conditions, and fire history. The plan addresses water supply, access (including secondary/emergency access where applicable), structural ignitability, 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 hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect the adjacent at-risk development and essential infrastructures. The plan recommends measures that the property owner(s) will take to reduce the probability of ignition of the structures addressed by the plan.

Photo #1 - Aerial View of Project Site. *The site is currently vacant land located between I-15, a major freeway and Wagon Train Road.*

General Information

Applicant: NAB OIL WAGON, INC.
450 Newport Center Drive, Suite 405
Newport Beach, CA 92660

Approving Departments:

Fire Authority:	San Bernardino County Fire Protection District
Engineering:	San Bernardino County Department of Building & Safety
Water:	Cajon Junction Property Owners Association

The FPP for the Project will be submitted to and approved by the San Bernardino County Fire Protection District (SBCFPD) and the San Bernardino County Department Building and Safety. The FPP is based upon current requirements, as of the date of this report, of the SBCFPD and San Bernardino County regarding Wildland Fire Protection Plans. Government and private industry codes and standards include: pertinent local ordinances; the 2020 County of San Bernardino Consolidated Fire Code; 2021 International Urban-Wildland Interface Code; 2021 International Fire Code; California Code of Regulations Title 24, Part 9, and Title 14, Section 1280; 2022 California Fire Code; Amendments including Appendices to Chapters 1 & 4 and Appendices B, F, & H; Chapter 7A, California Building Code; the 2022 California State and Local Responsibility Area Fire Hazard Severity Zone Map; California Government Code, Sections 51175 through 51189; California Public Resources Code, Sections 4201 through 4204; California Government Code, sections 51175 through 51189; California Public Resources Codes sections 4201 through 4204; and the National Fire Protection Association Standard 13 and 1140.

The FPP has two main objectives. First, the plan provides fuel treatment guidelines for the business owners, employees and occupants. Second, the FPP provides features for the developer, architect, builder, and the SBCFPD to improve the relative safety of the buildings from approaching wildfire. Appendices attached to this FPP that provide additional information shall be considered a part of this FPP.

This Fire Protection Plan Includes:

- A wildland fire hazard rating assessment and expected fire behavior of both on-site and off-site native vegetative fuels.
- A long-term perimeter vegetative fuel modification treatment and maintenance plan to minimize the potential loss of any structure due to wildland fires.
- A long-term interior landscape fuel modification treatment plan and "Firewise Landscaping" criteria to be utilized around the planned structures.
- "Ignition Resistant Building Features" that will be required for all structures.
- A review of existing architectural plans required building features, and community protection systems (e.g., water and access), and specifications to assure these plans, features and systems adequately protect life and property.

1.1 Project Location, Description and Environmental Setting

1.1.1 Project Location

The Project is located in an unincorporated section of San Bernardino County approximately eight (8) miles north of the City of San Bernardino and nine (9) miles south of the City of Hesperia (see Photo #1). It is bordered by the I-15 on the west (an 8-lane

freeway) and Wagon Train Road on the east (a two-lane highway that provides access to Highway 138 located north of the Project. Wagon Train Road dead ends within one fourth of a mile to the southeast). The Project is within Cajon Pass, a major north south canyon that contains not only major roadways but also a major rail system with frequent trains traversing the canyon daily. Adjacent to the Project site to the north is a McDonalds restaurant and nearby gas stations. To the south, the adjacent lot is only partially developed and contains significant wildland vegetation.

1.1.2 Project Description

The Project proposes to build a ± 4,900 sq ft ARCO AM/PM Convenience Store, a car wash, nine (9) covered gas fueling dispensers, and eight Tesla Supercharging Stations, all located on approximately 1.42 acres.

1.1.3 Environmental Setting

The environmental setting consists of a description of information that portrays or captures various aspects of the existing environment within or adjacent to the Project.

1.1.3.1 Dates of Site Inspections/Visits Conducted

The site visit was evaluated remotely based on Google Earth aerial and ground based photos as well as prior drive byes, as the author of the FPP travels I-15 and Highway 138 yearly. A review via the internet and email was conducted to determine pertinent information concerning the environmental setting including vegetation types, topography, fire history, access, water supply, and related factors.

1.1.3.2 Topography

The elevation of the site is approximately 3,060 feet and is relatively flat with a gentle slope within the property that is downhill to the southeast onto an adjacent property. The Project location is within the Cajon Pass, a canyon that is oriented from the northwest to southeast.

The site was previously graded. A manufactured slope exists to the southwest that is uphill into the Project from the adjacent I-15 right-of-way (See Photo #2), and land owned by the Cajon Junction Property Owners Association. The slope located on adjacent private land to the east of Wagon Train Road is downhill toward the Project as seen in Photo #3 which is beneficial from a fire behavior perspective as fires intensity is lower when a fire burns downhill.

1.1.3.3 Climate & Weather

The climate within the project area is characterized as a Mediterranean type of climate with generally mild, wet (20-24 inches of rainfall per year) winters, with the bulk of the annual precipitation falling between December and March. Long, hot, and very dry summer seasons frequently occur with occasional, multi-year droughts.

FIRE*WISE* **2000, LLC** identified the Mormon Rock California Remote Automated Weather Station (RAWS) as being the closest weather station to the Project. RAWS are utilized for the monitoring of weather and forecasting of fire danger. This RAWS is located at Latitude 34° 19' 03" and Longitude 117° 30' 07" at an elevation of 3,300 feet which is nearly identical to the Project Site. This station reports hourly and has been in continuous operation since 1999.

The most critical wind pattern to the Project area 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. ***FIREWISE* 2000, LLC** evaluated the historical weather data from the Mormon Rock California RAWS and did not find any Santa Ana type winds that exceed 42 MPH during the fall when these winds are most likely. It is believe that the Cajon pass canyon orientation at the Project site, being northwest to southeast, shelters the site from stronger winds. Strong winds were identified at the Mormon Rocks California RAWs but these winds were associate with wet moisture ladened storms and therefore not a wildland fire problem. For planning purposes, worst case Santa Ana winds of 50 MPH were utilized for projecting fire behavior.

Photo #2 – East Side of Wagon Trail Road. *Wildfire burned the area recently and has exposed the topography. Slopes are downhill to the Project which is beneficial as fire behavior is reduced by the slope.*

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) when non-irrigated vegetation is at its lowest moisture content.

The typical prevailing summer time wind pattern is out of the west or southwest and normally is of a much lower velocity (5-12 MPH with occasional gusts to 30-MPH) and is associated with higher relative humidity readings (> 30% and frequently more than 60%) due to a moist air on-shore flow from the ocean.

All other (northwest, south, west) wind directions may be occasionally strong and gusty. However, they are generally associated with cooler moist air and have higher relative humidity (> 40%). They are considered a serious wildland fire weather condition when wind speeds reach > 20-MPH.

Photo #3 – South Side of the Project. *Note the Scattered Sage, Buckwheat, and occasionally taller shrubs. The small, fenced area that can be seen to the right contains control values for a pipeline.*

1.1.3.4 On-and Off-Site Vegetation

There is no significant native wildland vegetation on the building site due to the previous grading and mowing of the annual vegetation. As all the Project site will be utilized and graded, no on-site native or exotic fuels will remain. Adjacent to the Project on its east, south and west there are wildland fuels that are each discussed below as wildland fire exposures.

Eastern Fire Exposure

The property to the east across Wagon Train Road is a privately held parcel of land that has considerable wildland fire history. As seen in Photo #2, the topography is downhill toward the Project and ranges from 10-20 percent. The vegetation types, based on the expected climax vegetation type, consist of a Combined Fuel Model of SCAL18 – Sage/Buckwheat (70%) and sh5 – High load dry climate shrub (30%).

Southern Exposure

South of the Project is a parcel that is only partially developed as seen in Photo #4. The owner of the land to the south is Cajon Junction Property Owners Association (See Figure 1). The development consists of two small fenced areas that contain pipeline controls. Surrounding these two fenced areas is a vegetation cover that includes the same fuels as identified for the Eastern Exposure except that the ratios are different.

The southern exposure is exposed to a worst case 30-MPH wind conditions. Slopes as can be seen in photo #3 are nearly level to 5 percent.

The most likely climax vegetation consists of a Combined Fuel Model of SCAL18 – Sage/Buckwheat (90%) and sh2 – Moderate load dry climate shrub (10%).

Western Exposure

Photo #4 – Looking East from I-15. *The site for the gas station and related facilities is located at the top of the first slope.*

To the west is a combination of the Interstate 15 right-of-way and a narrow parcel of land owned by the Cajon Junction Property Owners Association. The Property Owners Association land is primarily located on the hillside (See Photo #4). This hillside faces southwest which results in it being very dry and therefore does not support as much plant growth. The larger scattered shrubs in Photo #4 are Chamise, a highly flammable species due to high oil content and scattered smaller shrubs.

Figure 1 shows the adjacent landownership. Immediately to the west of the Cajon Junction Property Owners Association is property owned by Caltrans. Caltrans periodically mows their right-of-way as a means of reducing fire behavior, especially when structures are located near their right-of-way.

The most likely climax vegetation consists of a Combined Fuel Model of SCAL15 – Chamise (50%) and gs2 – Moderate load dry climate grass-shrub (50%). Slopes are uphill into the Project and range between 25 to 40 percent which enhances fire behavior.

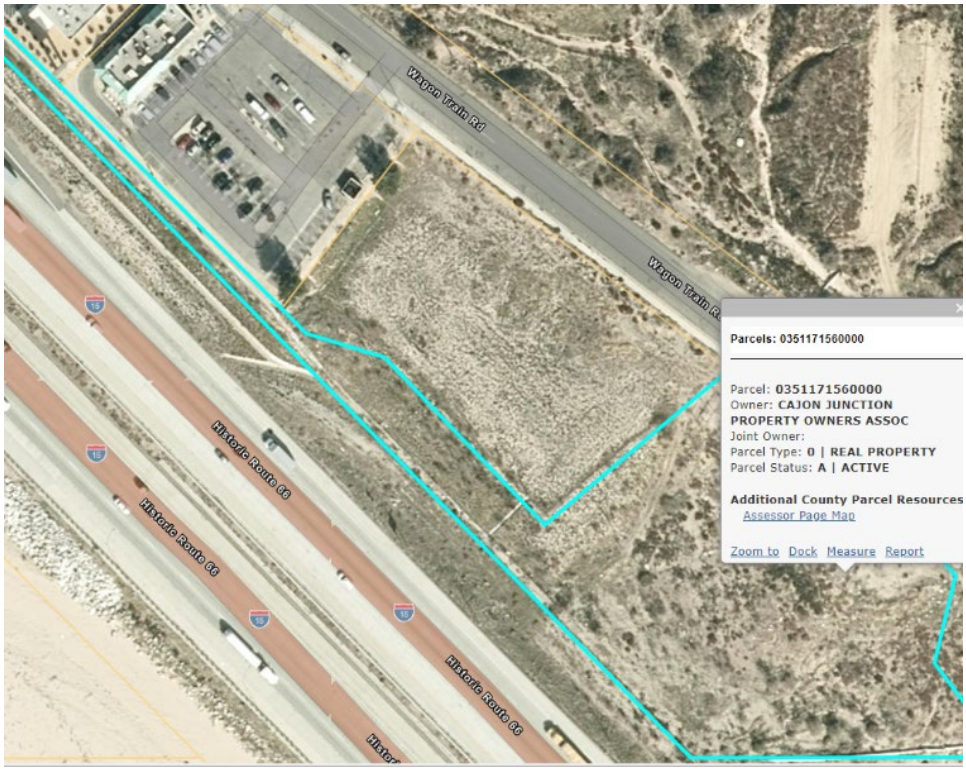

Figure 1 – Property Ownership West of the Project*. The San Bernardino County Assessor's parcel information shows that the property to the south and west (outline in blue) that abuts the Project is owned by the Cajon Junction Property Owner Association.*

1.1.3.5 Fire History

There is very significant wildland fire history for the Project site and area surrounding it (See Figure 2). Shown are the large number of fire footprints that have burned on or near the Project site over the time period of 1970-2022. All of these fires are what are called large fires, generally over 100 acres in size. There were undoubtedly also small fires of under 100 acres that were not mapped.

1.1.3.6 On-site and Off-site Land Uses

The existing 1.42-acre parcel of land proposed for development is located on a disturbed site as soil was previously compacted during grading operations which has restricted the growth of native vegetation. Compaction restricts root development and generally leads to sites that have more weeds and native and non-native grasses than what existed in the area prior to grading. The land to the northwest is commercial property currently occupied by McDonalds Restaurant. No wildland fuels are present to the north. Undeveloped land lies to the northeast and the land to the southeast is only partially developed and contains wildland fuels. To the southwest is a narrow piece of land owned by the Cajon Junction Property Owners Association that is shown in Figure 1 that is located between I-15 and the Project.

1.1.3.7 Fire Zone

The Fire Hazard Severity Zone Map for California was last updated on November 21, 2022. As shown in Figure 3, the site is classified as being in a Very High Fire Hazard Zone.

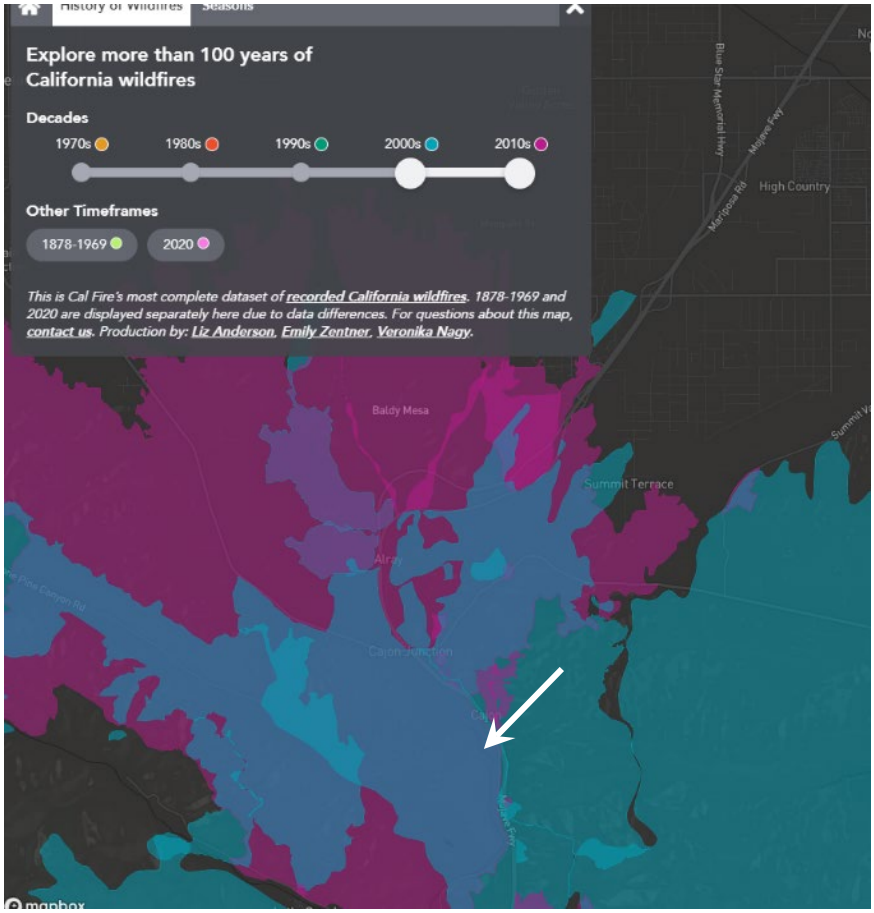

Figure 2 – Fire History. *Numerous wildland fires of over 100 acres have burned on and surrounding the Project. Most of these fires have occurred during southwest winds and not during Santa Ana wind events.*

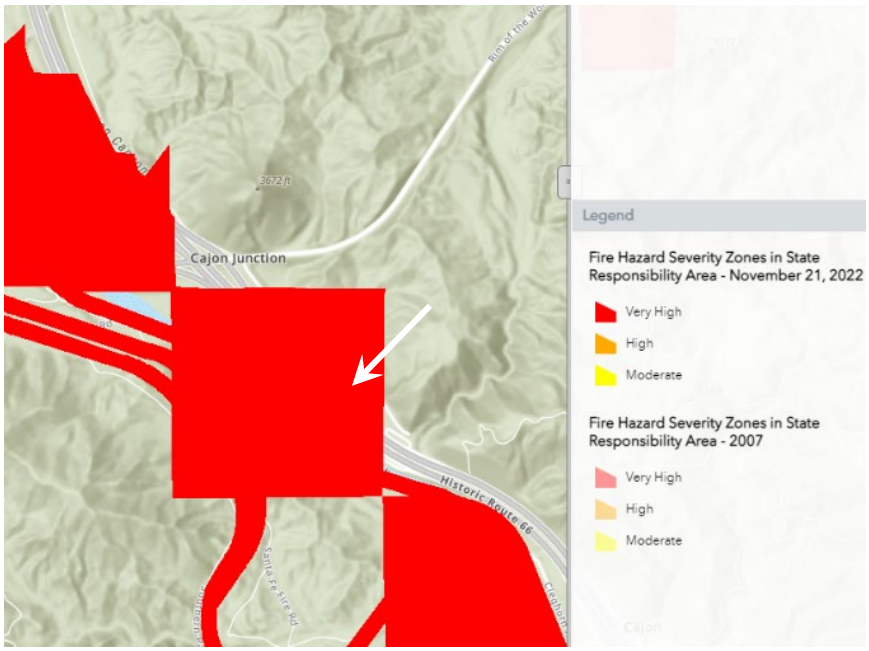

Figure 3 – Fire Hazard Zone. *The Project site is classified as being in a Very High Fire Hazard Severity Zone, the highest hazard classification that has specific building design and construction requirements including landscaping.*

2.0 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

This FPP evaluates the potential adverse environmental effects that the Convenience Store, Gas Station, Car Wash and Tesla Supercharging station commercial development may have from wildland fire and proposes appropriate mitigations for any adverse impacts to ensure that this development does not unnecessarily expose people or structures to a significant risk of loss, injury or death in regard wildland fire. The following guidelines for the determination of significance are used:

1. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The Project is bordered by existing commercial development, major roadways and wildland vegetation. The wildland fuels are located to the northeast, southeast and southwest. Following grading for the Project, the existing wildland fuels located within the Project will no longer exist. Fuel modification and other requirements outlined in this FPP will reduce the exposure of people or structures to a less than significant risk of loss, injury or death involving wildland fires.

2. Would the project result in inadequate emergency access?

Wagon Train Road is the only access into the Project. This roadway is currently not classified in the San Bernardino County Land Use Plan – General Plan – Circulation and Transportation Map. The road is a two-lane highway that only can be accessed from the north as it dead ends to the south. To the north is State Route 138 which to the east is classified by the County as a Major Highway and to the west as a Major Arterial Highway that has turn lanes onto I-15 in both southerly and northerly directions. The access at the front of the Project will both be improved and designed to the latest county standards.

3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service ratios, response times or other performance objectives for fire protection?

The SBCFPD provides fire and EMS services to the Project area. The SBCFPD is a cooperator with CALFIRE pursuant to the 2022/2023 Strategic Fire Plan for the San Bernardino Unit. This plan lists the SBCFPD as being a local fire department that has a Mutual/Automatic Aid Agreement with CALFIRE. The County also has a Mutual Aid Agreement with the San Bernardino National Forest. The existing facilities are adequate to provide acceptable emergency service and response times.

4. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The Project developer will be connecting to existing privately owned Cajon Junction Property Owners Association water lines. This system is currently utilized by the existing McDonalds and similar businesses located to the north of the Project. A fire hydrant currently exists in front of the building site on Wagon Trail Rd. This hydrant has a fire flow of 1,500 GPM per communications with City Commercial Management who is the water system operator on behalf of the Cajon Junction Property Owners Association.

3.0 ANALYSIS OF PROJECT EFFECTS

The Project demonstrates compliance, or offers the "*same practical effect"*, with applicable fire regulations, including but not limited to the California Fire Code, California Code of Regulations, California Building Code, the San Bernardino County Fire Protection District Fire Code. The NAB Oil Wagon Gas Station Fire Protection Plan and the Project design are consistent with the San Bernardino County recommendations including fuel modification. The Project meets the emergency response objectives identified in the Countywide Plan Hazard Element (last updated 09/27/2022) including Policy HZ-1.13 Fire Protection Planning or offers the Same Practical Effect.

3.1 Adequate Emergency Services

The nearest fire station to the project is the San Bernardino National Forest Mormon Rocks Fire Station 14 that is located approximately 2.1 miles west and 6 minutes away. SBCFPD Station #2 located at 1511 Devore Road, San Bernardino, CA is located 8.6 miles and approximately 14 minutes from the Project location based on Google Maps driving directions. The CALFIRE Devore Fire Station is located 9 miles away. Other Fire Departments might also respond based mutual aid agreements and the availability of fire apparatus.

On days with predicted high or extreme wildland fire danger, there may be multiple fire starts with multiple engine companies deployed on other incidents, reducing the normal availability of resources. However, agencies, including the SBCFPD, frequently staff additional units to increase resource availability when extreme weather and fuel conditions are predicted.

3.2 Fire Access

The Project will be accessed via Wagon Train Road on the north, a paved 26-foot-wide two-lane County Road. Wagon Train Road is maintained by the County of San Bernardino, Public Works Department, Transportation Division. The frontage onto Wagon Train Road will be designed to meet the access requirements and San Bernardino County Road standards. Fire apparatus access road design shall be designed and installed per SBCFD Community Safety Division Standard A-1. Road improvements include but are not limited to widening, with curbs and gutters. Turnarounds for fire apparatus will be constructed in the parking lots. Driveways will be a minimum of 24-feet in width and designed to support not less than 80,000 pounds and proposed grades shall be less than 12%. The Project owners will be responsible for road, signage, and markings within the

Project. Upkeep and maintenance of the driveways will become the financial responsibility of the owners.

No gates are planned in this Project.

Signs, postings, red curbs and white stencils shall conform to the requirements of Section 22500.1 of the California Vehicle Code and shall be maintained in perpetuity. Signs or notices shall be maintained in a clean and legible condition at all times and replaced or repaired when necessary to provide adequate visibility. Also see Section 4.5 regarding signage.

All driveways and roadways shall have a vertical clearance of fourteen (14) feet, six (6) inches in height. All accessways shall be maintained free of obstructions including storage or the parking of vehicles.

3.3 Water

The Project water supply will be provided by the Cajon Junction Property Owners Association. This Private water system serves the adjacent McDonalds restaurant and Chevron gas station by a 6-inch water main located along Wagon Train Road. The water system manager reports that the water tank that connects to the system has a usable volume of approximately 122,000 gallons. The domestic well that supplies the system was drilled in 1987 to a depth of 126 feet. At the time of its drilling, it was tested to deliver 200 GPM per the State of California Well Completion Report Number WCR1987-013753. Based on that flow, the system in one hour could pump 18,000 gallons to resupply the storage tank.

The SBCFPD Fire Marshal shall approve the design and installation of fire connections prior to the contractor bringing any combustible building materials onto the development.

Currently there is a fire hydrant located along the street that can provide the required fire flow to the Project. No new fire hydrants are therefore required as the existing one serves the Project. Onsite fire protection water systems shall meet SBCFD Standard W-2. Fire hydrant(s) along roadways shall be located at intervals as approved by the SBCFPD Fire Marshal. (See Fuel Modification Plan Map, Section 4.3, for the fire hydrant location).

3.4 Ignition-Resistant Construction and Fire Protection Systems

All structures shall comply with the ignition-resistant construction requirements: Wildland-Urban Interface sections of Chapter 7A of the California Building Code (see APPENDIX 'C'). This is a building requirement for any structure built in a Very High Fire Hazard Severity Zone. The SBCFPD shall review and approve the fire protection measures contained in this plan prior to the issuance of an occupancy permit.

The owners of the Project will be required to maintain the exterior of their property to the Fuel Modification standards outlined in Section 4.3 and will keep the roof and rain gutters free of leaves, needles and other combustible debris. All combustible materials must be safely stored away from the structures so that burning embers falling on or near a structure have no suitable host. The building owners must keep all doors and windows tightly closed whenever a wildland fire is reported in the near vicinity. The integrity of the doors and windows must be maintained to reduce the chances of embers being blown into the building and starting an interior fire.

3.4.1 Structure Setbacks from Protected Land – Minimum setback from property lines abutting national forests, open space preserves, and designated riparian areas is 100 feet. No protected land exists within 100 feet of the Project. National Forest land does exist to the north and east of the Project. It is approximately 250 yards away.

3.4.2 Setbacks from Slopes - Structures shall have a minimum setback from the top of slopes per the California Building Code, Chapter 4, Section R403.1.7. Structures greater than two-stories in height may be required to have a greater slope setback to be determined by the SBCFPD Fire Marshal or County Building Official. Setbacks from slopes reduce radiant and convective heat from a wildfire upon the structure.

3.5 Defensible Space and Vegetation Management

Defensible space is an area that surrounds each structure that acts as a barrier to slow or halt the spread of a wildland fire. Vegetation Management is the control or elimination of unwanted vegetation that exists around a home or structure.

3.5.1 Off-Site Fire Hazard and Risk Assessment

There are wildland fuels located to the east, south and west of the Project. The area to the north is bordered by commercial development (see Photo #1 and #5 and Figure #1).

Photo #5- Looking North on Wagon Train Road. *No parking is allowed along the roadway. McDonalds can be seen in the distance. The Project is located on the property to the left of the roadway. Wildland fuels exist on the right side of the roadway on private land.*

The eastern boundary abuts Wagon Train Road (See Photo #5 and #6). It is bounded to the south and west by the property owned by the Cajon Junction Property Owners

Association. To the north of the Project is a McDonalds restaurant that has its own established fuel modification zones.

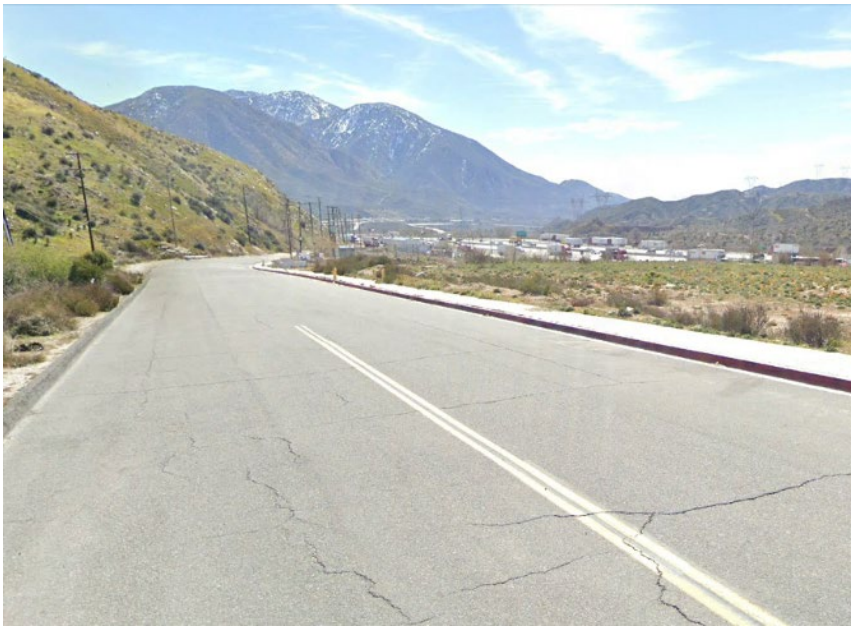

***Photo #6 – Looking South from the Project Along Wagon Train Road**. The roadway ends about a quarter mile from this location. The slope to the left in the distance recently was burned and is public land owned by the San Bernardino National Forest. The Project is to be located to the right of the roadway on the nearly level graded site.*

West of the Cajon Junction Property Owners Association property is the state-owned right-of-way for I-15 as shown in Figure 1.

3.5.2 On-Site Fire Hazard and Risk Assessment

The Project site is unoccupied, and the native and non-native vegetation will be removed during grading operations. No wildland fire hazard will remain once grading is performed followed by the creation and maintenance of the Fuel Modification Zones.

3.6 Vegetative Fuels Assessment/Fire Behavior Modeling

There are wildland fuels to the east, south and west of the building site. Fire Behavior Modeling was conducted for these exposures and is shown in the following three scenarios. For each scenario, the fire behavior calculation input data and anticipated fuel moistures are displayed. Within each scenario the expected "worst case" fire behavior is shown followed by the expected fire behavior in treated fuels or a Fuel Modification Zone 2.

Fire Scenario #1 - Fire Approaching from the Northeast or East ***(Late Fire Season With 50 MPH North, Northeast and East Wind Conditions)***	
Fire Behavior Calculation Input Data • **15 percent slope** • **50 mph 20-foot wind speed** • **45º wind direction from north** • **220º aspect from the north**	**Anticipated Fuel Moistures** *** 1-Hour Fine Fuel Moisture of……...2%** *** 10-Hour Fuel Moisture of…….……...…2%** *** 100-Hour Fuel Moisture of.....……...…..3%** *** Live Herbaceous Fuel Moisture of……..30%** *** Live Woody Fuel Moisture of…….....45%**
Expected Fire Behavior – Wildland Fuels **Combined Fuel Model [SCAL18 – Sage/Buckwheat (70%) and Sh5– High load, dry climate shrub (30%)]**	
Rate of Spread - 575 ft/minute	
Fireline Intensity - 33,974 Btu/ft/s	
Flame Length - 54.6 ft	
Expected Fire Behavior in Treated Fuels **Combined Fuel Model - [tl2 – Low Load Broadleaf Litter (50%) and gr1 – Short Sparse Dry Climate Grass (50%)]**	
Rate of Spread - 23 ft/minute	
Fireline Intensity - 67 Btu/ft/s	
Flame Length - 3.1 ft	

Fire Scenario #2 - Fire Approaching from the South ***(Late Fire Season With 30 MPH, South or Southwest Wind Conditions)***	
Fire Behavior Calculation Input Data • **5 percent slope** • **30 mph 20-foot wind speed** • **225º wind direction from north** • **160º aspect from the north**	**Anticipated Fuel Moistures** *** 1-Hour Fine Fuel Moisture of……...2%** *** 10-Hour Fuel Moisture of…….……...…3%** *** 100-Hour Fuel Moisture of.....……...…..4%** *** Live Herbaceous Fuel Moisture of.……30%** *** Live Woody Fuel Moisture of…….....55%**
Expected Fire Behavior – Wildland Fuels **Combined Fuel Model [SCAL18 – Sage/Buckwheat (90%) and Sh2 – Moderate load, dry climate shrub (10%)]**	
Rate of Spread - 165 ft/minute	
Fireline Intensity - 12,197 Btu/ft/s	
Flame Length - 34.1 ft	
Expected Fire Behavior in Treated Fuels **Combined Fuel Model - [tl2 – Low Load Broadleaf Litter (50%) and gr1 – Short Sparse Dry Climate Grass (50%)]**	
Rate of Spread - 7 ft/minute	
Fireline Intensity - 67 Btu/ft/s	
Flame Length - 3.1 ft	

Fire Scenario #3 - Fire Approaching from the West ***(Late Fire Season With 30 MPH, Southwest or West Wind Conditions)***	
Fire Behavior Calculation Input Data • **40 percent slope** • **30 mph 20-foot wind speed** • **225º wind direction from north** • **225º aspect from the north**	**Anticipated Fuel Moistures** *** 1-Hour Fine Fuel Moisture of……..2%** *** 10-Hour Fuel Moisture of……..……...…3%** *** 100-Hour Fuel Moisture of.....…….....…..4%** *** Live Herbaceous Fuel Moisture of.……30%** *** Live Woody Fuel Moisture of…….....55%**
Expected Fire Behavior – Wildland Fuels **Combined Fuel Model [SCAL18 – Sage/Buckwheat (50%) and gs2 – Moderate load, dry climate grass-shrub (50%)]**	
Rate of Spread - 159 ft/minute	
Fireline Intensity - 3,836 Btu/ft/s	
Flame Length - 20.0 ft	
Expected Fire Behavior in Treated Fuels **Combined Fuel Model - [tl2 – Low Load Broadleaf Litter (50%) and gr1 – Short Sparse Dry Climate Grass (50%)]**	
Rate of Spread - 25 ft/minute	
Fireline Intensity - 67 Btu/ft/s	
Flame Length - 3.1 ft	

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

Projects located in Hazardous Fire Areas shall include Fuel Modification Zones (FMZ) surrounding all structures that are greater than 250 square feet in size. San Bernardino County Fire Code stipulates that the FMZ be a minimum of 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 are 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 the referenced Firewise landscaping plant lists (See APPENDIX 'B' for references).

The descriptions and required treatments for Fuel Modification Zones are described below. All distances in this report are measured horizontally and are depicted on the Fuel Modification Plan Map included herein. The responsibility for the fuel modification maintenance defined below shall remain with the current owners and any subsequent owners, and as such shall run with the land. In the event the project is repossessed or sold, the unit/agency holding title to the NAB Oil Wagon Gas Station property will be responsible for such maintenance. Should the property owner not voluntarily maintain the property according to the fuel treatment guidelines in this FPP, the SBCFPD will provide written notice of abatement and require completion of the removal of annual grasses, and dead and down fuels accumulated on the site. Rather than specifying a specific time-period, the SBCFPD will require abatement as needed.

Maintenance of fuel treatment zones is highly important. Latham (1989) found that ember ignitions of surface fuels were primarily a function of ground fuels, especially litter depth. Also important 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 owners, surface fires burn with less intensity and spread more slowly than an aerial fuel.

Below are the detailed definitions and required treatments for the Fuel Modification Zones within the Project. See Fuel Modification Plan Map, Section 4.3, for all fuel treatments. Normally there are three fuel modifcation zones. Zone 0 is the immediate area, 0' to 5', surrounding a structure, followed by Zone 1 which covers the area from the outer edge of Zone 0 to 50' from the structure, and Zone 2 is the area from the outer edge of Zone 1 to a distance of 100' from the structure, however, in the NAB OIL Wagon Gas Station project, the area between Zone 0 and the property boundary will be designed and maintained to Fuel Modification Zone 1 thus providing additional protection. The required fuel treatments are also interlinked to the adjacent commercial buildings, infrastructure, and roadways. This results in a total of 100 feet of fuel treatment for the Project to the north, south and west. To the east, the building will be setback from the property line approximately 45 feet. This setback, when combined with the right-of-way for Wagon Trail Road (42 feet), results in approximately 90 feet of area without wildland fuels.

Fuel Modification Zone 0 **- Property Owner Maintained -** ***Shown as Black Around Each Proposed Building on the Fuel Modification Plan Map (Section 4.3).***

Zone 0, also known as an Ember Resistant Zone, whose intent is to create a landscape absent of all combustible materials within 5 feet of any structure. This zone requires the most stringent fuel modification and maintainenace. This area shall be kept clear of combustibles, plant based landscaping mulch, and all large shrubs and trees. It may have a few nonwoody plants, generally confined to pots or containers, that are low growing. No plants shall be grown beneath windows or adjacent to doorways. Each plant shall be properly irrigated and maintained and may include species such as sedges, agaves, jade plants, and succulents. Plants are limited to a maximum of 12 inches in height with a spread of not more than 1 foot. Plants that grow in water are also a good choice. All plants listed in Appendix A shall be prohibited in this zone.

The soil surface may be bare ground or covered with hardscape features such as pavers, gravel, concrete, rock, or other non-combustible material. Water features and statuary developed from non-combustible materials are also a good choice for this zone.

Fuel Modification Zone 1 **- Property Owner Maintained (***Shown as Green Around Each Proposed Building on the Fuel Modification Plan Map).*

Defined

Fuel Modification Zone 1 is the area commonly called the *defensible space zone* and shall be free of all combustible materials. It is an irrigated landscaped zone extending from the outer edge of Zone 0 to the lot property line. It provides the best protection against the high radiant heat produced by wildfire. It also generally provides an open area in which fire suppression forces can safely operate during wildfire events. This zone is typically located on a level or near level-graded area around each structure.

Required Landscaping:

- Plants in this zone need to be fire resistant and shall not include any pyrophytes that are high in oils and resins such as most pines, eucalyptus, cedar, cypress or juniper species. Thick, succulent or leathery leaf species with high moisture content are the most 'fire resistant'. For a list of Prohibited Plant, See Appendix 'A'.

- Zone 1 shall be cleared of all fire prone and undesirable plant species (see APPENDIX 'A').

- 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. See Appendix 'B' for literature sources for suitable fire-resistant plants.

- Other vegetation in this zone shall be irrigated.

- Trees shall not exceed 30' in height.

- Shrubs and groundcovers may be located no closer than 5 feet from the structure provided these plants will not carry fire to the structure.

- Non-flammable concrete patios, driveways, walkways, boulders, rock, and gravel can be used to break up fuel continuity within Zone 1.

- Any retained trees and all newly planted trees must be sited so that when they reach maturity the tips of their branches are at least 10 feet away from any structure, 20 feet from the crown of an adjacent tree, and must have a minimum of 6 feet of vertical separation from low growing irrigated vegetation beneath the canopy of the tree.

- All plants in this zone shall be irrigated by an automatic irrigation system.

- Artificial turf may be installed as long as the turf material is installed on a sand or noncombustible material and has a Class A fire rating of between zero and 25 as measured by ASTM E84 standard testing method for assessing the surface burning characteristics of building products. Artificial turf melts when exposed to extreme heat but does not burn and contribute to fire spread.

Required Maintenance:

- Shrubs and trees are to be annually maintained free of dead material.

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

- Tree crowns shall be separated by twenty (20) feet or more on steep slopes and maintained to keep a separation of 6 feet between the ground fuels (shrubs and groundcovers) and the lower limbs.

- Any trees within Zone 1 should be irrigated, limbed up to 6-feet from the ground, pruned of dead wood, grass understory weed-whipped, and leaf drop removed to prevent large accumulations of dead material under the trees.

- All trees must be maintained to the current ANSI A300 standards [Tree, Shrub, and Other Woody Plant Maintenance —Standard Practices (Pruning)] (www.treecareindustry.org/public/gov_standards_a300.htm).

- Flammable mulch materials shall not be installed in Zone 1.

- The irrigation system may be temporarily shut down during periods of significant precipitation but shall be reactivated once soil begins to dry out.

- The irrigation system may temporarily be shut down for necessary repair and maintenance.

Fuel Modification Zone 2 **- Cajon Junction Property Owners Association Maintained**
(Shown as Yellow on the Fuel Modification Plan Map)

Defined:

Zone 2A is a transition area between the strict requirements of Zone 1 and the undisturbed native and exotic vegetation designed to maintain a reasonably open character in this area. Zone 2A is typically a non-irrigated thinning zone 50 - 100 feet in width depending on location beginning at the outer edge of the structure. Due to the high valued Tesla charging stations on the south side of the property, Zone 2A shall be 40 feet in width along the southern property boundary within the Cajon Junction Property Owners Association Property as shown on the Fuel Modification Zone Plan Map (Section 4.3). This 40-foot-wide zone is designed to protect the Tesla Charging Stations. All the Associations property to the west of the Project that is within 100 feet of a structure will be maintained to Zone 2A criteria as shown on the Fuel Modification Plan Map (Section 4.3).

Thinning zones are utilized to reduce the fuel load of a wildland area near buildings thereby reducing both 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 removing root systems. The Association is not prohibited from planting the area and irrigating it to Zone 1A criteria as this treatment would exceed the requirement.

Required Landscaping

- Thinning the native vegetation to a point where 50% open space is created between shrubs.

- Remove all dead or dying plants, woody debris, and exotic flammable vegetation including designated prohibited plants (Appendix A).

- If native shrubs and chaparral plants are located within a tree's drip line, the lowest branch of the tree shall be a distance from the understory plant at least three times the height of the shrub/chaparral or 10 feet, whichever is greater.

- Allowances for the needs of protected species and habitats will be considered in this zone.

- No combustible construction or materials are allowed in Zone 2A.

- No Combustible mulches are allow in Zone 2A

Required Maintenance

- Annually maintain all tree crowns to keep a separation of ten 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 https://www.isa-arbor.com/store/product/124.

- Root systems shall be retained to help prevent soil erosion.

- Annually remove any undesirable exotic vegetation (see APPENDIX 'A') to maintain a 50% thinning from the original vegetation cover.

- Native and exotic 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 shall be cut to four (4) inches or less in height and maintained at that height until the following growing season.

- Remove any combustible trash and related materials that may have blown into any fuel treatment zone.

Fuel Modification Zone 2B **- Caltrans Maintained** ***(Shown as Grey on the Fuel Modification Plan Map)***

Defined:

Fuel Modification Zone 2B is an area located on off-site lands owned and maintained by Caltrans. To control vegetation, Caltrans implements a plan called the Integrated Vegetation Management Plan composed of assorted methods for keeping vegetation in check, including herbicide spraying, mowing, weed whacking, and or hand removal. Areas located adjacent to development receive higher priority and frequency of maintenance.

3.8 Cumulative Impact Analysis

The combination of San Bernardino County's weather, fuel, and terrain has often contributed to intense, uncontrolled wildland fires. This was evident in the devastating Old Fire of 2003, Blue Cut fire of 2016, and Grand Prix fire of 2003.

Typically, the areas of greatest concern are adjacent to urbanized areas or where structures are intermixed with wildlands. As the population of San Bernardino County increases and the Wildland Urban Interface (WUI) expands, fire hazards and risks will continue to be encountered. The risks associated with this project, will not be significantly increased. An increase in human activity in the immediate area may occur, but the removal of hazardous flammable fuels, and increased security should lessen any impacts of the development.

The approval of this proposal in addition to the already approved developments in the area, and future development proposals will decrease the concern of wildland fires as this area becomes more urbanized. At present, the density of development in the Cajon Junction area of San Bernardino County is slowly increasing and contains properties compliant with the fuel modification and weed abatement requirements of the County of San Bernardino and the SBCFPD.

4.0 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Mitigation measures and design considerations improve the overall safety of the NAB Oil Wagon Gas Station commercial development. The following list describes these measures:

1. All buildings will be built of non-combustible construction pursuant to Chapter 7A of the California Building Code construction requirements.
2. Irrigated landscaping shall be required throughout the entire site.
3. Access roads are adequate and shall be improved where they are not.
4. Fire apparatus and firefighter access is more than adequate.
5. Speed bumps, blocking fire lanes and fire access routes are prohibited.

4.1 Construction Standards

The structures within the NAB Oil Wagon Gas Station project shall be designed and constructed with ignition resistant construction standards and design features as per the current San Bernardino County Building Code. For a summary description of these construction requirements see APPENDIX 'C'.

All combustible building materials, e.g., decks, balconies, and fences, shall be permanently prohibited in Zones 0, 1, and 2. These structures may be allowed if constructed with Fire Resistive materials as per the San Bernardino County Fire Code and the San Bernardino County Consolidated Fire Code.

4.2 Additional Requirements

- Brush removal shall be completed prior to commencing any flammable 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.
- 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.
- Any trimmings produced by thinning and pruning will be removed from the site. No combustible mulches are allowed within the Project.
- Any damaged or replacement windows, siding, roof coverings, 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.

4.3 Fuel Modification Plan Map

A large, printed version of the Fuel Modification Plan Map or file containing the map is attached/included with this FPP depicting the location of all proposed fuel treatments, lot lines, roads, road widths, slopes, fire hydrant locations, fire behavior, and other pertinent construction elements for the Project.

4.4 Evacuation

Evacuation may be required should a wildfire threaten the area, See Appendix 'E' for details.

4.5 Signage

Signs shall be located at each exit from the Project that states "Emergency Evacuation Route". With an arrow that points north toward Highway 138. Each sign shall be constructed to be consistent with SBCFPD Standard B-1, Building and Premise Identification which includes information concerning the size of the lettering, stoke width and other features. Signs shall be maintained and repaired as needed by the property owner.

Figure 4 Emergency Evacuation Sign.

5.0 CONCLUSION

This FPP evaluated the adverse environmental effects that a proposed commercial development may have from wildland fire and identified means to properly mitigate those impacts to ensure that this development does not unnecessarily expose people or structures to a significant risk of loss, injury or death involving wildland fires.

- The requirements of this FPP provide the fuel modification standards to mitigate the exposure of people or structures to a significant risk of loss, injury or death. Zone 1 consists of the level building pad and the first 5-feet from the structures. Within Zone 1 only hardscape such as paved, block or gravel walkways surrounding the perimeter of the building. Limited plantings of fire-resistant vegetation may be permitted. Zone 2 begins at the outer edge of Zone 1 in a horizontal plane and provides for the selective clearing of vegetation and will protect structures from radiant and convective heat. This zone is a landscaped zone that is permanently irrigated and consists of fire resistant and maintained plantings.

- The development will have adequate emergency access in terms of access and construction standards for roadways and streets. The SBCFPD and nearby fire departments through mutual and automatic aid, shall provide fire protection. The proximity of the development to the Wildland Urban Interface (WUI), with the development inside a Very High Fire Hazard Severity Zone require fire sprinklers in all buildings.

- Water supplies via pipelines, hydrants, and related requirements will provide adequate water for fire protection.

- The mitigation measures proposed assure that the project will have less than significant impact related to fire hazards.

6.0 LIST OF PREPARERS, PERSONS & ORGANIZATIONS CONTACTED

6.1 List of Preparers

The principal author and preparer of this Fire Protection Plan is Herbert A Spitzer, Senior Wildland Fire Associate, ***FIREWISE*** **2000, LLC.** The plan was certified by Melvin

Johnson, Owner, ***FIREWISE*** **2000, LLC.,** a San Diego County DPLU Certified Wildland Fire Consultant.

6.2 Persons and Organizations Contacted

1. Jerry Bajwa, The Bajwa Group of Companies
2. Yolette Naranjo San Bernardino County Fire Protection District
3. Pablo Solano City Commercial Management
4. Jeanette Verdugo AGC Design Concepts, Inc.

7.0 REFERENCES

1. Andrews, Patricia L.; Carolyn H. Chase. 1989. BEHAVE: Fire behavior prediction and Fuel Modeling System—BURN subsystem, Part 2. Gen. Tech. Rpt. INT-260. Ogden, UT: USDA Forest Service, Intermountain Research Station. 93 p.

2. BehavePlus Fire Modeling System, Version 4.0 User's Guide. General Technical Report RMRSGRT-106WWW Revised. July 2009. Patricia L. Andrews, Collin D. Bevins, Robert C. Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

3. *Behave Plus Fire Modeling System, Version 5.0.5,* General Technical Report RMRS-GRT-106WWW Revised. July 2008. Patricia L. Andrews, Collin D. Bevins, Robert Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

4. *California Building Code 2022, Chapter 7A.*

5. California Code of Regulations, Title 14, section 1280, and Title 24 Part 9

6. California Public Resources Codes sections 4201 through 4204

7. California Government Code, sections 51175 through 51189

8. California Fire Code including Local Amendments and Appendices to Chapters 1 & 4 and Appendices B, F & H, 2022

9. International Wildland-Urban Interface Code. 2020 Edition.

10. International Fire Code. 2020 Edition

11. County of San Bernardino, Ordinance 4048. Ordinance Pertaining to the Abatement of Fire Hazards and Hazardous Trees and Fire Access Road Obstructions, October 7, 2008.

12. *The California State and Local Responsibility Area Fire Hazard Severity Zone Map. CALFIRE, November 21, 2022.*

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 1140 *Standard for Wildland Fire Protection. 2022 Edition.*

15. San Bernardino County Ordinance No. FPD 20-01, Adopting the 2022 California Fire Code with local amendments.

16. San Bernardino County Ordinance No. 4452, an ordinance adopting the 2022 California Residential Code and 2022 California Building Code.

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 p.

18. 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 the following web site: http://www.raws.dri.edu/index.html

APPENDIX 'A'

Prohibited/Invasive Plant List

The following species are highly flammable and 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.

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 Bernardino County native species

APPENDIX 'B'

References for Suitable Plants for High Fire Hazard Zones

References:

Bethke, J., Bell, C., Gonzales, J., Lima, L., Long, A., and MacDonald, C. 2016. UCCE San Diego. Research Literature Review of Plant Flammability Testing, Fire-Resistant Plant Lists and Relevance of a Plant Flammability Key for Ornamental Landscape Plants in the Western States. https://ucanr.edu/sites/SaratogaHort/files/235710.pdf

California Native Plant List. Fire Safe Council of San Diego County. 2017.

Fire Resistant Native Plants with High Wildlife Value, The Theodore Payne Foundation for Wildflowers and Native Plants, Inc. 10459 Tuxford Street, Sun Valley, CA 91352.

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.

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

APPENDIX 'C'

Ignition Resistant Construction Requirements

The following is a summary of the current requirements for ignition resistant construction for high fire hazard areas under Chapter 7A of the California Building Code (CBC) 2022 edition and the current California Residential Code, Section R337. However, the requirements listed below are not all inclusive and all exterior building construction including roofs, eaves, exterior walls, doors, windows, decks, and other attachments must meet the current CBC Chapter 7A ignition resistance requirements, the California Fire Code, and any additional County and/or City codes in effect at the time of building permit application. See the current applicable codes for a detailed description of these requirements and any exceptions. Note that the list below was specifically developed for residential homes and some features may not apply to commercial properties.

1. All structures will be built with a Class A Roof Assembly and shall comply with the requirements of Chapter 7A of the California Building Code. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions.

2. Roof valley flashings shall be not less than 0.019-inch (0.48 mm) No. 26 gage galvanized sheet corrosion-resistant metal installed over not less than one layer of minimum 72-pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D3909, at least 36-inch-wide (914 mm) running the full length of the valley.

3. Attic or foundation ventilation louvers or ventilation openings in vertical walls shall be covered with a minimum of 1/16-inch and shall not exceed 1/8-inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection.

4. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to resist the intrusion of flames and embers, be firestopped with approved materials or have one layer of a minimum 72-pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D3909 installed over the combustible decking.

5. Enclosed roof eaves and roof eave soffits with a horizontal underside, sloping rafter tails with an exterior covering applied to the under-side of the rafter tails, shall be protected by one of the following:
   - noncombustible material
   - Ignition-resistant material
   - One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit

- The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
- Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in Section 707A.10 when tested in accordance with the test procedures set forth in ASTM E2957.

- Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

  Exceptions: The following materials do not require protection:
  1. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
  2. Fascia and other architectural trim boards.

6. The exposed roof deck on the underside of unenclosed roof eaves shall consist of one of the following:
   - Noncombustible material, or
   - Ignition-resistant material, or
   - One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck, or
   - The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the roof deck designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association fire Resistance Design Manual.

     Exceptions: The following materials do not require protection:

     1. Solid wood rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).

     2. Solid wood blocking installed between rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2-inch (50.8 mm).

     3. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.

     4. Fascia and other architectural trim boards.

7. Vents – ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, other materials, or other devices that meet one of the following requirements:
   A. Vents listed to ASTM E2886 and complying with all the following:
      i. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
      ii. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
      iii. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).

B. Vents shall comply with all of the following:
   i. The dimensions of the openings therein shall be a minimum of 1/16-inch (1.6 mm) and shall not exceed 1/8-inch (3.2 mm).
   ii. The materials used shall be noncombustible.
   Exception: Vents located under the roof covering, along the ridge of roofs, with the exposed surface of the vent covered by noncombustible wire mesh, may be of combustible materials.
   iii. The materials used shall be corrosion resistant.

8. Vents shall not be installed on the underside of eaves and cornices.
   Exceptions:
   1. Vents listed to ASTM E2886 and complying with all the following:
      - There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
      - There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
      - The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
   2. The enforcing agency shall be permitted to accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.
   3. Vents complying with the requirements of Section 706A.2 shall be permitted to be installed on the underside of eaves and cornices in accordance with either one of the following conditions:
      3.1. The attic space being ventilated is fully protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or,
      3.2. The exterior wall covering, and exposed underside of the eave are of noncombustible materials, or ignition-resistant materials, as determined in accordance with SFM Standard 12-7A-5 Ignition-Resistant Material and the requirements

9. All chimney, flue or stovepipe openings that will burn solid wood will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, having a heat and corrosion resistance equivalent to 12-gauge wire, 19-game galvanized steel or 24-gage stainless steel. Or other material found satisfactory by the Fire Protection District, having ½-inch perforations for arresting burning carbon or sparks nor block spheres having a diameter less than 3/8 inch (9.55 mm). It shall be installed to be visible for the purposes of inspection and maintenance and removeable to allow for cleaning of the chimney flue.

10. All residential structures will have automatic interior fire sprinklers installed according to the National Fire Protection Association (NFPA) 13D 2019 edition – Standard for the Installation of Sprinkler Systems in One and Two-family Dwellings and Manufactured Homes. Fire sprinklers are not required in unattached non-habitable structures greater than 50 feet from the residence.

11. The exterior wall covering, or wall assembly shall comply with one of the following requirements:
    - Noncombustible material, or
    - Ignition resistant material, or
    - Heavy timber exterior wall assembly, or
    - Log wall construction assembly, or
    - Wall assemblies that have been tested in accordance with the test procedures for a 10-minute direct flame contact expose test set forth in ASTM E2707 with the conditions of acceptance shown in Section 707A.3.1 of the California Building Code, or
    - Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1.

      Exception: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section including;
        a. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing, or
        b. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Associate Fire Resistance Design Manual.

12. Exterior walls shall extend from the top of the foundation to the roof and terminate at 2-inch nominal solid blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.

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

1. All projections (exterior balconies, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections) or structures less than five feet from a building shall be of non-combustible material, one-hour fire resistive construction on the underside, heavy timber construction or pressure-treated exterior fire-retardant wood. When such appendages and projections are attached to exterior fire-resistive walls, they shall be constructed to maintain the same fire-resistant standards as the exterior walls of the structure.

15. Deck Surfaces shall be constructed with one of the following materials:
    - Material that complies with the performance requirements of Section 709A.4 when tested in accordance with both ASTM E2632 and ASTM E2726, or
    - Ignition-resistant material that complies with the performance requirements of 704A.3 when tested in accordance with ASTM E84 or UL 723, or
    - Material that complies with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5, or
    - Exterior fire-retardant treated wood, or
    - Noncombustible material, or

- Any material that complies with the performance requirements of SFM Standard 12-7A-4A when the attached exterior wall covering is also composed of noncombustible or ignition-resistant material.

16. Accessory structures attached to buildings with habitable spaces and projections shall be in accordance with the Building Code. When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all underfloor areas and exterior wall construction in accordance with Chapter 7A of the Building Code.

17. Exterior windows, skylights and exterior glazed door assemblies shall comply with one of the following requirements:
    - Be constructed of multiplane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, or
    - Be constructed of glass block units, or
    - Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
    - Be tested to meet the performance requirements of SFM Standard 12-7A-2.

18. All eaves, fascia and soffits will be enclosed (boxed) with non-combustible materials. This shall apply to the entire perimeter of each structure. Eaves of heavy timber construction are not required to be enclosed as long as attic venting is not installed in the eaves. For the purposes of this section, heavy timber construction shall consist of a minimum of 4x6 rafter ties and 2x decking.

19. Detached accessory buildings that are less than 120 square feet in floor area and are located more than 30 feet but less than 50 feet from an applicable building shall be constructed of noncombustible materials or of ignition-resistant materials as described in Section 704A.2 of the California Building Code.
    Exception: Accessory structures less than 120 square feet in floor area located at least 30 feet from a building containing a habitable space.

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

21 Gutters shall be provided with the means to prevent the accumulation of leaf litter and debris within the gutter that contribute to roof edge ignition.

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

23. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding

1/8 inch. Gaps between doors and door openings shall be controlled by one of the methods listed in this section.

- Weather-stripping products made of materials that:
  (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials) for a period of 2,000 hours, where the maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10%; and (b) exhibit a V-2 or better flammability rating when tested to UL 94, Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
- Door overlaps onto jambs and headers.
- Garage door jambs and headers covered with metal flashing.

24. Exterior doors shall comply with one of the following:
    1. The exterior surface or cladding shall be of noncombustible material or,
    2. The exterior surface or cladding shall be of ignition-resistant material or,
    3. The exterior door shall be constructed of solid core wood that complies with the following requirements:
       3.1. Stiles and rails shall not be less than 1-3/8 inches thick.
       3.2. Panels shall not be less than 1-1/4 inches thick, except for the exterior perimeter of the panel that shall be permitted to taper to a tongue not less than 3/8 inch thick.
    4. The exterior door assembly shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252 or,
    5. The exterior surface or cladding shall be tested to meet the performance requirements of Section 707A.3.1 when tested in accordance with ASTM E2707 or,
    6. The exterior surface or cladding shall be tested to meet the performance requirements of SFM Standard 12-7A-1.

** FAHJ – Fire Authority Having Jurisdiction
SFM – State Fire Marshal
NFPA – National Fire Protection Association

APPENDIX 'D'

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.

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 – Means material that in its natural state 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.

DEFENSIBLE SPACE – Is an area either natural or man-made, where material capable of allowing a fire to spread unchecked has been treated, cleared, or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.

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

FIRE HAZARD SEVERITY ZONES – 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 PLANTS – 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.

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

GROUND FUELS - All combustible materials such as grass, duff, loose surface litter, tree or shrub roots, rotting wood, leaves, peat, or sawdust that typically support combustion.

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.

SHALL - Indicates a mandatory requirement.

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

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

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

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

WILDLAND-URBAN INTERFACE – The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

APPENDIX 'E'

Emergency Evacuation/Shelter-in-Place Plan

I. INTRODUCTION

The NAB Oil Wagon Gas Station development herein after referred to as the Project is located in in the Cajon Pass Junction area of San Bernardino County, California. The climate in this region of southern California, coupled with the soils, geographical, and topographical conditions supports a highly flammable and diverse wildland plant community. This landscape is conducive to wildfires when hot, dry winds impact the area. Communities and developments that are not prepared for wildfire, both in terms of fire protection and evacuation may be vulnerable to impacts from these events. Over the last several years, a number of large and tragic fires have occurred in this portion of the state including the devastating Old Fire of 2003, Blue Cut fire of 2016, and Grand Prix fire of 2003. Common sense and good planning dictate a detailed plan for evacuation of employees and guests and when it is appropriate, a shelter-in-place plan should be included for all development proposals within the wildland urban interface (WUI).

To prepare owners, employees, and guests of the Project for wildland fire emergencies, this Emergency Evacuation/Shelter-in-Place Plan has been developed. It is anticipated that while this plan is primarily for wildland fires, portions of it may also apply to other evacuation emergencies such as earthquakes and hazardous materials spills. This plan should be part of any facility operations plan that outlines the details of daily operations and defines who does what, when they do it, and how they do it.

II. NAB OIL WAGON GAS STATION PROJECT

According to the fire hazard severity zone maps prepared by CalFire, the Project is located in an area identified as a Very High Fire Hazard Severity Zone. Areas to the east, south and west contain wildland fuels. These wildland fire exposures are presented in the Fire Protection Plan (FPP) developed specifically for the NAB Oil Wagon Gas Station. These wildland fuels combined with topography ranging from nearly level to 40 percent slopes, extreme fire weather, and the fact that the Project has a limited amount of existing development adjacent to it indicates a strong potential for wildland fire to be a continuing hazard that will need mitigation. As long as there are areas with wildland vegetation remaining, the Project at some point will be affected by wildfire. Of significant importance is that the Project incorporates a series of design features, which will provide the capacity to withstand the threat of a wildland fire and provide the means and methods necessary to protect its owners, employees, and guests. Significant wildland fire safety features identified by fire experts and reviewed and approved by the County of San Bernardino shall be implemented. One example of a design feature that creates a substantial interruption of the native vegetative fuels is the use of modification zones around each structure that provides a significant

benefit for not only the property but also the entire community surrounding area as these areas form barriers to wildland fire spread.

As part of the planning process, the FPP that was developed and to be approved sets forth the requirements for the establishment and maintenance of specific areas, that will modify or remove flammable vegetation within the Project or adjacent property. In addition, the FPP includes restrictions on specific building materials and methods suitable for building in a high fire hazard area as identified by the San Bernardino County Fire Protection District (SBCFPD) and identifies a series of other items such as minimum water supplies, automatic fire extinguishing systems (interior fire sprinklers) and roadway widths and design features that are needed for emergency response as well as evacuation. The development includes a redundant layering of fire protection features that have been proven to increase ignition resistance of structures and landscapes and result in communities that are significantly less vulnerable to wildfire.

Should evacuation be required, all employees and guests will use Wagon Train Road going north as the roadway to the south deadends. Wagon Train Road is a 2-lane roadway with access to Highway 138, a major arterial roadway. It is approximately 0.3 miles from the Project to the intersection with Highway 138. From that intersection, evacuees should travel west to either take either Interstate-15 northward toward Hesperia or southbound toward San Bernardino. The distance from the Project to I-15 north is 0.4 miles with an estimate drive time of 1 minute. From the Project to I-15 southbound is approximately 0.7 miles and an estatimated drive time of 2 minutes. Should I-15 not be available, evacuees could also continue westward on Highway 138 toward Wrightwood and Palmdale. Should all of these routes not be available, a third option would be to go east on Highway 138 toward Silverwood Reservoir. Due to the dynamics of wildland fires, always follow local fire or police officials instructions regarding which evacuation route to take.

When ordered to evacuated, do not delay. Take essential items and leave immediately as instructed by law enforcement. Always follow evacuation orders issued by law enforcement.

III. EVACUATION CONCEPTS IN THE WILDLAND URBAN INTERFACE

There are numerous concepts used throughout the world relating to evacuations of people from wildfire. Throughout the United States and particularly in California the most popular and commonly used concept in areas subject to wildfires is the implementation of a program known as "**Ready, Set, Go!".** This national program was developed and managed by the International Association of Fire Chiefs. It empowers fire departments to engage the residents they serve in wildland fire community risk and hazard reduction. CalFire and the majority of California fire agencies have adopted and promoted this program.

The focus of the program is on the public's awareness and preparedness, especially for those living or working in WUI areas. The program is designed to incorporate the local fire protection agency as part of the training and education process in order to ensure that evacuation preparedness information is disseminated to those subjected to the impact from a wildfire. For the

gas station project, this will be primarily its owners and employees. Most fire safety experts agree that this program provides for the greatest level of survivability from a wildfire. By virtue of the name of the program, there are three simple components:

READY – Preparing for the Fire Threat: Be ready, be firewise. Take personal responsibility and prepare long before the threat of a wildfire so one is ready when a wildfire occurs. For more information about how to be ready for wildland fires, visit: www.firewise.org.

SET – Situational Awareness When a Fire Starts: Pack your vehicle with your emergency items. Stay aware of the latest news from local media and local fire department for updated information on the fire.

GO – Leave Early! Following an action plan makes one prepared, and by leaving early, well before a wildfire is threatening the community.

"READY! SET! GO!" is predicated on the fact that being unprepared and attempting to flee an impending fire late (such as when the fire is physically close to the community or location) is dangerous and most often leads to death or injury.

Ready, Set, Go is the evacuation strategy proposed for this Project as described on the CalFire website (https://www.readyforwildfire.org/prepare-for-wildfire/ready-set-go/). Should a wildfire exist that threatens the property or safety of people located in the NAB Oil Wagon Gas Station, the following actions shall be implemented:

1. ***Ready – Preparing for the Fire Threat:*** *Take personal responsibility and prepare long before the threat of a wildfire so the structure is ready in case of a fire. Maintain a defensible space by clearing brush and weeds away from all structures. Use fire-resistant landscaping and harden structures with fire-safe construction measures. Assemble emergency supplies and personal belongings in a safe spot. Make sure all individuals, especially employees within the area, are 'on the same page' in commitment to advance preparation. Plan escape routes.*

2. ***Set – Situational Awareness When a Fire Starts:*** *Pack vehicle(s) with emergency items. Stay aware of the latest news from local media and the local fire department for updated information on the fire and perform the following:*

   - ✓ *Close all windows and doors that lead outside to prevent sparks from entering the structure.*
   - ✓ *Close all doors within the building in case the building does catch on fire; this will slow down the spread of the fire from room to room.*
   - ✓ *Move all combustible materials away from windows to prevent the possibility of heat from a fire radiating through windows and glass doors and catching flammable materials inside the structure on fire. This includes drapes, curtains, blinds, merchandise, 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 and buckets with water in case the power goes out.*
- ✓ *Shut off any gas valves within the structure or outside.*
- ✓ *Open the damper on fireplaces to stabilize inside/outside pressure, but close fireplace screens to keep sparks from igniting the house.*

3. Go – Leave early! *Following an Action Plan makes one prepared and firefighters are now able to best maneuver and manage the wildfire and ensure everyone's safety. Follow instructions given by the Fire Department official on site.*

Having a Wildfire Evacuation Plan (WEP) provides information necessary to protect life and property. The key to any effective WEP is the dissemination of early warnings and useful information. Regional or community evacuation plans can be supported through a number of early warning and information programs. In addition to the information provided by radio and television stations, and the internet, there are several other significant systems available to keep residents, guests and employees informed about wildfire incidents and evacuation procedures.

During a major disaster such as a wildfire, your Fire and Sheriff's Dept. use a system known as the Telephone Emergency Notification System or TENS to send high-speed mass notifications by telephone and text messages. This system helps get you critical updates, such as evacuation information, as quickly as possible. Additionally, Nixle provides alerts through cell phones and reverse 911 notifications systems. To use these systems, both require the individual resident to register their cell phones as well as their family member's cell phones as an added information tool in the event that some or all of the family members are not at home when an evacuation process is implemented.

Every local TV and radio news outlet in Los Angeles has agreed to broadcast, during traffic and weather segments, the Red Flag situation for southern California. A Red Flag warning is issued by the National Weather Service for weather events which may result in extreme fire behavior within 24-48 hours for the target areas.

Finally, emergency personnel may also ride through neighborhoods announcing voluntary or mandatory evacuation through loudspeakers or some communities have sirens such as used for tornadoes in the Midwest.

IV. OWNER, EMPLOYEE & GUEST AWARENESS & EDUCATION

The key to a successful evacuation or shelter-in-place plan is the education of not only the owners but also those employees that work at the facility. Annually, the owners, local business managers/owners, San Bernardino County Sheriff, and members of the Cajon Junction Property Owners Association should meet with the appropriate officials of the San Bernardino County Fire Protection District to develop any updates to the WEP and to distribute those updates as necessary.

To be notified by the County Emergency Notification Systems, register through the following web site: http://www.sbcounty.gov/SBCFire/TENS/TENSContact.aspx.

Another notification tool in San Bernardino County is what is called the SB Ready App. This app is designed to help you prepare and plan for now to respond to a disaster in your area. Using this app, the user will be able to:

- Share your status with your selected contacts with the push of a button.
- Receive critical emergency alerts via push notification.
- Locate San Bernardino County's emergency shelters.
- View up-to-date evacuation route maps.
- Get the latest news and weather for the San Bernardino County area.
- Create a personalized Emergency Preparedness Plan by answering five basic questions.

The SB Ready App can be downloaded from the following site: http://readysb.com.

Electricity to the community is provided by SCE. To reduce the risk of a fire starting, SCE may elect to implement what is known as a temporary Public Safety Power Shutoff (PSPS). This may occur when there are forecasted high winds and/or very high and/or extreme wildland fire danger. Homeowners can sign up for a free PSPS alerts at https://www.scepsps.com/. SCE also provides forecast information concerning potential PSPS shutdowns for the next seven days based on the weather forecast and fuel (vegetation moisture content) conditions on their website at https://www.sce.com/wildfire/weather-awareness. See Red Flag watch and warning criteria in Section V and the SCE alerts closely parallel one another.

Electricity is required to operate garage doors and the landscape irrigation system. Should a PSPS notification be issued, it is highly recommended that the vehicle that would be used to evacuate be parked facing the street, prior to the electricity being shut down.

V. NAB OIL WAGON GAS STATION EVACUATION AND SHELTER-IN-PLACE PLAN

When the NAB Oil Wagon Gas Station facility is threatened by a wildfire located miles away evacuation is the preferred means of protecting lives. When evacuation is recommended, avoid delays, GO! When a wildfire is close and heading toward the facility, especially during strong winds, shelter-in-place is preferred. The determination for which plan to implement will be determined by the SBCFPD, the San Bernardino County Sheriff's Department (SBCSD) and or the incident commander overseeing emergency operations. The SBCSD will most likely be the law enforcement agent to direct evacuation procedures but that could also involve the California Highway Patrol when the Sheriff Department resources become thin due to major incident activity.

The following considerations shall be evaluated to determine if evacuation or shelter-in-place are to be implemented:

Red Flag weather factors for consideration prior to a wildfire:

Fire Weather Watch – an alert issued by the National Weather Service (NWS) indicating that there is high potential for Red Flag criteria to be met within the next 36-48+ hours. These criteria include winds of over 25 MPH and relative humidity of 15% or less.

Red Flag Warning – Issued by the NWS there is high confidence that Red Flag criteria will be met within the next 24-36 hours or when those criteria are already met or exceeded.

Over the past several years, Red Flag Warnings have been posted on average 4-7 times a year. The greatest number of Red Flag Warnings in one year was 12.

Trigger points for staffing, checking systems and supplies

During Red Flag weather conditions with a strong Santa Ana wind condition from the east or northeast, a fire burning east of the Project can result in spot fires within the community due to falling embers from a fire over a mile away.

Factors for consideration during a wildfire event in nearby open space and public lands near the Project for which businesses and their employees are present include:

Is smoke visible from the facility?
It is time to monitor the fire status.

Can one smell smoke?
If smoke can be smelt, it usually indicates, especially during strong winds, that the fire is moving toward your location. It is time to initiate the SET stage of evacuation.

Are ashes or embers falling around the facility?
This is another indicator that the fire is heading toward your location. It is time to initiate the SET stage of evacuation. For those with health including respiratory issues, it would be good to evacuate prior to their being a official order.

Is traffic on the roadways located around the facility congested?
People may have already started to evacuate or there may have been an accident on the roadway that is causing the congestion. Listen to emergency officials. If it appears that the congestion is unlikely to clear, it may be time to prepare to shelter-in-place within the structure or at a nearby shelter-in-place facility.

Is an upcoming civic event planned during a Red Flag Watch or Warning?

Consider if the event will bring significantly more people into the community and result in there being additional vehicles needing to evacuate on the same roadways for which each EOP was based.

The primary evacuation route, Wagon Train Road to I-15 is likely to be the safest route during a wildfire event. The secondary evacuation routes, currently going west on Highway 138 toward Palmdale or east on 138 toward Lake Silverwood provide options for emergency managers.

Interstate 15 is a designated evacuation route in either direction. Currently, the roadway has five (5) lanes northbound and four (4) lanes going southbound.

Signage is also critical. During wildfire events, smoke and flying embers or debris may impact visibility during the day and become increasingly difficult during the night. The Owners, employees, and especially guests may get confused at intersections and get turned around. All roadways therefore must be signed with evacuation route signs indicating the way out.

The owners shall establish and maintain emergency evacuation route signs within the Project. These signs shall be located at each exit from the property. An example of these signs is shown in Figure 1 below.

Figure 1 – Evacuation Signage

VI. SUMMARY

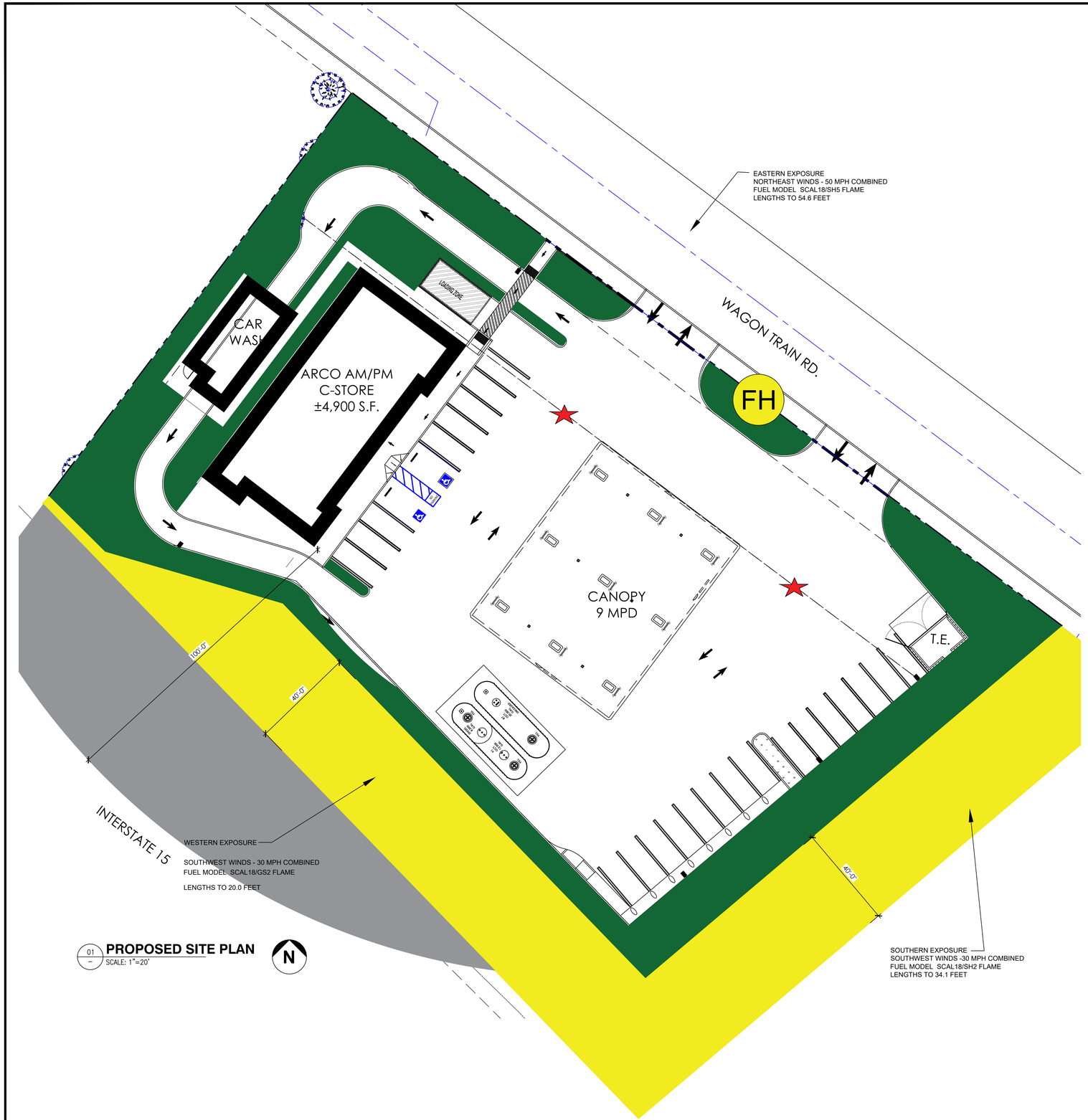
This Project WEP can be updated to reflect changes to the existing development or future new development. This Wildfire Evacuation/Shelter-in-Place Plan is therefore dynamic and will change over time.

To summarize; the important points of this Wildfire Evacuation and Shelter-in-place Plan are as follows:

- Educate owners, employees, and guests of Ready, Set, Go as outline in Section III and V and follow said principals.
- Have all landowners and their staff signed up for Nixle, http://readysb.com and the Southern California Edison notification website https://www.sce.com/wildfire/weather-awareness as outlined in Section III.
- Advise employees of the importance of signing up for at least one of the following alert programs:

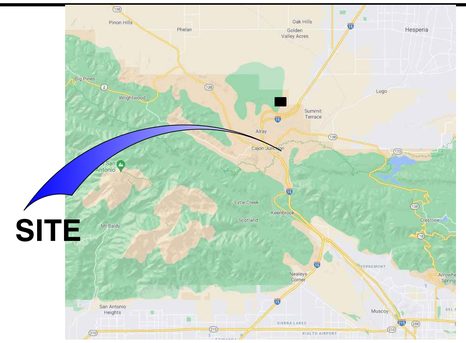
  Nixle – Text your zip code to 888777 to opt-in
  For the **SB app** - http://readysb.com
  Southern California Edison (SCE) Alerts - https://www.scepsps.com/
  The **Telephone Emergency Alert System** at -
  http://www.sbcounty.gov/SBCFire/TENS/TENSContact.aspx.

- Educate the owners and employees regarding the importance of this evacuation and shelter-in-place plan and its exit routes.
- Conduct educational sessions with local businesses, employees, San Bernardino County Sheriff's Department and the SBCFPD annually.
- Make sure all Emergency Evacuation Signs are in place and maintained.
- Post maps of the roadway system and evacuation routes on bulletin boards.
- Consider providing emergency or other trained personnel for ADA employees or those with health issues, especially respiratory conditions, and provide them with transportation should an evacuation be ordered.
- Annually, review this WEP with all employees and new owners as property is sold.
- Conduct annual reviews of the WEP with the SBCFPD, SBCSD, members of the Cajon Junction Property Owners Association.
- Update the plan for other types of emergencies that may require evacuation such as earthquakes and the release of hazardous materials.



01 — **PROPOSED SITE PLAN**
SCALE: 1"=20'

N



A — **VICINITY MAP**
SCALE: N.T.S.

N

Certified By

Melvin A Johnson, Owner Date: 4/21/2023
Certified CEQA Wildland Fire Consultant
*FIREWISE*2000, LLC
PO Box 339
Lower Lake, CA 95457
Telephone: (760) 745-3947
info@firewise2000.com

This Exhibit is found to be compliant with
The Fire Protection Plan dated 4/21/2023

NAB OIL WAGON GAS STATION

FUEL MODICATION PLAN MAP LEGEND

PHELAN, CALIFORNIA

Symbol	Description
	FUEL TREATMENT ZONE 0 (PRPERTY OWNER MAINTAINED) - An irrigated zone that is cleared of all existing plants and that is 5 feet in width beginning at the outer wall of the structure at ground level. No combustible material or plants are allowed in this zone. Plants are limited to small plants typically less than 1 foot in height and that will not spread more than 1 foot. Usually these plants are placed in containers that are located between windows and doors. See written Fire Protection Plan for additional information.
	FUEL TREATMENT ZONE 1 (PROPERTY OWNER MAINTAINED) - The lot owner shall plant their lot as shown with fire resistant vegetation and maintain it to Zone 1 criteria. Plants listed in the Prohibited Plant List found in Appendix A of the Fire Protection Plan shall not be planted in this zone. Zone 1 shall extend outward from each structure to the Project boundary or property line. Maintenance will be on-going throughout the year as needed. The area shall be permanently irrigated. See Fire Protection Plan for details.
	FUEL TREATMENT ZONE 2 (CAJON JUNCTION PROPERTY OWNERS ASSOCIATION MAINTAINED) - Plants listed in the Prohibited Plant List found in Appendix A of the Fire Protection Plan shall not be planted in this zone. Zone 2A shall extend from the southerneast side of the Project property pine for a distance of 40 feet into the land owned by the Association. Grass and herbaceous vegetation shall annually be cut or mowed to a 4 inch stubble height. Maintenance will be on-going throughout the year as needed. See Fire Protection Plan for details.
	FUEL TREATMENT ZONE 2B (CALTRANS MAINTAINED) - A non-irrigated thinning zone located on adjacent transportation property owned and maintained by Caltrans. The zone is maintained similar to Zone 2 criteria described above.

Prepared for:	NAB oil Wagon, Inc 450 Newport Center Drive, Suite 405 Newport Beach, CA 92660	Prepared By:	FIREWISE2000, LLC. PO Box 339 Lower Lake, CA 95457 Telephone: 760-745-3947 Info@firewise 2000.com

FUEL MODIFICATION SYMBOL LEGEND

SYMBOL	DESCRIPTION
★	Emergency/Fire Access Way Entrance
FH	The FH (Fire Hydrant) symbol is shown for reference only. Each fire hydrant is to be installed per Riverside County Fire Department.

AGCDC.COM
AGC DESIGN CONCEPT, INC.
24820 Orchard Village Rd.
Ste. A311
Valencia, CA 91355
Phone: 661.295.1111

REVISIONS

NO.	DATE	BY

OWNER:
NAME: JERRY BAJWA
PHONE: (909) 843.9092
APPLICANT:
NAB OIL WAGON, INC.
ADDRESS:
800 N. HAVEN AVE. SUITE 428
ONTARIO, CA 91764

NEW GAS STATION
WAGON TRAIN RD.
PHELAN, CA.
FUEL MODIFICATION SITE PLAN

consultant job#

master release date

project exe date | master drawn by

Filename AGC

Facility/Project 626

sheet name
FMP