Appendix F:
Hazardous Materials Supporting Information
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Eagle Ranch
Development Fire
Safety Review

City of
Atascadero, CA

September 12, 2016
1. **EXECUTIVE SUMMARY**

Citygate Associates, LLC’s Fire Safety Review of the proposed Eagle Ranch Development (the Project) has been divided into three categories which include: (1) Project roadways and Emergency Vehicle Access (EVA); (2) firefighting water system; and (3) Wildland-Urban Interface wildfire safety and vegetation management requirements.

Overall, Citygate finds the proposed Project can be built within the requirements of the adopted City of Atascadero development codes and policies. The Project is located in steep, rolling terrain and will mix residential single-family, a hotel/resort complex, and retail buildings with wildfire-prone native vegetation. These challenges can be safely mitigated to a level of insignificance by the proper application of various City-adopted Fire Code and development standards. By connecting the existing public streets and firefighting water storage system to the Project, appropriate Code and policy requirements can be achieved.

Given the Project road grades, curves, and private driveway grades/lengths, all fire unit response speeds will be slowed to approximately 18-20 miles per hour. Therefore, normal suburban fire unit travel times will not be possible. There are no federal or state regulations for minimum fire unit travel times, so it is typical for projects built in unique situations to have longer response times. The adopted Fire and Building Codes offer mitigation measures and other safety enhancements, such as automatic fire sprinklers, fire-resistant construction, and vegetation management that can be used to mitigate these circumstances.

2. **PROJECT BACKGROUND AND CITYGATE METHODOLOGY**

The Eagle Ranch residential (single-family dwellings and multi-family residential), commercial Village Center, highway commercial, and resort hotel are proposed to be located in unincorporated San Luis Obispo County, bordering the City of Atascadero. This Project encompasses 3,430 acres, of which ±2,581 acres will remain agricultural open space. This review of the Eagle Ranch Development is based on City of Atascadero ordinances, local Building and Fire Code amendments, and standards provided by the City.

Specifically, the Project borders a portion of Highway 101 near the downtown area, south of Atascadero Road. It will connect to San Carlos Road, San Diego West Road, and San Dimas Road, to the north, and Atascadero Avenue (north and south), to the east. Tributaries of three major drainages are located within the Specific Plan area (Eagle, Atascadero, and Paloma Creeks). Additionally, the south and westerly property lines border the Las Padres National Forest. The Project’s elevation varies from ±950 to ±1,650 feet above sea level. The areas proposed for development are located at elevations of up to ±1,450 feet above sea level.
Presently, the site contains ranch houses, barns, and assorted ranch-specific structures in two locations. In addition, the present use of the site is a working cattle ranch. Generally, the site is heavily-wooded with California Oak Stands, Digger Pines, and other naturally occurring vegetation found in this area.

The site’s Vesting Tentative Tract Map (VTTM) #3046 includes for the following:

- Single-family residential (20,000-square-foot - 1-acre lots): 72 lots
- Single-family residential (1-5 acres): 387 lots
- Single-family residential (5 acres +): 35 lots
- Multi-family residential: 93 units
- Resort hotel (approximately 100 rooms on 42.4 acres)
- Village Center (retail, offices, postal facilities, and second floor residential): 15,000 on 1.8 acres
- Highway commercial (sit-down restaurant(s), 200-room hotel, executive suites/cottages, etc.): 15.2 acres
- Public park (10.7 acres), equestrian staging area (1.5 acres), roads (19.8 miles), trails (16.2 miles), and open space that includes agricultural open space, private open space, public recreation areas, resort open space, and staging areas: 2,585.1 acres.¹

The Eagle Ranch Development was subdivided into 452 lots of record (Colony lots) as part of the establishment of the original Atascadero Colony in the 1910s. These lots have ownership shares in the Atascadero Mutual Water Company and thus have the vested right to receive potable water. Citygate’s review included the new Project application documents submitted by Eagle Ranch.

2.1 City Codes and Ordinances Applied to This Review

Citygate staff reviewed the following City of Atascadero Fire Codes, Building Codes and Public Works Standards, as well as City “policies, procedures, and interpretations,” as currently adopted by the City:

- The City’s Fire Codes based on the 2010 California Codes adopted January 11, 2011 (Ordinance 553), with local amendments

¹ Acreage denoted is approximate based on current Project parameters and subject to change.
The Atascadero Public Works Standards for both public roadways and private driveway minimum standards as set forth by the City.

Municipal Code Section #553, which adopts the California Building and Fire Codes and contains additional local amendments or modifications:

- Sections 4-7.102 and 4-7.104 adopting and modifying the Wildland-Urban Interface Code requirements
- Section 4-7.103, the requirement to install fire sprinklers in all new construction, including retrofit provisions
- Section 4-5.101 the display of address numbers
- Fire alarms, and permissible construction alternatives in high hazard areas

The Public Works Standards for rural roads design (409), fire access roadway standards (F-2, F-4, etc.)

- Section 9-4.123 driveway standards for single-family residential uses
- Section 6-13.01 for Removal of Vegetative Growth and/or Refuse (weed abatement).

The Atascadero Mutual Water System was not reviewed as Project infrastructure plans for the water system have not yet been created. A proposed water system layout is not shown on VTTM #3046. The VTTM plans do include a new water tank in area 12, adding potable water storage capacity for the Project.

Additionally, Citygate staff met on site with Fire Department staff to tour the existing road system and to review the conditions and terrain of the proposed design and discuss fire service issues in person.

3. **Proposed Road System and Emergency Vehicle Access**

3.1 **Primary Road System—Grades, Turning Radii, and Angles**

Due to the change in elevation from Highway 101 to the various developed areas of the site, the maximum grade permitted in the California Fire Code 2010 Edition (CFC) will be exceeded on occasion. The Fire Code maximum grade is 10 percent unless otherwise approved by the Fire Chief. Upon review of the Project application documents and exhibits, the Atascadero Fire Chief has approved exceeding the grade in certain areas (main loop, rural collector and local roads with cul-de-sac, and private access easements).

Internal road grades change from 3 to nearly 20 percent, and average 3-12 percent overall. The distance from the Atascadero Road connection to San Carlos Road is approximately 3.35 miles and forms the main loop road. The rural collector road is ±4.25 miles in length with grades...
generally below 10 percent, with some variation due to topography exceeding 15 percent, and sometimes reaching 20 percent. While the road grade averages 8-12 percent overall, much of the significant variation of up to 19 percent is located on private access easements.

In addition, there will be two EVA points at Ortega Road and Atascadero Road (Santa Barbara Road where the existing gated ranch access road/gate is located). Ortega Road is noted to have an automatic opening EVA gate. Gated access including road bends and roundabouts (intersections) where the fire apparatus or ambulance must slow down will impact response times at the site.

The Project layout minimizes impacts from road design and building location and maximizes the integrity of the natural resources. The proposed road system periodically follows existing unimproved trail ways throughout the site. Based on elevations and the site plan lot layout previously approved by the County, these grades leave little room for change. The fire apparatus can climb these grades, but more slowly.

The turning radius of the responding Atascadero front-line structure fire engine is 67 feet. The turning radii at certain locations on the Project roads are less than 67 feet. As such, the Project application should demonstrate compliance with applicable State and local fire code regulations related to secondary access, emergency access, and maximum dead-end road length.

**Recommendation #1:** Prior to grading permit issuance, roadway and access improvements (curb height(s), stem walls, retaining walls, etc.) should be reviewed and approved by the Fire Chief or the Chief’s designee to ensure that fire apparatus would safely make the turns with adequate bumper and overhang clearance. This also ensures that steep grade transition points (+15%) do not impact the breakover angles of fire apparatus, especially the longer fire apparatus.

**Recommendation #2:** Fire truck turning templates, using engineering software such as “Auto Turn,” should be used to ensure accurate measurements and movements of the Atascadero structure fire pumper and ladder apparatus prior to grading permit issuance. City Engineering Standard F-2 notes the specific minimum turning radius and roadway widths for private driveways.

Further, the fire apparatus angles of approach and departure must be taken into account as the road grade changes. Fire trucks have extended front and rear overhangs which can contact the road if a hill begins too steeply from a level street, or upon exiting a turn. Citygate strongly recommends the road design team use the “Auto Turn” software, or equivalent, to ensure all entry and departure angles work for fire apparatus.
The Fire Department has also adopted the 2010 Edition of the California Fire Code Appendix D, with additional City standards. City of Atascadero Engineering Department Fire Access Standards F-1 through F-4 defines the minimum standards for fire apparatus in residential and commercial projects. Based on the VTTM #3046 drawing provided by RRM Design Group dated June 2013, the minimum standards have been provided for the collector and local roads. Private access easements shall meet Atascadero Engineering Standard F-4.

Access and EVA roads for fire apparatus, under the adopted City Codes and Standards as well as the California Fire Code 2010 Edition, require a 20-foot clear width and a minimum vertical clearance of 13 feet 6 inches.

Particularly for the resort area proposal, Citygate recommends no deviation from the minimum access road widths as found in the Codes. In the event of an evacuation at the site (due to fire, earthquake, medical emergency, etc.), emergency fire apparatus and/or ambulances will attempt to respond. Large parties, concerts, or other special events will cause congestion while evacuating. Congestion on the resort access road must be avoided. As noted in this development safety report, the City and Fire Department will require fire hydrants on the access road leading to the resort. Should a wildland fire require fire apparatus to access these fire hydrants, it is imperative that two 8-foot emergency vehicles, as well as routine passenger vehicles, can pass under extreme conditions.

Additionally, private access easements at the Project site will be longer than 300 feet. Due to these extreme driveway lengths serving the individual residential building sites, consideration should be given to providing pullouts and/or wideouts at fire hydrant locations. These would be provided to ensure that emergency vehicles at hydrants and evacuating residents can pass in light of the private roadways with a clear width less than 20 feet. These can also serve as parking locations for fire apparatus to work vegetation fires without creating an impassible lane under emergency conditions. These turnouts/wideouts should be located to least impact ridge-cutting or slope-filling, and be on relatively flat ground. Consideration should also be given to the tree canopy overhang in these areas so that branches do not interfere with fire apparatus.

Rural collector roads that are 30 feet net width should have wideouts/pullouts at predetermined locations. These might include locations with fire hydrants and/or locations where topography is flat enough to avoid significant grading.

The Fire Department should consider site plan approval covenants for each affected lot to ensure that future construction considers the use of residential driveways as part of the turnaround system. As each of the single-family home sites is submitted to the City for review, the Fire Department should consider access to and around each home. Driveway access accommodating a fire engine should be required within 150 feet of all portions of the residence and other structures, such as outbuildings, (e.g., detached garages, sheds, barns, etc.) that are permitted on the site. City of Atascadero Standard F-3 denotes specific fire hose requirements that shall be
met. Consideration of second units, as permitted, on one acre or greater lots shall also be considered when access and fire hose restrictions apply.

Where cul-de-sacs, circles/roundabouts, hammerheads, etc. exist, it is recommended that they are designated fire lanes with signage. Alternatively they can be marked as “no parking” areas with red curbing, or a painted band on the road surface. Due to the reduced width provided in the City standards, clearly marking these areas is important to preclude parking. Additionally, when driveways are provided with shoulders as noted in City of Atascadero Standard F-4, shoulder construction shall be capable of supporting the imposed loads of fire apparatus in all weather conditions. On-going maintenance of shoulders shall be considered as part of any lighting and landscaping maintenance district (Mello Roos), or agreement the City has with the developer.

Because of the width of the rural collector streets, the same recommendation of providing turnouts/wideouts for emergency vehicles and civilians to use under evacuation conditions is recommended. Locations can approximately be spaced every 1,000-1,500 feet, or placed where topographical conditions are best suited to minimize grading and the construction of retention walls. The minimum width of a turnout should be 12 feet of all-weather surface and no shorter than 40 feet, similar to a bus stop configuration.

Finally, the connection to the northerly side of the Project, specifically the Chandler Ranch area, creates improved access to the existing residential neighborhood and offers a second access connection to this neighborhood.

### 3.2 Emergency Vehicle Access Roads

The current Fire Code and City requirements for fire apparatus access roads and EVAs state that they are to be 20 feet wide and be constructed of an all-weather surface capable of supporting the imposed load of the heaviest fire apparatus in use. EVA is identified on the Project plan from two locations. The first EVA noted is Ortega Road being extended from current termination. It is noted to have a “motorized gate.” Citygate recommends that any powered (motorized) gate have public-utility-provided power as the primary source of power, as well as an approved solar panel with battery back-up system capable of operating the gate under all weather conditions. A number of optical readers for emergency apparatus, similar to those used at signalized street intersections, can be adapted for EVA gates so that approaching emergency vehicles open the gate automatically. This dramatically reduces the time needed to manually open a gate. All gates (powered or not) should also have an approved lock box system (City-approved Knox Box) and override for emergency personnel use.

A second EVA from Atascadero Road (Santa Barbara Road) is also proposed. It is recommended that the same conditions that applied to Ortega Road EVA apply here. Minimum gate clear width shall be 20 feet and vertical clearance should be 13 feet 6 inches, as specified in the Fire Code. Posting of fire lanes shall be per Fire Code Appendix D, Section D103.6.
Should any barriers be installed to control traffic to or from the EVA, such as gates (bollards at pedestrian openings), they shall be installed to City specifications providing a clear width of 20 feet, and have an approved locking system (Knox Box) meeting City or Fire Department standards.

Citygate recommends those road segments with grades exceeding City standards be constructed with a surface that is grooved or scored to prevent skidding and slipping.

**Recommendation #3:** Prior to grading permit issuance, the City should require EVAs to be widened to 20 feet all-weather surface clear width from Ortega Road to the main loop road, unless reduced by the Fire Chief or the Chief’s designee. The outside turning radii shall also be increased where needed along the EVA to accommodate the current structure fire engine (refer to Fire Department “Turning Performance Analysis” Drawing F-7). Grades in excess of 15 percent shall be constructed with a surface that is grooved or scored to prevent skidding and slipping, subject to the review and approval of the City. The EVA shall be constructed using an all-weather surface. The Fire Department should consider the turnout/wideout concept on specific driveway and rural/local collector streets as a mitigation measure to reduce potential evacuation congestion.

**Recommendation #4:** Citygate recommends that any EVA-powered gate configuration include a minimum of 20 feet all-weather surface clear width, 13 feet 6 inches vertical clearance, and a back-up power supply to power the gate motor should utility power fail. Considering an optical electronic gate override (OptiCom) as well as lock box (Knox Box) control for each EVA gate is recommended. Pad locking motorized gates is not recommended.

**Recommendation #5:** Citygate recommends that the minimum access road width to the resort complex be no less than 20 feet paved clear width. Where fire hydrants are located on this access road, wideouts/pullouts should be provided so that fire apparatus can access fire hydrants without hindering vehicle movements.

### 3.3 Other Road Design Considerations

Based on the adopted City Fire Code, the clear width of private access roads where fire hydrants are located may be less than 20 feet. We highly recommend that where private access easements are less than 20 feet wide and near fire hydrants, they be widened to ensure fire apparatus access to the fire hydrant, and the ability to pass a stopped fire truck using a fire hydrant.
In general, the typical cross section would meet the intent of the Code provided that the area is appropriately marked “No Parking–Fire Truck Use Only” (or equivalent City Standard detail) to ensure resident/guest parking does not occur at fire hydrant locations. Additionally, concrete pads around a hydrant must be a minimum of at least 4 inches thick over a 10-inch base. This ensures the hydrant is locked in place if there is no sidewalk. Breakaway spool or bolts above the concrete pad are required per City and Atascadero Mutual Water Company standards. The entire street cross section at the fire hydrant sections shall be an all-weather surface capable of supporting the heaviest fire apparatus in use. Design specifications are contained in the City Standard Engineering Detail F-6.

**Recommendation #6:** Prior to occupancy, “No Parking–Fire Truck Only” signage at the hydrants and wideouts/pullouts is recommended. Road sections shall be in accordance with the load requirements and subject to the Fire Chief’s review and approval.

**Recommendation #7:** Where private access easements are less than 20 feet wide and approved by the Fire Department, a minimum clear width of 20 feet, all-weather surface shall be provided at all fire hydrant locations. Installation of fire hydrants shall also meet City standard detail F-6.

Imposed fire apparatus loads shall be considered for the main access road and EVA sections. City Fire Code Appendix D, Section D102.1, specifies the design must meet the requirements of a 75,000-pound fire apparatus. The main access road and EVA sections shown on the “Roads Plan” sheet #071 from the RRM Design Group submittal shall be reviewed to ensure compliance prior to issuance of a grading permit.

### 4. Water System for Firefighting

Citygate has reviewed the Notice of Preparation, which states in 1.3.3—Utilities, “The proposed Specific Plan uses would be served with potable water provided by the Atascadero Mutual Water Company (AMWC). The 452 lots that comprise the Project site have the vested right to receive potable water from the AMWC. A Water Supply Assessment will be prepared for the Project in accordance with state law.”

The VTTM #3046 denotes a new water tank in area 12. No detail regarding the capacity is noted. Citygate agrees that the need to provide a water supply from the adjoining service areas, as well as from the new proposed tank, is required. This provides a looped water system with flow from multiple connections. Establishing fire flow at 20 psi residual pressure is critical at the higher and lower elevations, plus at the resort and commercial complexes. We recommend that no reduction in fire flow be permitted based on the Project being provided fire protection per City Ordinance as it is in a Wildland-Urban Interface area. Current minimum fire flow is based on the California Fire Code fire flow tables for specific uses.
The existing water supply system should be evaluated for reliability in the event any AMWC water supply connections are compromised. The redundancy concern is based on the concurrent series of events that would include: refilling an empty storage tank at the Project after a fire, the City’s daily peak domestic demand in progress, along with a fire taking place in the north/northwestern portion of the City. Infrastructure improvements to resolve the City’s redundancy and supply concerns include installing a new water tank (unknown size) in area 12. Eagle Ranch and the Atascadero Public Works Department must further evaluate the most appropriate solution(s) to meet system redundancy requirements.

**Recommendation #8:** Prior to grading permit issuance, the water system connection size, flow, pressure capacity, and redundancy shall be designed to meet Code requirements subject to the review and approval of the Fire and Public Works Departments.

Once improvement plans are generated, a detailed plan and specifications review of the entire fire protection water system, including fire hydrant locations, fire department connections, and a minimum/maximum pressure at various locations, will be needed.

The Fire Chief can take into consideration the site’s fire access and water supply constraints and could additionally require that the minimum design specifications for all buildings be enhanced to ensure any foreseeable fire is controlled. One alternative would be to establish a minimum fire sprinkler hydraulic design area of 3,000 square feet in all commercial type structures as the National Fire Protection Association (NFPA) 13 design specification for that use, as opposed to the Fire Code minimum (12,000 square feet or more for most commercial buildings).

Another safety enhancement due to site location is to require a minimum 4-sprinkler design area for all hotel/residence club occupancies vs. a 2-sprinkler minimum NFPA 13D / NFPA 13R design. In the case of the custom homes, design criteria of up to 6 fire sprinklers in the largest design area should be used. As there are likely to be rooms with 6 sprinklers or more, the assurance that a fire in a large custom home is contained to the room of origin is extremely important. The fire main water supply design specifications should accommodate these fire sprinkler design enhancements.

**Recommendation #9:** All residences, including accessory buildings should be protected with an automatic fire sprinkler system as required by all applicable codes in place at time of building permit submittal. Fire sprinkler systems and minimum fire flows shall comply with the requirements set forth in the California Fire Code and City ordinances in place at time of building permit submittal.
5. **Wildland Fire Defense**

In this section we review the Wildland-Urban Interface safety program and the creation of a Wildland Fire Protection Plan (WFPP). This requirement is applied to the Project based on the City’s local amendment to the 2010 California Fire Code, but a WFPP has not yet been developed.

In general, this document requires that the applicant meet the California Fire Code, Chapter 49, and Requirements for Wildland-Urban Interface Fire Areas. It also mandates that the construction conform to California Building Code, Chapter 7. There are numerous ways to address the options in the Codes for construction type, using ignition-resistant materials, protected eaves, residential fire sprinklers, fire-resistive landscaping, tree pruning and thinning, management of the forested areas within 100 feet of structures, roof type, etc.

The WFPP should evaluate approaches towards continued maintenance and management of open space, agriculture, and undeveloped parcels. It should include a management plan for forested areas which abut areas of existing and proposed development. The plan should include guidelines for defensible space, vegetation management in a fire safe manner, financial responsibility for maintenance of landscaping and open space areas, fire-resistive landscaping solutions, and an evaluation of architectural issues to meet City Code requirements. The WFPP should be updated with each phase of development as necessary and as required by the City Fire Chief.

It is noted that the entire open space specified as part of this development will also include “wildlife and domestic animal corridors” to open space surrounded by development. The intent is to maintain the capability to use the open space as part of the continuing cattle ranching operation, and the corridors provide a permanent means of access for grazing. A wildfire behavior model is required to specify building setbacks and fire-resistive ratings. Based on the information provided at this point, there is little to review as no building plans have been prepared or documents presented addressing the City requirements.

Presently, the Atascadero City Fire Department has an aggressive fuel management and abatement plan that has been in place for many years. The public response to the requirements of the fuel management and abatement plan is nearly 100 percent. Where unwilling or non-compliant sites exist, the City abates the vegetation hazard per City standards and invoices the property owner. Additionally, the City provides a wood “chipper” service to residents requesting the need to mulch their cuttings. The waste materials are returned to the site as a soil amenity or a decorative landscaping feature.

**Finding #1:** The Project area has significant exposure to wildfire and the Project must have a wildfire mitigation program meeting the existing City requirements, which are current and best practice based.
**Recommendation #10:** In order to comply with the detailed requirements of a WFPP, the applicant is best advised to hire a California licensed forester. This firm/person(s) can evaluate the best approach to manage the open spaces and design the ideal framework for the landscape architect to use within prescribed areas of the Project. Such a plan will discuss architectural issues with the Project architect to mitigate the City Code requirements.

### 6. **Fire Department Response Time and Staffing Analysis**

In the United States, there are no federal or state minimum fire department response time requirements. It is a local policy issue for jurisdictions to decide, if they so choose. The National Fire Protection Association (NFPA) recommended policy for career fire departments is 4 minutes travel for the first-due fire apparatus, and 8 minutes for multiple apparatus to serious incidents (commonly called the First Alarm).

The home insurance industry recommends that fire engines be within 1.5 miles driving distance of developed properties and that aerial ladder trucks be within 2.5 miles driving distance.

The City of Atascadero has not adopted specific fire department response time polices in local ordinances, or in the Safety Element of the City’s General Plan. The Atascadero Fire Department policy is that the first-due unit arrive within 6 minutes driving time and the follow-up unit(s) within 8 minutes travel time.

Based on the recommended measures above, and the Atascadero Fire Department performance goals, Citygate used geographic mapping to measure both distance and travel time from the existing City fire stations into the Eagle Ranch Project area.

**Exhibit Map #1** Displays the overall Eagle Ranch location in relation to the existing City and road network. One road that exists today entering the Project area that will not be gated as an EVA point is labeled as a restricted point, so the fire unit routing time on the following maps do not use this street segment.

**Exhibit Map #2** Uses realistic fire truck speeds over the roads and topography to show the travel time, in minutes, from the closest City fire stations. As measured, almost none of the Project is within 1.5 miles of a fire station. The eastern half of the Project ranges from 1.5-2.5 miles from a fire station, leaving the western half of the Project 2.5-5 miles from a fire station.

**Exhibit Map #3** Displays the computer estimated travel times in increments from 4 minutes to 8 minutes. This measure shows that a small amount of the eastern streets are within 4 minutes of the closet fire station, which is a typical suburban fire unit travel time goal. The balance of the eastern third of the Project is within 4-6 minutes of a City fire station, which meets the
Atascadero Fire Department response policy goal. The western third of the Project is greater than 8 minutes travel time from a City fire station.

6.1 Fire Department Staffing Analysis

The City of Atascadero is already difficult to serve using only two fire stations due to its topography and historic road network design. Given no state or federal minimums for the duration of response times for fire services, communities have the level of fire services that they can afford. Thus Atascadero provides two fire stations with a minimum career staff of five firefighters per day, supplemented with paid call and auxiliary staff. There are three 40-hour employees: a Fire Chief, Fire Marshal, and a Secretary.

The daily career staff of a minimum of five is insufficient by itself to control a serious building or wildland fire. At any given time, it is not possible to expect that a significant number of paid-call and/or auxiliary firefighters will respond.

The Eagle Ranch proposal further stretches this thin force by introducing large residential buildings, people, and automobiles into a rolling set of hills containing grasses and trees susceptible to wildfire. Urbanizing these ranch lands and annexing them to the City means that the City Fire Department will be responsible for all wildfire suppression costs, not the County Fire Department and CAL FIRE. A serious wildfire can become very expensive if it requires the use of hand crews, bull dozers, and aircraft.

Humans tend to cause wildfires; open grazing lands do not usually combust for natural reasons. A wildfire in Eagle Ranch with a southwest to west wind behind it will threaten the existing city. The best mitigation for this hazard, after the preemptive fuel abatement program, is the response of an adequate force to quickly suppress a small, emerging fire. The response of an initial 2-firefighter team from Station 2 is only adequate for a single-patient medical emergency or small, incipient fire.

Additionally, recent proposals for a section of the Project have considered up to 80 senior units. Such complexes will definitely generate more emergency medical calls, further straining the City Fire Department’s limited staffing.

The Department uses up-to-date structure and wildland fire apparatus, both front-line and reserves, for maintenance downtime or large fires. The Department has adopted excellent, up-to-date fire and wildland defense Codes. The weed and fuel abatement program is one of, if not the best, Citygate has observed in departments of all sizes. The more rural developed areas of the City on the west side clearly have the native vegetation and weeds cleared, and residents make extensive use of the free chipping/mulch program for their cuttings.

The City’s adopted Building and Fire Codes will require automatic fire sprinklers in all buildings, including residences, regardless of size. The Codes will also provide strict requirements for the use of flammable materials and landscaping on the outside of structures in
wildland-fire-prone neighborhoods. All of these measures, along with public education, combine in a community fire safe program.

Some of the western City neighborhoods are also outside the Department’s 6-minute policy, as seen on Map #3, and some of them have topography challenges similar to the Eagle Ranch area. As a result, the City has accepted that its two fire stations can cover what they can outside of the downtown core. The response times to the western City limits and, possibly Eagle Ranch, are less than 10 minutes, which is better than many rural areas of the state that receive service in 10-20 minutes, or worse.

Finding #2: The scope of the development opens up inhabitation and increased public use in a wildfire threat area adjacent to the developed City. This risk can only be partially mitigated by fire sprinklers in buildings and vegetation abatement programs. The City also must have an adequate firefighting response to keep small fires from becoming catastrophic.

Finding #3: The Eagle Ranch Project will have paved roads, a water main and fire hydrant system, in addition to the fire-resistant landscaping, building construction, and automatic fire sprinkler requirements. The City’s fire apparatus will be able to access the Eagle Ranch parcels if City street and driveway standards are followed.

Recommendation #11: To keep the Project fire threat to what can be reasonably be controlled by an initial responding unit, the closest Fire Station (Station 2) will need a modest staffing increase. The Project applicant shall fund modifications to Fire Station 2 to accommodate additional living quarters associated with the increased demand in Fire Department staffing as a result of the Project. Improvements shall be installed when the City determines that additional staffing is warranted at Fire Station 2 to accommodate the additional personnel.

7. CONCLUSIONS AND FINDINGS

In conclusion, there are several issues identified: road access, EVA configuration, water system design, a Wildland-Urban Interface wildfire safety plan, and increased firefighter staffing. Each has unique issues. There are proven industry-wide standards, as well as unique and creative solutions, to each issue. Other additional Fire Department issues that need to be addressed as the Eagle Ranch Project moves forward are noted below.

On-site management of specific medical issues at the resort can be another concern, considering the response times under best-case scenario. The Fire Department might consider that certain on-site hospitality industry staff have completed basic fire aid training (e.g., fire extinguishers) and have minimum first aid certifications. Trained staff that can coordinate with emergency responders would be an asset to the Eagle Ranch Project and City.
When the proposed resort complex site plans are available, consideration for “safe areas” should be reviewed. Based on topography and the ability to advance early warning of a wildland fire, generally the best practice is to evacuate the guests and visitors away from the venue to “safe areas” elsewhere in the greater community. However, should the departure from the venue become problematic due to fire and/or smoke, consideration for sheltering in place should be proposed. Safe or refuge areas allow occupants to “shelter in place” and can take the form of areas within the buildings (e.g., convention/banquet center, restaurant, resort lobbies, etc.).

Another public safety issue not contained in the City’s local Fire Code adoption is the issue of emergency responder radio coverage throughout the proposed Specific Plan area. It is already well understood by the City’s public safety departments that the current City radio system does not cover many areas of the Project. When radio systems do not cover new developments or unusually large buildings, a common development requirement is that the applicant have a radio coverage study performed. The Project should fund the purchase and installation of the emergency communications radio repeater, which should be designed according to the specifications of the radio coverage study.

**Recommendation #12:** The Project requires and should fund an emergency communications radio repeater station to be installed in the location identified in the Eagle Ranch Specific Plan to provide public safety radio coverage throughout the Project site. Communications coverage shall be required at the time determined by the City.

The Fire Department should additionally request the developer propose a phasing plan for each area(s). Generally, Citygate does not recommend extensive development, as defined in California Title 14, Section 4290, Public Resources Code, to be inhabited without a secondary access and firefighting water supply being provided to meet Fire Department standards.

As there are no building submittals to review, one additional review consideration for the Fire Department is the management of any hazardous materials that may be involved. Article 80 of the Fire Code addresses exempt amounts, but the manner proposed for chlorinating the swimming pool should be considered. Another issue to consider is the use of on-site equipment. For example, electric golf carts, as opposed to gas-powered carts, reduce the need for on-site flammable/combustible fuel storage. Should the Eagle Ranch Project propose any fueling facilities, such as above-ground or underground tanks, they will be required to meet Fire Code and California State hazardous materials requirements as enforced by San Luis Obispo County as they are the Certified Uniform Permit Agency (CUPA) for the City as well as the existing site (currently outside the City limits).

This report provides a background of issues and possible elements for consideration. As details develop, further evaluation of solutions is encouraged.
8. **Mitigation Findings and Recommendations**

**Finding #1:** The Project area has significant exposure to wildfire and the Project must have a wildfire mitigation program meeting the existing City requirements, which are current and best practice based.

**Finding #2:** The scope of the development opens up inhabitation and increased public use in a wildfire threat area adjacent to the developed City. This risk can only be partially mitigated by fire sprinklers in buildings and vegetation abatement programs. The City also must have an adequate firefighting response to keep small fires from becoming catastrophic.

**Finding #3:** The Eagle Ranch Project will have paved roads, a water main and fire hydrant system, in addition to the fire-resistant landscaping, building construction, and automatic fire sprinkler requirements. The City’s fire apparatus will be able to access the Eagle Ranch parcels if City street and driveway standards are followed.

**Recommendation #1:** Prior to grading permit issuance, roadway and access improvements (curb height(s), stem walls, retaining walls, etc.) should be reviewed and approved by the Fire Chief or the Chief’s designee to ensure that fire apparatus would safely make the turns with adequate bumper and overhang clearance. This also ensures that steep grade transition points (+15%) do not impact the breakover angles of fire apparatus, especially the longer fire apparatus.

**Recommendation #2:** Fire truck turning templates, using engineering software such as “Auto Turn,” should be used to ensure accurate measurements and movements of the Atascadero structure fire pumper and ladder apparatus prior to grading permit issuance. For example, City Engineering Standard F-2 notes the specific minimum turning radius and roadway widths for private driveways.

**Recommendation #3:** Prior to grading permit issuance, the City should require EVAs to be widened to 20 feet all-weather surface clear width from Ortega Road to the main loop road, unless reduced by the Fire Chief or the Chief’s designee. The outside turning radii shall also be increased where needed along the EVA to accommodate the current structure fire engine (refer to Fire Department “Turning Performance Analysis” Drawing F-7). Grades in excess of 15 percent shall be constructed with a surface that is grooved or scored to prevent skidding and slipping, subject to the review and approval of the City. The EVA shall be constructed using an all-weather surface. The Fire
Department should consider the turnout/wideout concept on specific driveway and rural/local collector streets as a mitigation measure to reduce potential evacuation congestion.

Recommendation #4: Citygate recommends that any EVA-powered gate configuration include a minimum of 20 feet all-weather surface clear width, 13 feet 6 inches vertical clearance, and a back-up power supply to power the gate motor should utility power fail. Considering an optical electronic gate override (OptiCom) as well as lock box (Knox Box) control for each EVA gate is recommended. Pad locking motorized gates is not recommended.

Recommendation #5: Citygate recommends that the minimum access road width to the resort complex be no less than 20 feet paved clear width. Where fire hydrants are located on this access road, wideouts/pullouts should be provided so that fire apparatus can access fire hydrants without hindering vehicle movements.

Recommendation #6: Prior to occupancy, “No Parking–Fire Truck Only” signage at the hydrants and wideouts/pullouts is recommended. Road sections shall be in accordance with the load requirements and subject to the Fire Chief’s review and approval.

Recommendation #7: Where private access easements are less than 20 feet wide and approved by the Fire Department, a minimum clear width of 20 feet, all-weather surface shall be provided at all fire hydrant locations. Installation of fire hydrants shall also meet City standard detail F-6.

Recommendation #8: Prior to grading permit issuance, the water system connection size, flow, pressure capacity, and redundancy shall be designed to meet Code requirements subject to the review and approval of the Fire and Public Works Departments.

Recommendation #9: All residences, including accessory buildings should be protected with an automatic fire sprinkler system as required by all applicable codes in place at time of building permit submittal. Fire sprinkler systems and minimum fire flows shall comply with the requirements set forth in the California Fire Code and City ordinances in place at time of building permit submittal.

Recommendation #10: In order to comply with the detailed requirements of a WFPP, the applicant is best advised to hire a California licensed forester. This
firm/person(s) can evaluate the best approach to manage the open spaces and design the ideal framework for the landscape architect to use within prescribed areas of the Project. Such a plan will discuss architectural issues with the Project architect to mitigate the City Code requirements.

**Recommendation #11:** To keep the Project fire threat to what can be reasonably be controlled by an initial responding unit, the closest Fire Station (Station 2) will need a modest staffing increase. The Project applicant shall fund modifications to Fire Station 2 to accommodate additional living quarters associated with the increased demand in Fire Department staffing as a result of the Project. Improvements shall be installed when the City determines that additional staffing is warranted at Fire Station 2 to accommodate the additional personnel.

**Recommendation #12:** The Project requires and should fund an emergency communications radio repeater station to be installed in the location identified in the Eagle Ranch Specific Plan to provide public safety radio coverage throughout the Project site. Communications coverage shall be required at the time determined by the City.
MAP EXHIBIT #1
MAP EXHIBIT #2
MAP EXHIBIT #3