



August 2, 2020

## PROPERTY CONDITION ASSESSMENT

(Updated from original February 13, 2017 PCA)

### **Property Identification:**

Town of Ross Fire and Police Building  
33 Sir Francis Drake Blvd.- PO Box 320  
Ross, CA 94957  
Parcel Number: 073-191-16  
Zoning: Civic District (C-D)  
General Plan: Public Service  
Flood Zone: Zone A (1-percent annual chance floodplain)

### **Prepared For:**

Richard Simonitch  
Director of Public Works  
Town of Ross  
31 Sir Francis Drake Blvd.  
Ross, CA 94957-0320

### **Prepared By:**

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## **Executive Summary**

In February of 2016, Construction and Development Solutions Inc. (CDS-Inc, conducted a Property Condition Assessment of the property. In May of 2020, CDS-Inc was contacted by the Town of Ross to update the Assessment. Del Nordby of (CDS-Inc.) performed a “walk-through” of the building at 33 Sir Francis Drake Boulevard (SFDB), Ross, CA. on June 1, 2020 at 10:00 am. The intent of this walkthrough was to visually inspect the condition of the property and determine if any significant changes had occurred from the previous study.

CDS-Inc. had previously engaged outside experts to report on the site topography, exterior and interior building, life safety, exiting, ADA compliance, structural conditions, lead and asbestos, electrical, mechanical, and plumbing systems in 2016. A Mold Report was commissioned by the Town of Ross in January of 2020 that focused on the Fire House and is referenced in this report.

With a very few exceptions, the condition of the property has not changed since February of 2016. It is difficult to categorize, in order of importance, the deficiencies in this property. There are current health issues due to the presence of mold, deficiencies in the structure of the building (pests and structural), deficiencies in ADA accessibility and non-compliance with the Essential Service Act (ESA) requirements for public safety construction.

### **General Description**

The Ross Public Safety building is located on a slightly sloping 2.33-acre lot bounded by Sir Francis Drake Boulevard to the east, Lagunitas Road to the south, Corte Madera Creek to the west, and a single-family property at 39 Sir Francis Drake Boulevard to the north. The building, which occupies a portion of Assessor Parcel 073-191-16, is part of the Ross Civic Center, which also includes Ross Town Hall at 31 Sir Francis Drake Boulevard, and the Corporation Yard at 35 Sir Francis Drake Boulevard.

Designed by architect John White in the Spanish Colonial Revival style. The Ross Public Safety Building includes the firehouse proper and two former residential wings, including the south wing, which presently houses the Ross Police Department, and the vacant north wing. A Historical Research Evaluation by Ver Planck, indicate that the building is considered to be a “historical resource” and is listed in the California Register.

### **General Physical Conditions**

The Ross Public Safety Building is in fair to poor condition - indicative of its age and shows signs of general wear and tear and lacking in overall general maintenance. Generally, the property appears to have been constructed within industry standards in force at the time of construction.

- The apparatus bay is in good condition (photo in Appendix J, page 3).
- The Fire House (middle section) is in poor condition (photo in Appendix J, page 4).
- The Police Department (south wing) in fair condition
- The north wing in poor condition. (photo in Appendix J, page 7).

Much of the firehouse was remodeled in the mid-1990s, presumably when the addition of the apparatus bay was constructed. Most recently a pre-engineered metal structure was installed adjacent the rear apparatus bay doors. The south wing, which has housed the Police Department since 1982, appears to have undergone few significant improvements since then. The north wing is in the poor condition, with little evidence of any significant maintenance having occurred within the last few decades. Much of the interior finishes have been removed and partial renovations have occurred.

The following summaries are taken from various reports prepared by professional consultants for the PCA along with observations made by CDS-Inc. Each consultant's report can be found and referenced in Appendix A through H in this report.

### **Site Elements**

Please refer to ArchiLogix report dated November 12, 2016 in Appendix G to review the consultant's detailed observations and written recommendations.

The drainage and immediate parking areas is in fair condition. The entire parking and drive area lack concrete curb and gutters. Pavement edges consist of varying material such as wood poles and asphalt. In several locations there are no edge material. There have been several comments made by people familiar with the site that significant flooding has occurred on the Property in previous years.

The asphalt is failed in many locations around the building as evidenced by "fatigue cracking". The concrete apron adjacent the apparatus bay is in good condition.

The onsite vehicular and pedestrian circulation present a potential safety challenge. Fire stations require a clear and unimpeded path of travel for apparatus and support vehicles to and from the site. Categorically, the type of vehicles used by administrative staff or the public to and from the civic center campus present possible circulation and parking conflicts as well as safety concerns for pedestrian's visiting the various buildings. If the building's existing police and fire use continuous a way finding system of exterior signs, pavement markings and possible warning signals (flashing lights) along with strategically placed decorative/security lighting should be considered to improve on-site circulation.

Topographically, the public safety's proximity to the existing creek is highlighted by the fact that the 1995 apparatus bay addition sits in the 25-foot creek setback. It is our understanding that from time to time when substantial rain events occur the apparatus bays have been flooded negatively affecting its use as public safety building. If one were to design a public safety facility site today, a finish floor elevation above flood level would be required. A public safety building must operate under emergency conditions for 72 hours.

Although beyond the scope of this report, the ADA accessible and van accessible parking does not appear to be compliant. There are several entry points in to the building and all but one (the Police Department) is not ADA accessible.

### **Structural Frame and Roof Condition**

Please refer to ZFA Structural Engineers report dated October 31, 2016 in Appendix A to review the observed structural assessments along with recommendations.

Per the structural engineer's report, there are several deficiencies to the structural integrity of the building. Highlighted concerns include lack of seismic upgrades at the foundation, in-fill construction, lack of floor girder connections and seismic concerns due to irregular shapes of the buildings. It is concluded that the extent of these deficiencies would require substantial re-configuration and not likely feasible or cost effective to repair.

The existing roof surface is a clay tile installed over a waterproof membrane. The roof appears to be around 20-30 years old. With proper maintenance this type of roof typically remains serviceable for approximately 40 to 50 years. The roofing consultant recommends several repairs and maintenance action items in the Visual Roof Inspection prepared on 10/13/2016 found in Appendix B.

Many of the exterior wood windows appear to be originals and are severally weathered and physically damaged. Most are in poor condition and show signs of deterioration

It should be noted that there is a plan in place to replace the existing windows, although the work had not started when CDS-Inc visiting the site.

### **Building Exterior and Interior Elements**

The exterior wall finish of the building is primarily plaster over wood framing. There are several locations where cracking has occurred in the plaster and areas of dark dis-colorization indicating surface mold (photo in Appendix J, Page 2).

CDS-Inc. noted several exposed cables and wires traversing the plaster walls. These wires appear to be low voltage or communication cables. How the wires are connected to the plaster walls is a concern since the nail fastening penetrations breach the water protecting function of the plaster. There are several wood stairways providing access to the building. The stairs treads and some risers at the fire house have recently been replaced. (photo in Appendix J, page 1). At the rear exit of the Police Department, anti-slip treads have been installed.

The interior conditions of several locations is discussed below:

- The south wing, which houses Police staff, is in good condition.
- The original apparatus bay is in poor condition due to age, multiple changes and structural additions performed over time. There is visible cracking in the interior walls (photo in Appendix J, Page 2, Slide 9). In addition to being small the washroom contains a furnace and water heaters along with exposed framing and wiring.
- The fire house kitchen and second floor areas are in fair condition, showing signs of wear and tear.
- The new apparatus bay is in good condition.

- The north wing is in poor condition. A section of the interior has been demolished exposing the wall framing and electrical wiring (photo in Appendix J, Page 10, Slide 55). There is also visible mold and dry rot.

### **Electrical, Telephone and Data Systems**

Please refer to the report by Brokaw Design dated October 24, 2016 in Appendix E to review the assessments of the electrical and communication systems.

Electrical distribution is accomplished at 120/240V, single-phase to surface or flush mounted panel boards throughout the facility. The panels are varying in age depending on location.

Distribution feeders are either run surface mounted in conduit or concealed in walls. No apparent deficiencies to the power distribution feeders were observed at the time of inspection. It is unknown if there have been any deficiencies or reasons for repair in the past.

The branch circuits are a mix of concealed and surface mounted boxes/conduit. Some branch circuits within the facility have been disabled/cut and it is not known if the serving overcurrent protection devices have been shut-off. The exposed Romex wiring and cut-off branch circuits are a safety concern.

There is an emergency generator at the rear of the building as Manufactured by Generac. The unit is rated 100kW and has a 300-ampere circuit breaker. The unit appears to be in good shape.

The telephone service is fed to the main electric room of the Fire Station portion of the building in the same room as the electric main switchboard. It is unknown if the existing telephone service is adequate for the facility. It appears to lack functionality.

The data server is located in the main electric room. It is unknown if the existing system and cabling is adequate for the facility. It is unknown if there are wireless access points located in the facility.

### **Mechanical and Plumbing Systems**

Please refer to the report by 15000 Inc. dated November 15, 2016 in Appendix F to review noted observations and recommendations for the mechanical and plumbing systems.

The existing HVAC systems are at the end of their life expectancy and should be replaced with new high efficient gas fired equipment.

Ductwork throughout the space should be evaluated and leak tested. Where possible, flexible ductwork shall be replaced with spiral ductwork.

The exhaust fans within the bathrooms are at the end of their life expectancy and should be replaced.

The data server room should be provided with stand-alone split-system cooling coil to maintain proper temperatures within the room (65-75 degree Fahrenheit).

Portions of the domestic water system show corrosion (including water heater).

## **Asbestos, Lead Based Materials, Microbial Growth**

Please refer to the report by NorthBay Environmental Assessment Report dated October 15, 2016 in Appendix D to review assessments of asbestos, lead based materials and microbial growth findings.

Suspect asbestos containing materials were identified at the roof, exterior stucco, exterior windows, drywall tapping and mudding, vinyl floor and tile/mastic areas during the walkthrough and should be sampled for asbestos prior to any activities taking place that would disturb them.

Based on the age of the various wings (pre-1978) it can be assumed that lead based paint and/or glazing is present on building components and fixtures, both interior and exterior.

Microbial growth was observed in various locations in the fire house. However, the areas in which microbial growth was observed did not appear to be occupied.

## **Mold**

Please refer to Bay Area Mold Pros inspection reports dated January 3, 2020 and January 22, 2020 in Appendix I. This report was limited to the Fire House.

There is mold in 2 rooms, the old gym, and the exercise room of the Fire House. There are also elevated humidity levels in the toilet and shower rooms. The proper course of action to remediate the mold, would be to first identify the cause ( areas of water intrusion), hire a remediation company to clean the affected areas and then make the necessary repairs to assure that the source causing the mold is repaired.

## **Pests and Organisms**

Please refer to Buena Vista's Wood Destroying Pests and Organisms Inspection report dated October 10, 2016 in Appendix C.

Subterranean termites, rodent infestation, surface fungus, wood eating beetles and other organisms, have affected various areas of the site and structure. These types of deficiencies typically need to be addressed immediately to prevent further damage. It does not appear that any corrective action has been taken since the Buena Vista's 2016 report.

## **ADA and Life Safety Systems**

There is no central fire alarm system in the facility. Only single-station smoke detectors were observed in some locations. There are no fire sprinklers in the building. According to the NFPA, although not required, fire sprinklers are highly recommended.

It is beyond the scope of this report to provide a California Access Specialist (CASp) survey however, in general terms there are several "barriers" to entry into and throughout the building as defined by the American with Disabilities Act. Path of travel from accessible parking at front of building to main entry has a non-compliant staircase; ramp and accessible parking space signage will need to be updated. The existing bathrooms are non-compliant.

According to the Archilogix report Public safety buildings have a challenge when it comes to disabled accessibility to comply with CBC Chapter 11 as well as ADA. An interior-exiting plan should be prepared and posted based on the existing room layout for both police and fire. Circulation through all circulation hallways is not fully compliant including connection to the modular building. The Town must determine the extent of public access and then to what extent the police and fire stations are available to individuals with disabilities. Ultimately, the architect believes that accessibility and safety are important considerations that must coexist.

### **Historical Resource Evaluation**

The findings of the Ver Plank report dated September 10, 2016 in Appendix H, “The Ross Public Safety Building appears eligible for listing in the California Register under Criterion 1 (Events) as a building constructed as part of the Town’s first Civic Center.” Additionally, “The Ross Public Safety Building appears eligible for listing in the California Register under Criterion 3 (De-sign/Construction) as a structure that embodies the distinctive characteristics of a type, period, and method of construction, and as the work of a master.”

### **Essential Services Building**

The original building was designed significantly prior to 1986 Essential Service Act (ESA) requirements for public safety construction. In short the ESA states that buildings such as firehouses “shall be capable of providing essential services to the public after a disaster, shall be designed and constructed to minimize fire hazards and to resist, insofar as practical, the forces generated by earthquakes, gravity, and winds<sup>1</sup>.

It is beyond the scope of this report to interpret the ESA as it relates to the existing facility, however, it should be noted (as described in the attached ArchiLogix report) that the proximity to the existing creek highlights the fact that the 1995 apparatus bay addition sits in the 25-foot creek setback and within a FEMA Special Flood Hazard Area. According to the attached FEMA report (see Appendix M), the building is within Flood Zone AE, which is s an area with a 1-percent annual chance flood, also referred to as the base flood or 100-year flood.

It’s our understanding that from time to time when substantial rain events occur the apparatus bays have been flooded and not able to be used for their intended use. If one were locating / designing a public safety facility like this today, one would establish the finish floor elevation above flood level especially given the fact that this is an essential service facility and must operate under emergency conditions for 72 hours.

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<sup>1</sup>[https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=12.5.&title=&part=&chapter=2.&article=1](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=12.5.&title=&part=&chapter=2.&article=1).



Additionally, the reference to the ESA's comment regarding earthquakes, in the structural engineer's report there are several concerns with the seismic integrity of the building and its ability to survive a major event.

## Recommendations

Deferred maintenance items and deficiencies that require immediate attention are listed below.

### Site Elements:

- Patch paving, seal coat and stripe parking
- Site concrete, curb and gutters
- ADA parking with signage
- Separation of circulation conflicts
- Improve storm drain system to address flooding hazards. It should be noted that the only solution to completely eliminating this issue would be to raise the new apparatus building along with the adjacent site improvements

### Structural Frame and Roof Condition:

Per the structural engineer's findings there are several recommendations that can be addressed immediately:

- Foundation – The connection to the foundation at the original structure appeared substandard. Recommendation: Review foundation attachment in detail and provide additional retrofit anchors as needed to connect building framing to foundation
- Exterior Stucco Cracks – The exterior walls and some interior walls at the center firehouse of the original building corner have some pronounced diagonal cracks. Recommendation: Inspect wood framing underneath stucco at areas of exterior cracks. Repair framing as needed and stucco.
- Floor Girder Connections – The ground floor framing girders and posts are not connected with metal hardware Recommendation: Add posts caps and bases to all connections.
- Interior Slab on Grade Cracks – The interior concrete slab on grade at the original fire house shows some cracks. Recommendation: Evaluate functional performance of floor and removed and replace slab or patch slab cracks.
  - *It should be noted that there are several other areas of concern regarding the structure that have been addressed that "Due to historic designation, substantial re-configuration is not likely feasible or cost effective."*
- At the roof, repair the cracked tiles with 50-year tile adhesive and replace 3 broken tiles. Blow-off entire roof, clean and seal all gutters and down spouts. Replace both 3'x4' window awnings. Repair / replace cracked and missing tile mortar at hips and ridges. Replace wood sub-structure and flashing at tower platform. Seal all mastic locations with three-course sealant system.

### Building Exterior and Interior Elements:

- Patch and repair all cracked plaster to prevent further water intrusion
- Re-route exposed wires and patch plaster
- Repair and replace dry rotted windows and doors to stop further deterioration.

- The north wing interior required a complete interior renovation to remove all hazardous materials.
- Interior repairs to original apparatus bay
- At fire house paint, carpet and general improvements to kitchen, stairs and second floor due to general wear and tear.

#### Electrical Systems:

- It is recommended to replace old panel boards with new panel boards and new feeders. Branch circuitry of these replaced panels will need to comply with the latest Title 24 standards for circuit disaggregation. Newer panel boards in the facility might be left as-is or reused. If the main switchboard is replaced, re-work of the existing feeders to panels that remain will be required.
- Add a fire alarm system

#### Mechanical Systems:

- The existing HVAC systems are at the end of their life expectancy and should be replaced with new high efficient gas fired equipment. Existing HVAC controls should be replaced with current Title 24 code compliant programmable thermostats. New HVAC units shall be provided with a dehumidification accessory to maintain 40-60% relative humidity.
- The exhaust fans within the bathrooms are at the end of their life expectancy and should be replaced. New fans should be provided with humidistats per current CalGreen requirements where showers are present.
- Data server room should be provided with stand-alone split-system cooling coil to maintain proper temperatures within the room (65-75 degree Fahrenheit).
- Ductwork throughout the space should be evaluated and leak tested. Where possible, flexible ductwork shall be replaced with spiral ductwork.

#### Plumbing Systems:

- Portions of the domestic water system where there is corrosion (including water heater) should be replaced in their entirety.
- Air compressor and storage tank should be replaced with modern and higher efficient equipment.
- Domestic water entrance should be protected from possible vehicle damage and replaced with modern valves and pressure regulator.

#### Additional Considerations:

- ADA Accessibility – Further evaluation is required. Contract with a CASp consultant to identify all ADA issues related to the subject property.

- Asbestos – Due to age of the original building, it is recommended that a professional Industrial Hygienist be engaged to sample the building and produce a protocol for an abatement contractor for removal any hazardous material that may exist.
- Mold – remediate the mold and repair areas that are the cause of the mold.
- Pest and Rodents – per the Buena Vista report further investigation is required to fully understand the extent of termite, dry rot and rodent damage to the property (this report was limited to visual inspections only, which do indicate that further investigation is required).
- An interior-exiting plan should be prepared and posted based on the existing room layouts for both police and fire. The exiting plan for the fire station side of the existing building is more difficult to prepare because several rooms are not being occupied by staff and basically serve as storage or fitness rooms. Circulation through all hallways are not fully compliant including connection to the modular building.

Typically, a report of this type is limited to addressing the visual deficiencies in the building as described above. In this particular case, it seems relevant to discuss issues that go beyond the visual defects.

Given the aforementioned issues related to noncompliance with ESA due to the building's current use as a public safety structure for the Town of Ross' Fire and Police, it seems appropriate to evaluate or consider a non-ESA related use for the building and repurpose it with due consideration for its inherit historical merits. Such a consideration would require a detailed feasibility analysis into the cost of design, historical review, permitting and re-construction of the existing facility. Due to the deficiencies called out in this report, the cost of re-construction could easily equal that of a new ground up facility.

## Purpose and Scope

At the request of Richard Simonitch of the Town of Ross, CDS-Inc. performed a Property Condition Assessment substantially in accordance with the American Society for Testing and Materials, ASTM E2018-01, Standard Guide for Property Condition Assessment-Baseline Property Condition Assessment Process. The intent of this report is to identify and communicate conspicuous defects or material deferred maintenance of a subject property's material systems, components, or equipment as observed on the date of the Field Observer's Walk-Through Survey. This is a visual review of readily accessible areas and components. It is not technically exhaustive and no excavation, disassembly or removal of covers, panels or obstructions is performed. Hidden or obstructed defects may not be observed. In addition, some components are assessed on a random sampling of like items.

The physical conditions of building components are typically defined as being in one of three categories: Good, Fair, or Poor. For the purposes of this report, the following provides an explanation of the definitions used:

Good: Average to above-average condition for the building system evaluated, taking into consideration factors of age and design. Generally, other than normal maintenance, no repair is recommended or required.

Fair: Average condition for the building system evaluated, taking into consideration factors of age and design. Some short term or immediate maintenance or repairs are recommended to return the system to a good condition.

Poor: Below-average condition for the building system evaluated taking into consideration factors of age and design. Immediate repair, significant work or replacement is anticipated to return the building system to a good or fair condition.

Present during the site visit were:

- Del Nordby of CDS-Inc. [www.cds-inc.net](http://www.cds-inc.net)

The Property Condition Report is intended only for use by the Client. It is not intended to benefit, be used by or relied upon by any third party.

## Conclusion

Typically, a report of this type is limited to addressing the visual deficiencies in the building as described above. In this particular case, it seems relevant to discuss issues that go beyond the visual defects.

Per the assessment reports included in Appendices A through I there are a number of building systems and components with a diminished level of integrity and capacity. This is due to exceeding limits on their life expectancy, in addition to, non-compliance with the Essential Service Act (ESA) requirements for public safety construction.

Given the aforementioned issues related to non-compliance with ESA due to the building's current use as a public safety structure for the Town of Ross' Fire and Police, it appears cost prohibitive to correct the issues related to the non-compliance of the ESA due to seismic and flooding issues.

Such a consideration would require a detailed planning and feasibility study that focuses on needs analysis, environmental and historical records, design, permitting and re-construction of the existing facility. Given the deficiencies called out in this report, the cost of re-construction could easily equal that of a new ground up facility.

If CDS-Inc. is engaged to study this further, then a proposal can include multiple options to re-purpose the building.

## APPENDIX A

### ZFA Structural Engineers Conditions Assessment Report dated February 13, 2017



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## Conditions Assessment Report

### Ross Public Safety Building

33 Sir Francis Drake Blvd.  
Ross, CA  
ZFA Project: 16523.00

February 9, 2017

*Prepared For:*  
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33 Sir Francis Drake Blvd. Ross, CA.

## **INTRODUCTION**

A general condition assessment structural review of the building located at 33 Sir Francis Drake Blvd in Ross, CA (see Appendix B: Location Map) was performed as requested by Construction and Development Solutions Inc. This review was based on one site visit completed on November 11, 2016 to visually review the general condition of the structure.

The following documents were provided for review:

- Town Facilities Master Plan Site Plan dated February 1, 2016 by Archilogix
- Historic Resource Evaluation: Town of Ross Public Safety Building dated September 10, 2016 by Ver Plank Historic Preservation Consulting which included images of the original floor plan, site plan, and front elevation (see Appendix B: Original Floor Plan)
- Town of Ross Firestation Expansion architectural drawings with no date by Strauss Architects
- Town of Ross Firestation Expansion structural drawings dated August 7, 1995 by Engle and Engle (see Appendix B: 1995 Expansion Drawings)
- No other documents were provided

The American Society of Civil Engineers (ASCE) 41 Standard for Evaluation and Retrofit of Existing Buildings provides a "Tier 1" checklist format which will be used as a guide for this assessment which helps to identify points of review and potential deficiencies. The assessment does not constitute a full seismic evaluation. See Appendix C for ASCE 41 Tier 1 checklists used for the entire structure. In a complete seismic evaluation, checklists would be performed for both the original and the 1995 expansion as separate structures.

## **STRUCTURE OVERVIEW**

### General Site Description

The Ross Public Safety campus is located on a slightly sloping 2.33 acre commercial lot between Corte Madera Creek and Sir Francis Drake Blvd. The campus is located with several entrances facing north to Sir Francis Drake. The site and structures are currently occupied by the Ross Valley Police and Fire Departments.

### Structural System and Materials Description

#### *General*

The original structure is historic and was designed and built in 1927-28. The original structure is cruciform shape in plan and includes three distinct elements: the north wing – originally designed as a residence for staff, the center main firehouse, and the south wing – also designed as a residence for the chief. The building was and remains essentially symmetrical north to south. Two atriums in the north and south wings were infilled and a small addition to the south wing was added with unknown construction in the mid-1980's. An apparatus bay expansion was added in 1995 and is structurally/seismically separated from the original structure. The original main firehouse and the apparatus bay expansion are two story and the north and south wings are one story. The north wing is unoccupied. Subsequently, two temporary (no foundations) and connected modular buildings were added to the north in 2006 and are structurally and seismically separated from the original structure.

#### *Roof Framing*

The original structure has a wood-framed hip and gable-end roof consisting of historic standard sawn-lumber sizes in a stick framed system supporting heavy terra cotta tile shingles. The infill and addition are flat roof systems also wood-framed.

33 Sir Francis Drake Blvd. Ross, CA.

The 1995 expansion is a wood framed gable end system consisting of modern standard wood framing with ridge and rafter construction supporting heavy terra cotta shingles. The ceiling is also sawn lumber and provides an attic and bearing for pony walls supporting the roof. Structural steel beams and columns are used to support large open spans.

#### *Second Floor Framing*

The second floor at the center firehouse portion of the original building is also historic sawn lumber joists at standard spacing. Diagonal wood sheathing provides the diaphragm.

The second floor at the 1995 expansion is modern wood framed joists and plywood diaphragm.

#### *Walls*

The exterior and interior walls for are wood framed with standard stud sizes and spacing. The original building is sheathed with straight sheathing and stucco at the exterior. Plaster is used at the interior with typical gypsum board assumed at the more modern infill and additions. The 1995 expansion has plywood at the exterior.

#### *Seismic Force-Resisting System*

The primary lateral (seismic and wind) force resisting system is sheathed walls. The original structure utilizes historic construction with straight sheathing/stucco/plaster shear walls. The 1995 expansion utilizes modern plywood shear walls and a one-bay structural steel moment frame at the open bay elevation.

#### *Ground Floor and Foundations*

Foundations are assumed shallow spread concrete footings at exterior walls of the original structure. A concrete slab on grade provides the ground floor at the central firehouse. Interior pad footings, wood posts, girders, and floor joists provide the ground floor framing and foundation system at the north and south wings. The 1995 expansion is also concrete shallow spread footings and slab on grade.

#### *Field Verification and Condition Assessment*

The historic original building appears in general accordance with the original floor plan and varies in structural condition. The central firehouse is the most original and retains a generally moderate existing condition with some cracks in stucco/plaster and various points of decay. The south wing has been modified several times with undocumented construction and is also in moderate condition. The north wing is in significant disrepair with an obvious lack of maintenance. Most of the infill construction was performed with sub-standard construction.

The 1995 firehouse expansion appears in general conformance with the original construction documents provided and in generally good structural condition with little to no decay. Therefore, there are few items of significant structural interest associated with this newer more modern constructed portion of the building. Only the last three items below apply to the expansion portion of the structure.

### **FINDINGS AND RECOMMENDATIONS**

The following items of structural interest were observed during site review of the structure (see Appendix A: Images). Items are listed in order of structural significance.

- a. ESSENTIAL SERVICE REQUIREMENTS AND RESIDENTIAL CONSTRUCTION – The original building was designed significantly prior to 1986 Essential Service Act requirements for public safety construction as well as modern wood construction techniques. Further the original floor plan notes the north and south wing as residential occupancy. Therefore, the construction is likely substantially less than current standards.

33 Sir Francis Drake Blvd. Ross, CA.

RECOMMENDATION: Due to historic classification, substantial compliance with current essential service facility and code requirements is not likely feasible or cost effective. Review and analyze the capacity of original systems and strengthen critical elements. Historical building code may be used to lessen structural requirements. Critical review of essential service facility occupancy is recommended.

- b. IRREGULAR SHAPE – The original building was designed in a highly irregular shape with significant re-entrant corners which concentrate forces during an earthquake. Portions of the structure respond differently and could create local structural issues.

RECOMMENDATION: Due to historic designation, substantial re-configuration is not likely feasible or cost effective. Review and analyze the effects of irregularities and strengthen critical connections and/or provide new seismic separations between north and south wing and central firehouse.

- c. INFILL CONSTRUCTION – The infill construction added to the original building is undocumented, appears sub-standard in some conditions, and could pose significant risk to the structure.

RECOMMENDATION: Review infill construction in detail and analyze effects on original structure. Removal and/or reconstruction may be required.

- d. FOUNDATION ANCHORAGE – The connection to the foundation at the original structure appeared sub-standard

RECOMMENDATION: Review foundation attachment in detail and provide additional retrofit anchors as needed to connect building framing to foundation

- e. EXTERIOR STUCCO CRACKS – The exterior walls and some interior walls at the center firehouse of the original building corner have some pronounced diagonal cracks.

RECOMMENDATION: Inspect wood framing underneath stucco at areas of exterior cracks. Repair framing and or sheathing as needed and re-apply stucco.

- f. FLOOR GIRDER CONNECTION – The ground floor framing girders and posts at the original building are not connected with metal hardware

RECOMMENDATION: Add posts caps and bases to all connections

- g. INTERIOR SLAB ON GRADE CRACKS – The interior concrete slab on grade at the original fire house shows some cracks.

RECOMMENDATION: Evaluate functional performance of floor and removed and replace slab or patch slab cracks.

- h. EXTERIOR FRAMING – Some of the exterior framing appears to suffer exposure degradation.

RECOMMENDATION: Evaluate functional performance exterior framing including emergency access conditions and replace as needed.

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- i. GEOTECHNICAL REVIEW – The site has a close proximity to creek, is prone to flooding, and no geotechnical information is available.

RECOMMENDATION: A full geotechnical and geological investigation is recommended to identify potential geologic hazards. This applies to both the original building and the expansion.

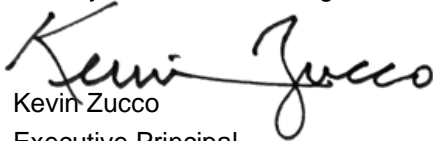
- j. BUILDING SEPARATION – The expansion building is located 3” from the original building but has a flexible moment frame system.

RECOMMENDATION: Due to existing construction, substantial re-configuration is not likely feasible or cost effective.

### **CLOSING**

The structural review is based on that which was plainly visible at time of site review and available original structural drawings. No attempt was made to uncover hidden conditions or perform any destructive or non-destructive testing. The items discussed in this report are subject to revision should more information become available. No structural analysis for loads or capacities was performed under the scope of this review.

We understand you may have questions regarding this evaluation and are available for comment and explanations. Please call with any questions you may have. Thank you for choosing ZFA Structural Engineers to assist you with this building condition assessment.



Kevin Zucco

Executive Principal

ZFA Structural Engineers

# ***APPENDIX A – IMAGES***



Image 1 Original Central Firehouse – Front elevation



Image 2: North Wing

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Image 3: Expansion



Image 4: South Wing



Image 5: Central Firehouse – north elevation



Image 6: Infill between central and north wing





Image 7: Infill construction roof between central and south wing



Image 8: Central firehouse dorm access stair (residential construction)

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Image 9 and 10: South wing – Interior substandard construction



Image 11 and 12: Central firehouse – stucco cracks

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Image 13 and 14: Central and North Wing – decay and floor girder/post

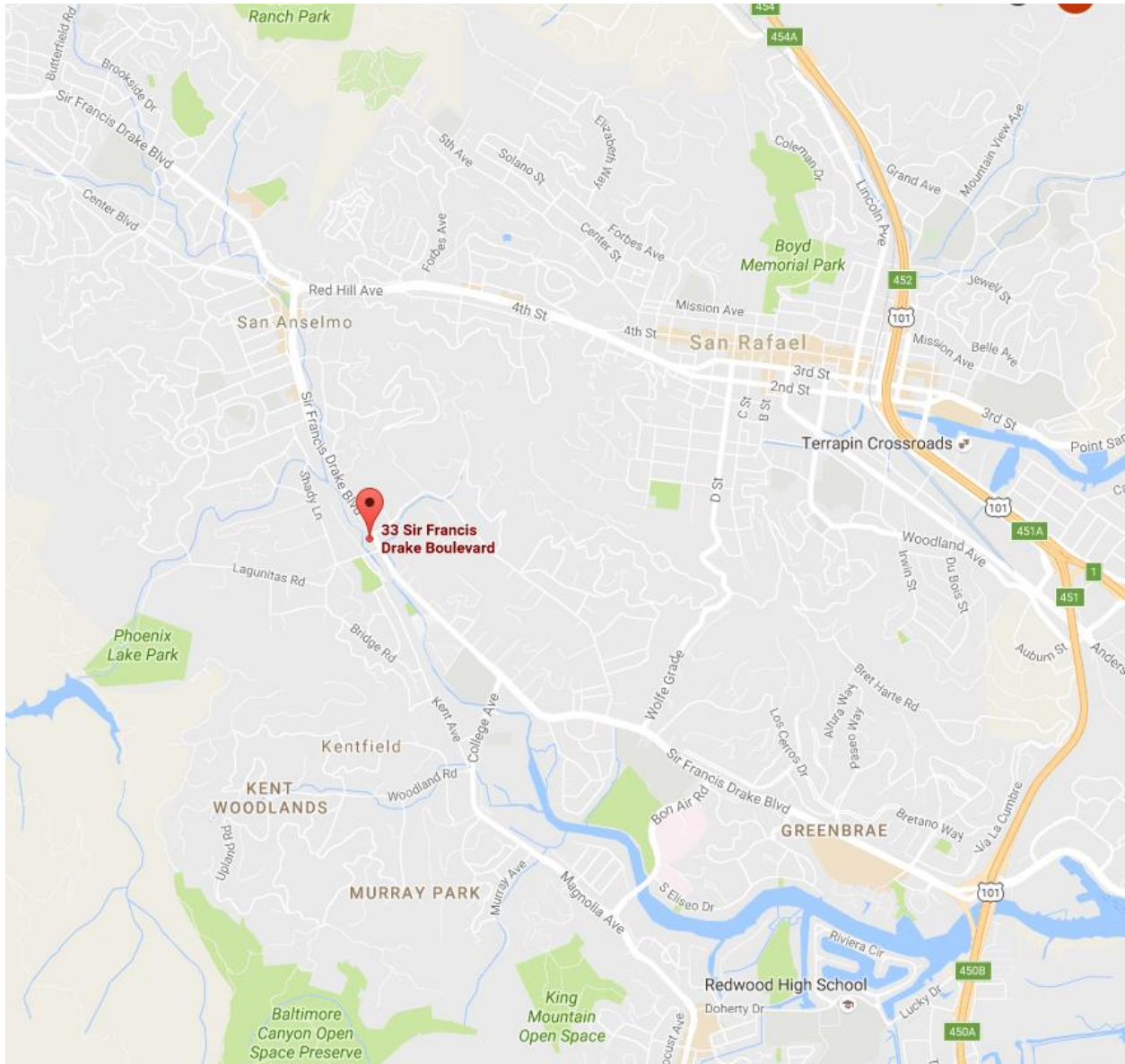


Image 15 and 16: Expansion and Infill – Roof framing and infill construction

## ***APPENDIX B – MAPS AND PLANS***

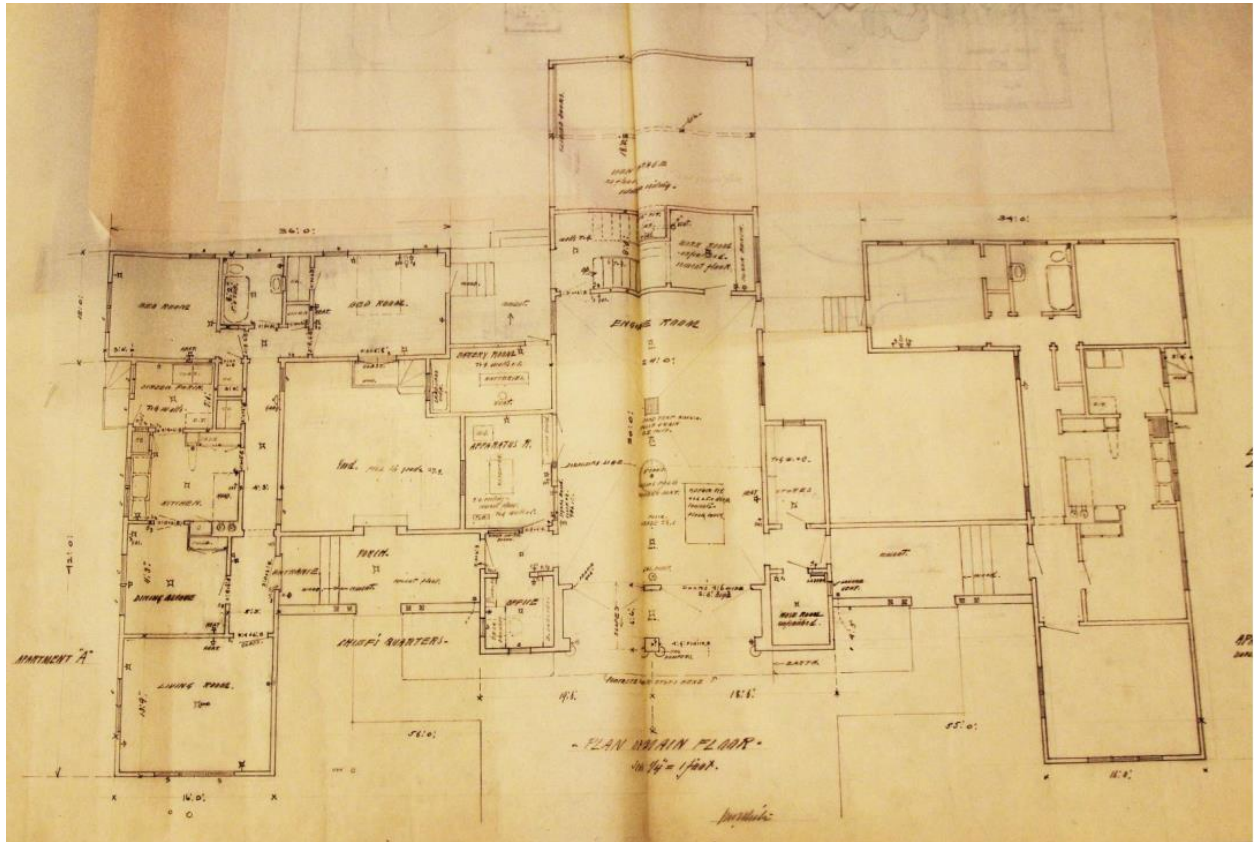
33 Sir Francis Drake Blvd. Ross, CA.

Location Map



33 Sir Francis Drake Blvd. Ross, CA.

Original Floor Plan

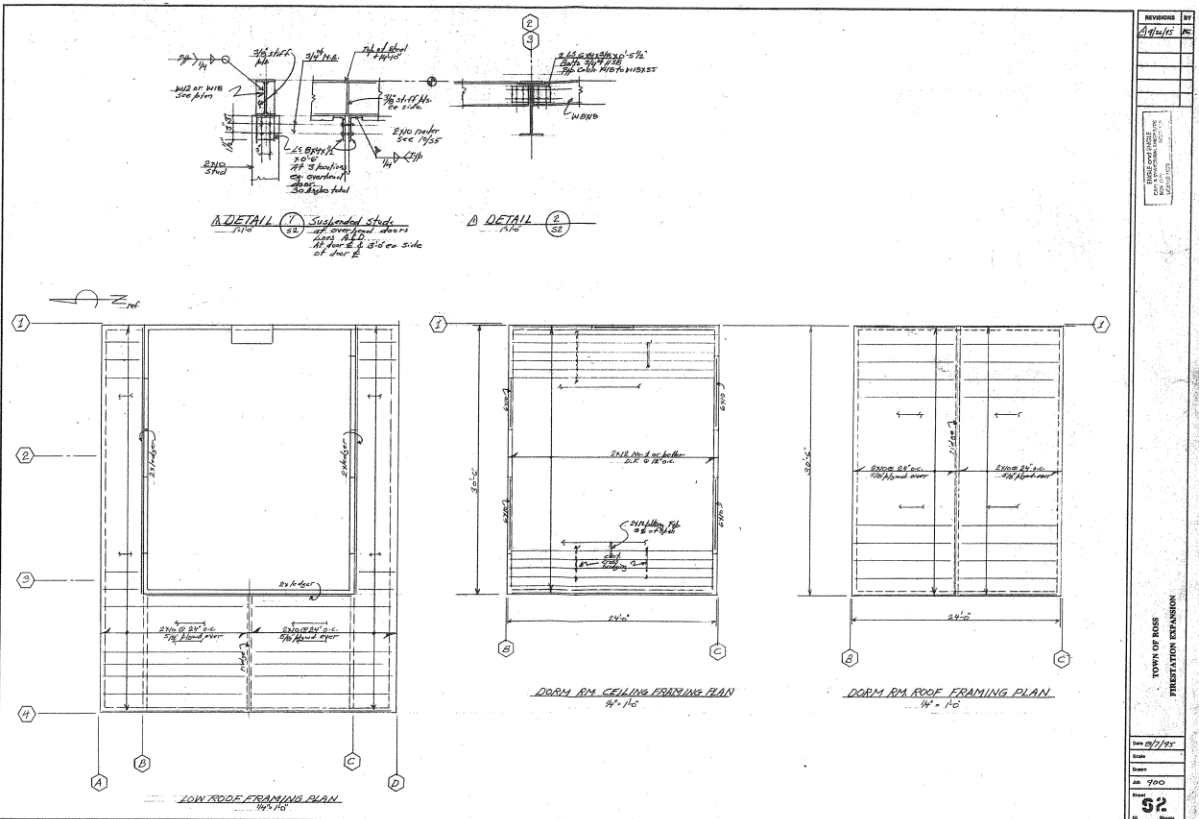
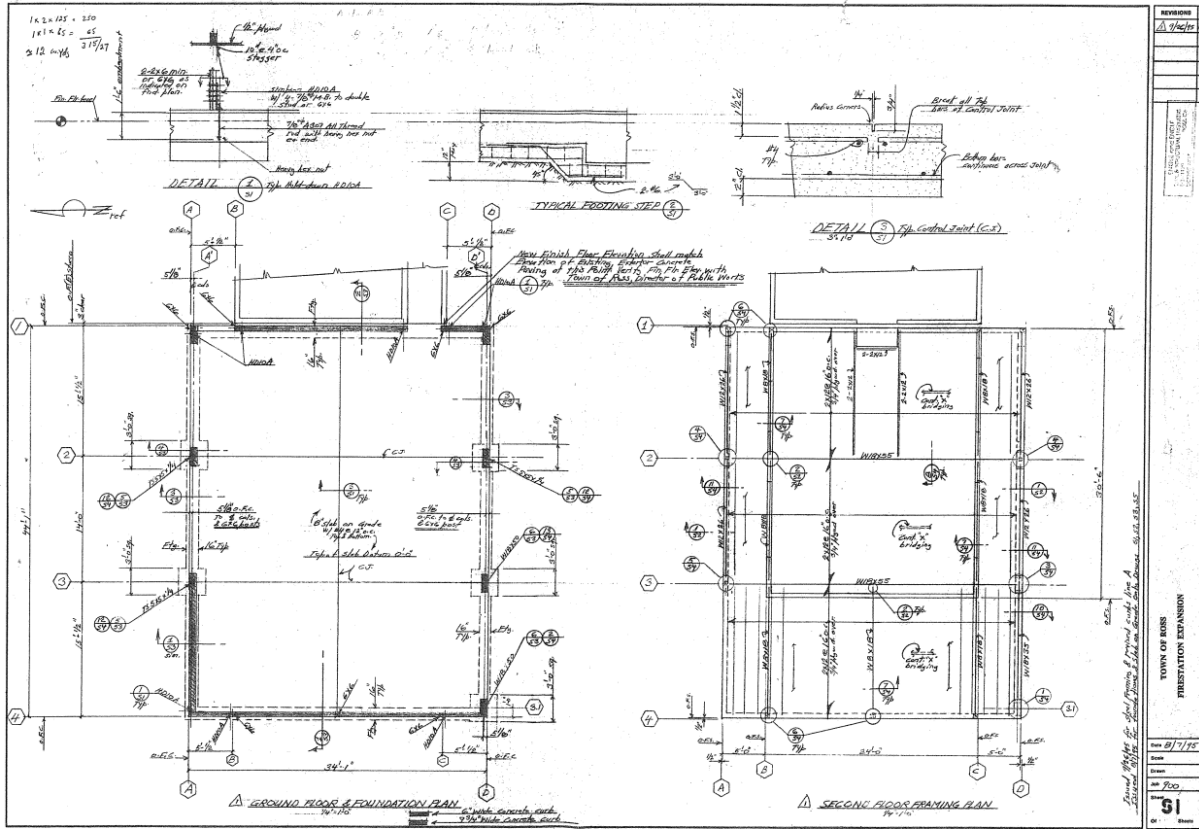


Original Front Elevation

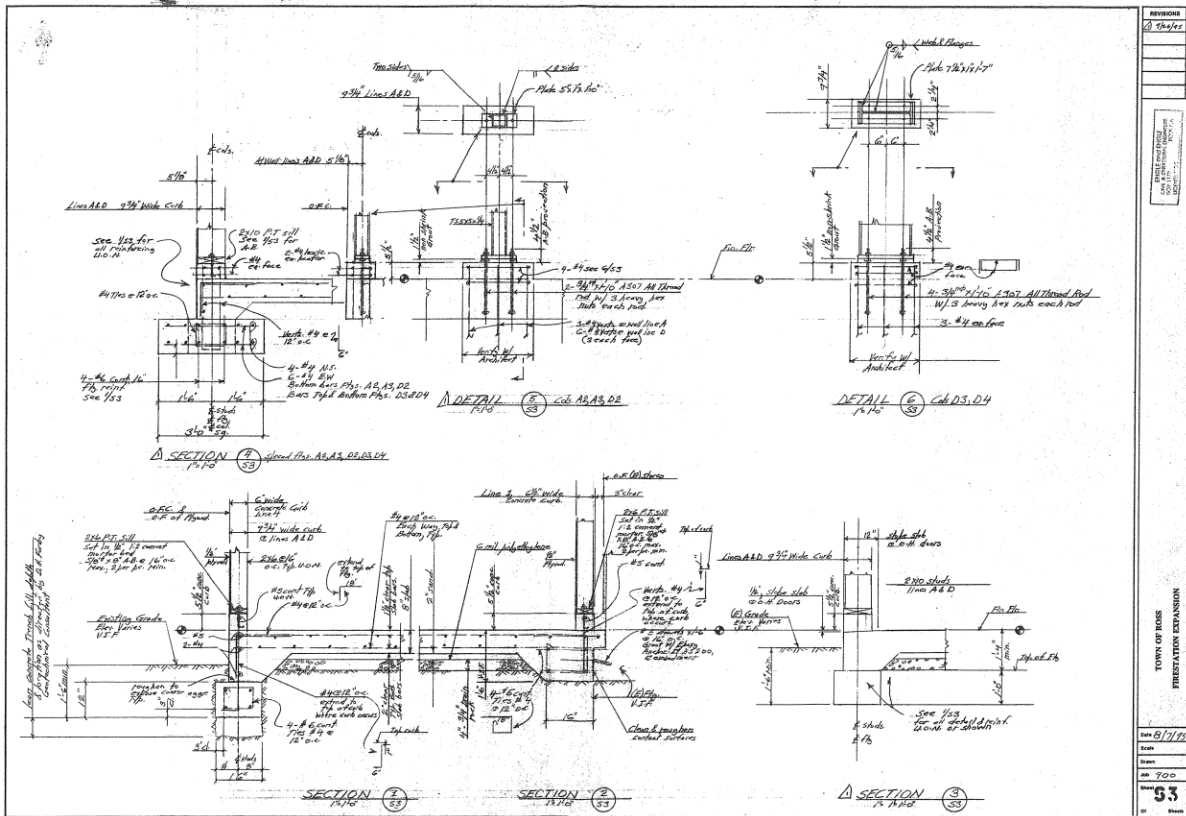


33 Sir Francis Drake Blvd. Ross, CA.

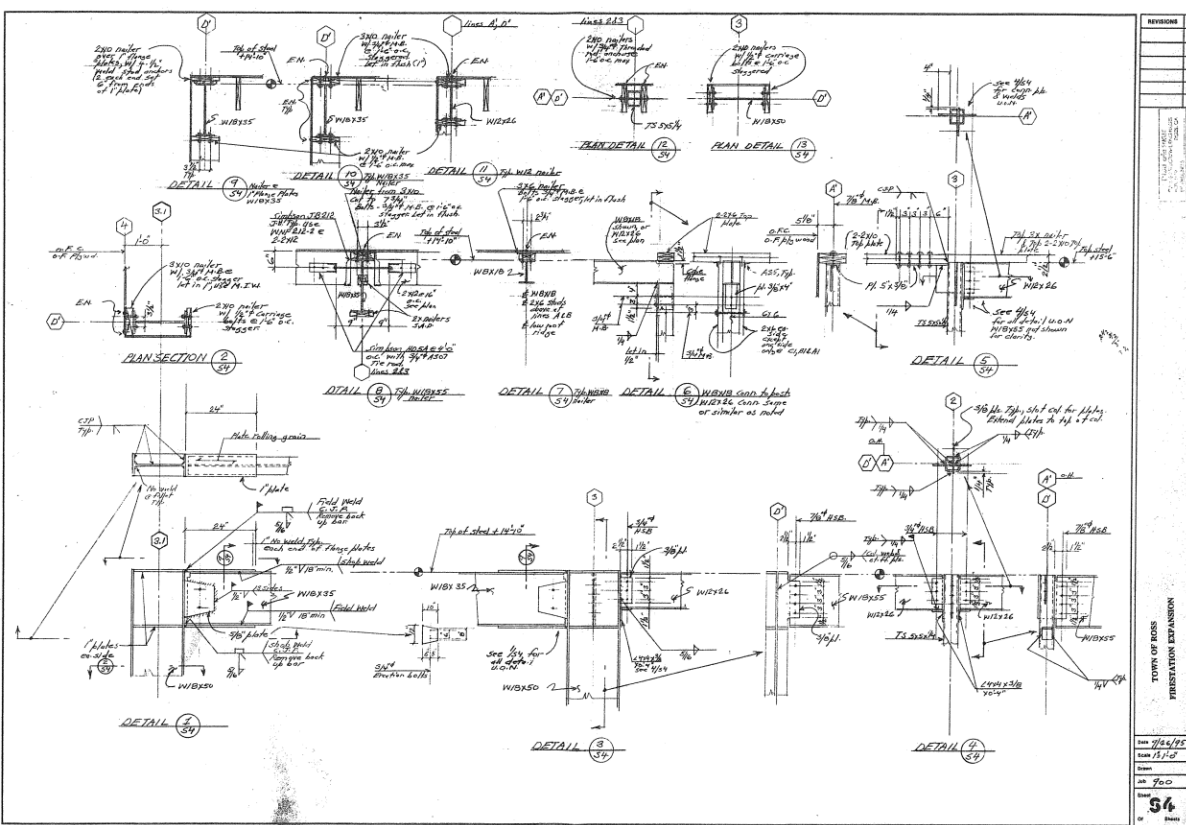
1995 Expansion Structural Plans



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## ***APPENDIX C – ASCE 41 Tier 1 Checklists***

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**16.1.2LS Life Safety Basic Configuration Checklist**

This Basic Configuration Checklist shall be completed for all building types, except buildings in very low seismicity, being evaluated to the Life Safety Performance Level. Once this checklist has been completed, complete the appropriate building type checklist for the desired seismic performance level as shown in Table 4-7. Tier 1 evaluation shall include on-site investigation and condition assessment as required by Section 4.2.1.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), Unknown (U), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant and unknown statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant and unknown evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**C16.1.2LS Life Safety Basic Configuration Checklist**

For buildings in low, moderate, and high seismicity the following evaluation statements represent general configuration issues applicable for most building based on observed earthquake structural damage during actual earthquakes. This checklist should be completed for all buildings in low, moderate, and high seismicity for Life Safety Performance Level.

The section numbers in parentheses following each evaluation statement refer to the commentary in Appendix A regarding the statement's purpose and the corresponding Tier 2 Evaluation procedures. If additional information on the evaluation statement is required, refer to the commentary in the Tier 2 procedure for that evaluation statement.

**Low Seismicity****Building System***General*

C	NC	N/A	U	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>LOAD PATH:</b> The structure shall contain a complete, well defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation. (Commentary: Sec. A.2.1.1. Tier 2: Sec. 5.4.1.1)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>ADJACENT BUILDINGS:</b> The clear distance between the building being evaluated and any adjacent building is greater than 4% of the height of the shorter building. This statement shall not apply for the following building types: W1, W1A, and W2. (Commentary: Sec. A.2.1.2. Tier 2: Sec. 5.4.1.2)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>MEZZANINES:</b> Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure. (Commentary: Sec. A.2.1.3. Tier 2: Sec. 5.4.1.3)

*Building Configuration*

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C	NC	N/A	U	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above. (Commentary: Sec. A2.2.2. Tier 2: Sec. 5.4.2.1)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOFT STORY: The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force-resisting system stiffness of the three stories above. (Commentary: Sec. A.2.2.3. Tier 2: Sec. 5.4.2.2)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation. (Commentary: Sec. A.2.2.4. Tier 2: Sec. 5.4.2.3)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines. (Commentary: Sec. A.2.2.5. Tier 2: Sec. 5.4.2.4)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MASS: There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered. (Commentary: Sec. A.2.2.6. Tier 2: Sec. 5.4.2.5)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. (Commentary: Sec. A.2.2.7. Tier 2: Sec. 5.4.2.6)

**Medium Seismicity: Complete the Following Items in Addition to the Items for Low Seismicity**

## Geologic Site Hazards

C	NC	N/A	U	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 ft under the building. (Commentary: Sec. A.6.1.1. Tier 2: 5.4.3.1)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SLOPE FAILURE: The building site is sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or is capable of accommodating any predicted movements without failure. (Commentary: Sec. A.6.1.2. Tier 2: 5.4.3.1)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site are not anticipated. (Commentary: Sec. A.6.1.3. Tier 2: 5.4.3.1)

**High Seismicity: Complete the Following Items in Addition to the Items for Low and Moderate Seismicity**

## Foundation Configuration

C	NC	N/A	U	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/height) is greater than $0.6S_a$ .

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(Commentary: Sec. A.6.2.1. Tier 2: Sec. 5.4.3.3)

- - 
  - 
  -
- TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C. (Commentary: Sec. A.6.2.2. Tier 2: Sec. 5.4.3.4)

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**16.3LS Building Type W2*****Life Safety Structural Checklist For Building Type W2: Wood Frames, Commercial And Industrial***

This Life Safety Structural Checklist shall be completed where required by Table 4-7 and where the building configuration complies with the description of W2 building type defined in Table 3-1. Tier 1 evaluation shall include on-site investigation and condition assessment as required by Section 4.2.1.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), Not Applicable (N/A), or Unknown (U) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant and unknown statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant and unknown evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**C16.3LS Life Safety Structural Checklist for Building Type W2*****Building Type W2***

These buildings are commercial or industrial buildings with a floor area of 5,000 square feet or more. There are few, if any, interior walls. The floor and roof framing consists of wood or steel trusses, glulam or steel beams, and wood posts or steel columns. Seismic forces are resisted by wood diaphragms and exterior stud walls sheathed with plywood, oriented strand board, stucco, plaster, straight or diagonal wood sheathing, or braced with rod bracing. Wall openings for storefronts and garages, where present, are framed by post-and-beam framing.

**Low and Moderate Seismicity****Seismic-Force-Resisting System**

- | C                        | NC                                  | N/A                      | U                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1. Tier 2: Sec. 5.5.1.1)                                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than the following values (Commentary: Sec. A.3.2.7.1. Tier 2: Sec. 5.5.3.1.1):<br>Structural panel sheathing            1,000 lb/ft<br>Diagonal sheathing                      700 lb/ft<br>Straight sheathing                        100 lb/ft<br>All other conditions                      100 lb/ft |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings do not rely on exterior stucco walls as the primary seismic-force-resisting system. (Commentary: Sec. A.3.2.7.2. Tier 2: Sec. 5.5.3.6.1)                                                                                                                                                                                                                                   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard are not used as shear walls on buildings more than one story high with the exception of the uppermost level of a multistory building. (Commentary: Sec. A.3.2.7.3.                                                                                                                                                                                        |

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## Tier 2: Sec. 5.5.3.6.1)

- NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 are not used to resist seismic forces. (Commentary: Sec. A.3.2.7.4. Tier 2: Sec. 5.5.3.6.1)
- WALLS CONNECTED THROUGH FLOORS: Shear walls have an interconnection between stories to transfer overturning and shear forces through the floor. (Commentary: Sec. A.3.2.7.5. Tier 2: Sec. 5.5.3.6.2)
- HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story because of a sloping site, all shear walls on the downhill slope have an aspect ratio less than 1-to-1. (Commentary: Sec. A.3.2.7.6. Tier 2: Sec. 5.5.3.6.3)
- CRIPPLE WALLS: Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels. (Commentary: Sec. A.3.2.7.7. Tier 2: Sec. 5.5.3.6.4)
- OPENINGS: Walls with openings greater than 80% of the length are braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or are supported by adjacent construction through positive ties capable of transferring the seismic forces. (Commentary: Sec. A.3.2.7.8. Tier 2: Sec. 5.5.3.6.5)

## Connections

- | C                        | NC                                  | N/A                      | U                                   |                                                                                                                                                                                                   |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | WOOD POSTS: There is a positive connection of wood posts to the foundation. (Commentary: Sec. A.5.3.3. Tier 2: Sec. 5.7.3.3)                                                                      |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | WOOD SILLS: All wood sills are bolted to the foundation. (Commentary: Sec. A.5.3.4. Tier 2: Sec. 5.7.3.3)                                                                                         |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | GIRDER/COLUMN CONNECTION: There is a positive connection using plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1. Tier 2: Sec. 5.7.4.1) |

**High Seismicity: Complete the Following Items in Addition to the Items for Low and Moderate Seismicity**

## Diaphragms

- | C                        | NC                                  | N/A                      | U                        |                                                                                                                                                                |
|--------------------------|-------------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | DIAPHRAGM CONTINUITY: The diaphragms are not composed of split-level floors and do not have expansion joints. (Commentary: Sec. A.4.1.1. Tier 2: Sec. 5.6.1.1) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ROOF CHORD CONTINUITY: All chord elements are continuous, regardless of changes in roof elevation. (Commentary: Sec. A.4.1.3. Tier 2: Sec. 5.6.1.1)            |

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- |                                     |                                     |                                     |                          |                                                                                                                                                                                                                                                          |
|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | DIAPHRAGM REINFORCEMENT AT OPENINGS: There is reinforcing around all diaphragm openings larger than 50% of the building width in either major plan dimension. (Commentary: Sec. A.4.1.8. Tier 2: Sec. 5.6.1.5)                                           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 2-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1. Tier 2: Sec. 5.6.2)                                                                               |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | SPANS: All wood diaphragms with spans greater than 24 ft consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Commentary: Sec. A.4.2.2. Tier 2: Sec. 5.6.2)                   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | DIAGONALLY SHEATHED AND UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 40 ft and aspect ratios less than or equal to 4-to-1. (Commentary: Sec. A.4.2.3. Tier 2: Sec. 5.6.2) |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1. Tier 2: Sec. 5.6.5)                                                                                |

## Connections

- | C                        | NC                       | N/A                      | U                                   |                                                                                                                                                                           |
|--------------------------|--------------------------|--------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | WOOD SILL BOLTS: Sill bolts are spaced at 6 ft or less with proper edge and end distance provided for wood and concrete. (Commentary: Sec. A.5.3.7. Tier 2: Sec. 5.7.3.3) |

**APPENDIX B**

**Visual Roof Inspection Report dated 10/13/2016**





October 13, 2016

Del Nordby  
50 Santa Rosa Ave.  
Santa Rosa CA 95404

**Re:** Visual Roof Inspection at: 33 Sir Francis Drake BLVD San Anselmo CA

Del Nordby,

Thank you for the opportunity of inspecting the roof at the above-referenced address. A visual inspection was made of the roof surface only. The roofing material was not removed to examine the underlayment or nailing unless specified below. The interior of the building, including the attic, was not inspected, and this inspection does not cover the structure, electrical, or plumbing.

Please note that this inspection report is not a guarantee that the existing roof is free of defects. The sole purpose of this report is to determine the expected service life of the roof under typical weather conditions with proper maintenance.

We assume no liability for roof leaks that have not been disclosed to us or reported to us at the time of our inspection.

Please be advised that the roof is tile, which has the wear characteristics of being approximately 20 to 30 yrs. old. This type of roof typically remains serviceable for approximately 40 to 50 years with proper maintenance.

After recommended repairs and maintenance are completed, given the general condition of the roof, this roof should have a minimum two-year useful life, which is the expected standard.

Please note that this inspection is not a guarantee against leakage, but an opinion on the serviceable life of the roof. Our Company assumes no liability for any damages resulting from leakage. This roof should be periodically inspected, kept clean of debris, and should have repairs made when needed. This would be considered normal owner maintenance.

RE: 33 Sir Francis Drake Blvd.  
San Anselmo CA 94960

Roof Findings :

Inspector found 34 roof tiles with minor cracks suitable for 50 year tile adhesive to repair.

3 tiles are broken beyond repair and need replacing.

Excessive leaf litter on roof and gutter system.

Evidence of gutters leaking.

Junction at flat roof and skylight has major cracks in black mastic that will leak and cause water damage to substructure.

Cracks and voids in tile mortar at ridges and hips need resealed to insure no leaks.

Upon inspection, the radio tower appears to have extensive wood structure damage and metal flashing is rusted.

Skylight domes show signs of ageing and are potential for leaks.

Roof to wall flashing has many locations where black mastic is cracked and potentially leaking.

2, 3'x4' window awnings are severally rusted.

Recommendations:

1. Repair 34 cracked tiles with 50 year tile adhesive.
2. Replace 3 broken tiles.
3. Blow-off entire roof to remove leaf litter.
4. Clean all debris from gutters and down spouts.
5. Seal all leaking gutters and down spout.
6. Replace 2, 3'x4' window awnings.
7. Repair / replace cracked and missing tile mortar at hips and ridges.
8. Replace wood sub-structure and flashing at tower platform.
9. Seal all mastic locations with three course sealant system.

Total Material and labor.....14,050.00

This inspection and report are not an appraisal of the property or a recommendation to purchase or not to purchase the property. Our company

assumes no liability for actions taken or not taken resulting from the opinions expressed in this report.

The sole purpose of this inspection was to determine the remaining life expectancy of the roofing material. Due to the multitude of manufacturers, this report does not guarantee that the roofing materials were installed according to the manufacturer's instructions unless the instructions were provided at the inspection site.

Please call me if you have any questions, or if I can be of further service.

Thank you,

Randy Nascimento  
Project Manager  
T.A. Krause Inc.  
(209) 300-4795

**APPENDIX C**

**Buena Vista Wood Destroying Pests and Organisms Inspection dated  
10/10/2016**

# WOOD DESTROYING PESTS AND ORGANISMS INSPECTION REPORT

BUILDING NO 33	STREET, CITY, STATE, ZIP Sir Francis Drake Blvd, Ross CA 94957	Date of Inspection 10/10/2016	No. of Pages 12
<p><b>THE BUENA VISTA COMPANY</b>                  P.O. Box 1001, Windsor, CA 95492                  Ph: (707) 838-6291 (707) 838-4637 Fax</p>			
Firm Registration No. PR 3042	Report No. 983012	Escrow No.	
Ordered By: Del Nordby 50 Santa Rosa Ave Santa Rosa, CA 95404	Property Owner/Party of Interest Del Nordby	Report Sent To: Del Nordby 50 Santa Rosa Ave Santa Rosa, CA 95404	
COMPLETE REPORT <input checked="" type="checkbox"/> LIMITED REPORT <input type="checkbox"/> SUPPLEMENTAL REPORT <input type="checkbox"/> REINSPECTION REPORT <input type="checkbox"/>			
General Description: Multi-Level Wood-Frame Structure-Stucco Exterior		Inspection Tag Posted: Subarea	
		Other Tags Posted: None Noted	
An inspection has been made to the structure(s) shown on the diagram in accordance with the Structural Pest Control Act. Detached porches, detached steps, detached decks and any other structures not on the diagram were not inspected.			
Subterranean Termites <input checked="" type="checkbox"/> Drywood Termites <input type="checkbox"/> Fungus/Dryrot <input checked="" type="checkbox"/> Other Findings <input checked="" type="checkbox"/> Further Inspection <input checked="" type="checkbox"/>			
If any of above boxes are checked, it indicates that there were visible problems in accessible areas. Read the report for details on checked items.			

NOTE: DIAGRAM IS DISPLAYED ON PAGE 2

Inspected by Michael Kesecker State License No. OPR 9432

Signature: 

You are entitled to obtain copies of all reports and completion notices on this property reported to the Structural Pest Control Board during the preceding two years. To obtain copies contact: Structural Pest Control Board, 2005 Evergreen Street, Suite 1500, Sacramento, California 95815.

NOTE: Questions or problems concerning the above report should be directed to the manager of the company. Unresolved questions or problems with services performed may be directed to the Structural Pest Control board at (916) 561-8708, or (800) 737-8188 or www.pestboard.ca.gov.

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Sir Francis Drake Blvd, Ross CA 94957

10/10/2016

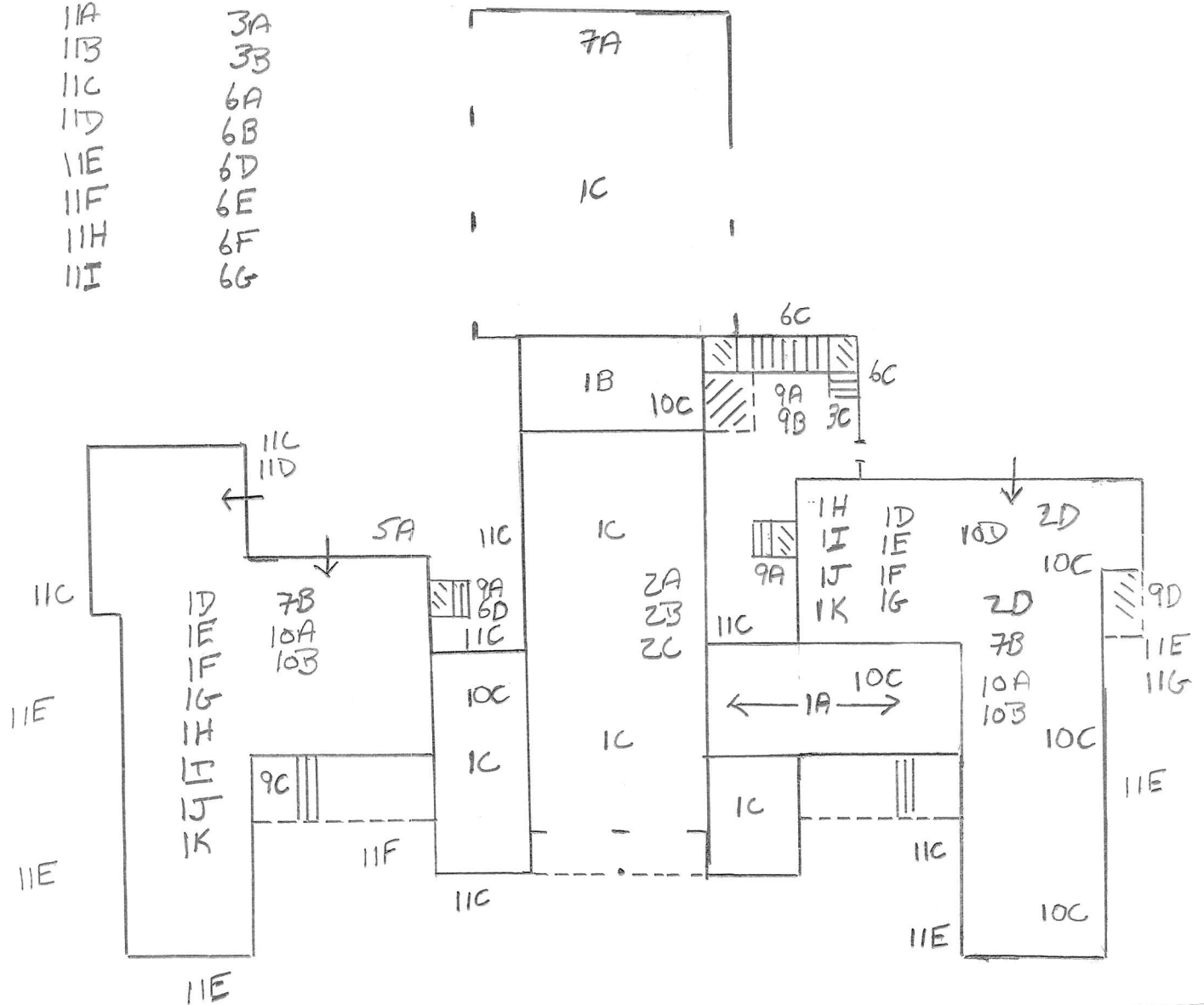
983012

BUILDING NO.

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REPORT NO.

## SCOPE OF WOOD DESTROYING PEST AND ORGANISMS REPORT

A "Wood Destroying Pest and Organisms Report" contains findings as to the presence or absence of evidence of wood destroying pests and organisms in visible and accessible areas and contains recommendations for correcting any infestations or infections found. The contents of "Wood Destroying Pest and Organisms Report" are governed by the Structural Pest Control Act and related regulations.

Some structures do not comply with Building Code requirements or may have structural, plumbing, electrical, heating, air conditioning or other defects that do not pertain to "Wood Destroying Organisms. A "Wood Destroying Pest and Organisms Report" does not contain information on such defects. These defects, if any are NOT within the scope of our License and appropriate Licensed Contractors qualified should be contacted if further information is desired regarding same.

The Structural Pest Control Act requires inspection of only those areas which are visible and accessible at the time of the inspection. Some areas of a structure are not accessible for inspection, such as the interior of hollow walls, spaces between floors, areas concealed by carpeting, built-in appliances, or cabinet work. Infestations or infections may be present and active in such areas without visible or accessible evidence of same. Areas that were not inspected are not in the report. If you desire information about areas that were not inspected, a Further Inspection may be performed at additional cost.

**WORK DONE BY OTHERS:** If anyone other than The Buena Vista Company performs work from this report, they should do so from their own specifications and inspection. If any other person or company performs work, we recommend inspecting these areas when they are fully opened up, damage removed, and prior to closing before we could certify that these area(s) are free from infestation. We would document these findings in Supplemental Inspection Reports. The fee for the Supplemental Inspection Report would be established on arrangement with inspector and is payable at the time of the Inspection. We cannot certify work performed by others with respect to inaccessible areas as detailed above.

**RE-INSPECTION:** State Law AB1127 - Re-inspection of this property will be performed, (if requested by the person ordering Original inspection AND within 4 months of Original inspection), providing that the previous Inspection fee has been paid in full. Re-inspection will be charged at a rate not to exceed Original inspection. At time of Re-inspection, required Building Permit must be posted. Also, Contractor's name, Lic. classification, and Lic. numbers must be supplied (if requested) at time of Re-inspection.

**HIDDEN DAMAGE:** In the recommendations below, if damage is found to extend into inaccessible areas or beyond the scope of intended repair; a Supplemental Inspection Report will be issued outlining the conditions found and costs for each additional corrective work will be submitted. All "Further Inspection" items referenced below should be completed as outlined and a written report obtained.

The exterior surface of the roof will not be inspected. All information pertaining to the roof should be obtained by a Licensed Roofing Contractor.

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**This is a separated inspection report. It is defined as Section 1 and Section 2 items evident on the date of this inspection.**

**Section 1: The items listed below contain evidence of active infestation or infestation: Or, conditions that have resulted in or from infestation or infection.**

**Section 2: The items listed below contain conditions deemed likely to leak to infestation or infection but where no outward evidence or same was noted on the date of this inspection.**

**Note: Our company does not assume responsibility for conditions existing in these areas unless an authorization to repair, replace, or further inspect these areas is made in writing and will be performed at additional cost.**

**Section 3 (further inspection): These items are recommendations to inspect areas which, during the original inspection, did not allow the inspector access to complete the inspection and/or cannot be defined as either Section 1 or Section 2.**

**Informational Items: These items are intended to be information and/or property maintenance related.**

**(The Structural Pest Control Board requires that you be given the following notice)**

**"NOTICE: The Structural Pest Control Board encourages competitive business practices among registered companies. Reports on this structure prepared by various registered companies should list the same findings (i.e., termite infestations, termite damage, fungus damage, etc.). However, recommendations to correct these findings may vary from company to company. Therefore, you may wish to seek a second opinion since there may be alternative methods of correcting the findings listed on this report that may be less costly."**

**1. Substructure Area:**

ITEM 1A Crawlspace as indicated was visible through wire mesh only. This appears to be a modified pier and post foundation system. Joists appear to be over spanned. No physical access or proper clearance provided.

**RECOMMENDATION: Make further inspection after access and proper clearance has been provided by others. Issue a supplemental report.**

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 1B The unimproved subarea was inaccessible for inspection as no adequate access could be located

**RECOMMENDATION: Make further inspection after access has been provided by others, and then issue a supplemental inspection report with findings.**

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 1C We noted that a portion of the structure (area indicated on diagram) was constructed on a concrete slab on grade. We made inspection as feasible to interior perimeter and partition walls at this area, and no apparent adverse conditions were noted. No representation is made with regard to any areas concealed by finished floor or wall coverings.

**RECOMMENDATION: Periodic inspection is advised.**

\*\*\*\*\* Information Item \*\*\*\*\*



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**1. Substructure Area:**

ITEM 1D There are two main portions of the unimproved sub area. Both were partially accessible. There is a vapor barrier beneath both sections, to improve ventilation. Ventilation was adequate at accessible areas. The vapor barrier was contaminated with rodent debris, and also silt from prior flooding. We did not make complete physical inspection, due to these conditions.

**RECOMMENDATION:** Remove and dispose of existing contaminated vapor barriers. Apply a sanitizer to soil as needed. Install new vapor barrier over soil. Make complete inspection. Issue a supplemental inspection report.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 1E Evidence of current or prior rodent infestation has contributed to adverse conditions.

**RECOMMENDATION:** Refer to licensed rodent abatement contractor for review and re-medial work.

\*\*\*\*\* Information Item \*\*\*\*\*

ITEM 1F Buildings have stucco exterior. On the wood sheathing behind stucco, we noted areas of surface fungus and woodboring beetles at accessible areas at perimeter. Possible damage or additional infestation may exist. Refer to 1G.

**RECOMMENDATION:** Treat perimeter substructure wood members with Timbor; for local control of wood boring beetles, and surface fungus. Make further inspection as outlined in 1G.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 1G As stated, areas of surface fungus and woodboring beetles noted at perimeter substructure. Areas were inaccessible for complete inspection.

**RECOMMENDATION:** Make further/complete inspection during 1D of this report, to determine extent of damage and infestation. Issue a supplemental inspection report with findings.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 1H Evidence of subterranean termites noted at wood sheer panel behind stucco. Termites are gaining access from behind unbonded stucco.

**RECOMMENDATION:** Treat at exterior perimeter of the structure with Altriset. At completion of treatment, there will be a five year warranty.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 1I Substructure area was inaccessible for complete physical inspection due to placement of heating ducts and/or other utilities.

**RECOMMENDATION:** Make further inspection to these areas as feasible during the course of substructure work as outlined in this report. Our finding and recommendations will be given on a supplemental inspection report.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 1J Evidence of prior flooding noted at substructure. This inspection was made during dry weather conditions.

**RECOMMENDATION:** Refer to licensed drainage contractor for review and recommendations.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

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**1. Substructure Area:**

ITEM 1K Adequacy of site drainage provisions are outside the scope of this inspection report.

RECOMMENDATION: If the owner or parties in interest desire information with respect to adequacy of drainage provisions, we advise that a Licensed Drainage Contractor or Geotechnical Engineer be consulted.

\*\*\*\*\* Information Item \*\*\*\*\*

**2. Stall Shower:**

ITEM 2A We noted some deterioration to portions of caulking/grouting at bathroom(s).

RECOMMENDATION: We advise that all portions of bathroom(s) be kept in a well caulked/sealed condition as a matter of good maintenance. Periodic inspection is advised.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 2B Evidence of decay fungus/moisture damaged noted to underpayment /sub flooring in the center right upstairs bathroom(s).

RECOMMENDATION: Remove the toilet, floor covering, and underpayment for further inspection. If no further damage is exposed, please the damaged wood with new material. Install new underpayment and floor covering. Reset the toilet on a new wax ring.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 2C Cracks and physical damage noted to tiled countertop at sink at upstairs center bathroom.

RECOMMENDATION: Refer to tile contractor for review and repair.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 2D This item is in regard to both downstairs bathrooms at right side annex. We noted dry rot damage, and also evidence of subterranean termite infestation to substructure wood members under both bathrooms.

RECOMMENDATION: Tear out both bathrooms entirely. Remove all structurally impaired wood. Replace with new. Re-construct bathrooms in a code compliant manner. Reffer to licensed specialty contractor.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

**3. Foundations:**

ITEM 3A NOTE: This is a general notation to indicate that foundations are outside the scope of this inspection report. This includes information about possible sloping of floors.

RECOMMENDATION: If owner or parties in interest desire information with regard to foundation system and related condition; we advise that a Licensed Foundation Contractor or appropriate Licensed Engineer be consulted.

\*\*\*\*\* Information Item \*\*\*\*\*

ITEM 3B Retaining walls on the property are outside the scope of this report and were not inspected.

RECOMMENDATION: If owner or parties in interest desire information with regard to retaining walls and related drainage provisions, we advise that appropriate Licensed Contractor or Engineer be consulted.

\*\*\*\*\* Information Item \*\*\*\*\*

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**3. Foundations:**

ITEM 3C We noted earth to wood contact at building exterior at area indicated on diagram.

RECOMMENDATION: Lower soil grade and/or alter construction detail as needed to eliminate earth to wood contact.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

**5. Ventilation:**

ITEM 5A We noted damaged and/or missing vent screens.

RECOMMENDATION: We advise that vent screens be repaired or replaced as needed.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

**6. Abutments:**

ITEM 6A We noted some cracks and/or weathering at portions of stucco exterior.

RECOMMENDATION: We advise that all portions of stucco exterior be kept in a well caulked and sealed condition as a matter of maintenance.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 6B Cracks and physical damage noted to portions of stucco exterior.

RECOMMENDATION: Review and repair as needed by qualified stucco contractor.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 6C Stucco abutment, railing, fence does not have benefit of ventilation provision. Possible adverse conditions suspect at inaccessible area.

RECOMMENDATION: Install ventilation provision. Make further inspection. Issue a supplemental report.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 6D We noted that portions of stucco exterior extend down over foundation into grade. this condition can allow for undetected Subterranean Termite entry.

RECOMMENDATION: We advise that stucco be terminated up above exterior grade levels where feasible as a mater of good maintenance to provide for proper periodic visual inspection. We advise that appropriate Licensed Contractor be consulted to perform this item.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 6E We noted evidence of possible moisture intrusion at areas behind stucco.

RECOMMENDATION: Make test holes in stucco at inspectors discretion. Probe/make further inspection to enclosed wood members. Issue a supplemental report with findings and recommendations. Patch test holes with stucco patch. Prime/finish paint to be done by others.

NOTE: No representation is made regarding areas not tested. Test holes are random and ultimately inconclusive unless areas that are concealed by stucco are fully opened up by others for inspection. Please contact this office if clarification is desired.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

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**6. Abutments:**

ITEM 6F Possible damage noted to sheer panel at areas behind stucco.

**RECOMMENDATION:** Make further/complete inspection during 1D. Issue a supplemental inspection report.  
\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 6G Evidence of subterranean termites noted entering structure from behind unbonded stucco.

**RECOMMENDATION:** Make treatment for subterranean termite control during 1H.  
\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

**7. Attic Spaces:**

ITEM 7A Attic space above rear firehouse garage was inaccessible, due to storage.

**RECOMMENDATION:** Make further inspection after storage has been removed by others. Issue a supplemental inspection report.  
\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 7B Inspection was made from attic access. Physical inspection not made, due to possibility of damage to ceilings. Stains noted. Evidence of current or prior leaks noted. Refer to 10 C.

**RECOMMENDATION:** Refer to licensed roofing contractor for review, recommendations, and remedial work.  
\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

**9. Decks - Patios:**

ITEM 9A We noted that deck(s)/step(s), as indicated on the diagram, to be in basically sound condition. We did, however, note some weathering to walking surface(s).

**RECOMMENDATION:** We advise that deck(s) /step(s) be kept in a well sealed condition to extend usable life. We advise that owner or parties in interest contact appropriate licensed person to periodically perform this item.  
\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 9B We noted surface decay fungus at area beneath the deck (indicated on diagram).

**RECOMMENDATION:** Scrape away and treat wood members as needed with approved fungicide in accordance with manufacturers label.  
\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 9C Area beneath the deck as indicated on diagram was inaccessible for complete inspection due to limited clearances. Inspection as feasible did not reveal any outward evidence of adverse conditions. It is our considered opinion that further inspection is not warranted at this time.

**RECOMMENDATION:** Periodic inspection is advised.  
\*\*\*\*\* Information Item \*\*\*\*\*

ITEM 9D This item is in regard to the right side deck. Dry rot damage noted to deck and railing.

**RECOMMENDATION:** Remove existing deck, and replace with new, in a code compliant manner.  
\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

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**10. Other - Interiors:**

ITEM 10A This structure was furnished/occupied at the time of this inspection. Although no apparent adverse conditions were noted at accessible areas (unless otherwise noted in this report), no representation is made regarding any areas concealed by furnishing or storage or areas concealed by finished floor or wall coverings. This includes (if applicable) the garage and/or other storage areas.

RECOMMENDATION: Periodic inspection as feasible is advised.

NOTE: Upon request from interested parties, this company would make inspection to currently inaccessible areas after all furnishings/storage was removed by others and issue a supplemental report. Please contact this office if further information/clarification is desired.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 10B At interior, evidence of leaks around windows were noted. Resulting dry rot damage noted to window sash and sills.

RECOMMENDATION: Make needed repairs. Refer to 11B.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

ITEM 10C Stains and moisture damage to ceilings noted at areas noted 10C on diagram. These are presumably from roof leaks.

RECOMMENDATION: Refer to licensed roofing contractor. Also, make further inspection to currently inaccessible areas, after damaged ceiling areas have been removed by others. Issue a supplemental report.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 10D This is in regard to the right side annex/apartment. We noted a lot of physical damage at interior floor, wall, and ceiling areas.

RECOMMENDATION: Refer to licensed specialty contractor for review and repairs.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

**11. Other - Exteriors:**

ITEM 11A We noted tree debris at the roof.

RECOMMENDATION: We advise that all tree debris be kept cleared from the roof, as well as from perimeter rain gutters and downspouts as a matter of maintenance.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 11B Dryrot damage noted at alder wood sash windows, sills, related wood members. Damage may extend to adjacent areas behind stucco.

RECOMMENDATION: Refer to licensed window contractor for review, repair, and/or replacement as found needed. During the course of replacement or repair, if damage is found to extend into adjacent areas, this company should be called immediately so that we may make further inspection and issue a supplemental inspection report. Also, refer to 6E.

\*\*\*\*\* This is a Section 1 Item \*\*\*\*\*

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**11. Other - Exteriors:**

ITEM 11C We noted that water from downspouts dumped directly at base of exterior perimeter walls.

RECOMMENDATION: We advise that water from downspouts be properly diverted away from building exterior. We advise that a Licensed Drainage Contractor be consulted.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 11D Deterioration noted at perimeter rain gutters/downspouts.

RECOMMENDATION: Owner is advised to contact appropriate Licensed Contractor to review condition of rain gutters/downspouts and follow recommendations for necessary repair.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 11E We noted plant and/or vine growth at building exterior.

RECOMMENDATION: We advise that all plant and vine growth be kept trimmed away from the building as a matter of good maintenance.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 11F We noted tree debris at the roof. We also noted that there were overhanging tree branches.

RECOMMENDATION: We advise that all tree debris be kept cleared from roof, as well as from perimeter raingutters and downspouts, as a matter of good maintenance. In addition, we advise that overhanging tree limbs be trimmed away from the building as a matter of good maintenance. We advise that a licensed Arborist be consulted in this regard.

\*\*\*\*\* This is a Section 2 Item \*\*\*\*\*

ITEM 11G This is a general notation to indicate that the indirectly attached modular unit was not inspected, and is not a part of this report.

RECOMMENDATION: Please contact this office if clarification is desired.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 11H The roof covering(s) are outside the scope of this inspection report.

RECOMMENDATION: If owner, or parties in interest desire information regarding the roof we advise that a Licensed Roofing Contractor be consulted.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

ITEM 11I Upper level portions of the building were inaccessible for inspection due to height up off of the ground. Possible adverse conditions are suspected at upper level areas.

RECOMMENDATION: Make further inspection using an extension ladder, and issue a supplemental inspection report with findings and recommendations.

\*\*\*\*\* Unknown Further Inspection Recommended \*\*\*\*\*

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BUILDING NO.

STREET, CITY, STATE, ZIP

INSPECTION DATE

REPORT NO.

THIS IS A STRUCTURAL PEST CONTROL INSPECTION REPORT NOT A BUILDING INSPECTION REPORT, THEREFORE NO OPINION IS BEING RENDERED REGARDING THE STRUCTURAL INTEGRITY OF THE BUILDING. THE FOLLOWING AREAS WERE NOT INSPECTED, AS INDICATED IN SECTION #1990, PARAGRAPH (j) OF THE STRUCTURAL PEST CONTROL ACT AND RULES AND REGULATIONS FURNISHED INTERIORS, INACCESSIBLE ATTICS, INSULATED ATTICS, AND PORTIONS THEREOF THE INTERIOR OF HOLLOW WALLS SPACES BETWEEN A FLOOR OR PORCH DECK AND THE CEILING OR SOFFIT BELOW STALL SHOWERS OVER FINISHED BUTTRESSES AND SIMILAR AREAS TO WHICH THERE IS NO ACCESS WITHOUT DEFACING OR TEARING OUT LUMBER, MASONRY AND FINISHED WORK, BUILT-IN CABINET WORK FLOOR BENEATH COVERINGS, AREAS WHERE STORAGE CONDITIONS OR LOCKS MAKES INSPECTION IMPRACTICAL.

NOTATION: AT THE TIME OF THIS INSPECTION, WE NOTED EVIDENCE THAT PAST REPAIRS / RENOVATION WORK HAS BEEN PERFORMED BY OTHERS. PARTIES IN INTEREST ARE ADVISED TO CONTACT OWNER (OR RESPONSIBLE PARTIES) FOR ALL INFORMATION ABOUT PAST WORK PERFORMED INCLUDING ANY RELEVANT GUARANTEES OR WARRANTIES.

NOTATION: WITH REGARD TO CORRECTIVE WORK AS OUTLINED IN THIS REPORT, IF DAMAGE OR INFESTATION IS FOUND BEYOND WHAT IS OUTLINED IN THIS REPORT, OR OTHERWISE EXTENDS INTO INACCESSIBLE AREAS THAT ARE UNCOVERED WE WILL ISSUE A SUPPLEMENTAL INSPECTION REPORT WITH FINDINGS /

RECOMMENDATIONS AND ADDITIONAL COST ESTIMATES FOR REPAIR. AREAS OF REPAIR (IF APPLICABLE) WILL BE PRIME PAINTED ONLY. WE WILL FINISH PAINT AREAS OF REPAIR UPON PRIOR ARRANGEMENT WITH OWNER / INTERESTED PARTIES IF FINISH PAINT IS PROVIDED BY OTHERS.

NOTATION: With respect to price shown on the contract, please keep in mind that price does not include costs for Time and Materials work (unless otherwise specified), work that is to be performed by others, or costs for repairing additional damage and/or infestation that may exist at currently inaccessible areas. In any event, we advise that all work as described be performed by appropriate licensed Contractor or Engineer, and all work be done in a code compliant manner with benefit of proper building permits.

THANK YOU FOR USING THE BUENA VISTA COMPANY. PLEASE DO NOT HESITATE TO CONTACT THIS OFFICE IF YOU HAVE ANY QUESTIONS, OR DESIRE CLARIFICATION OF ANY KIND. IF THE READER OF THIS REPORT HAS ANY KNOWLEDGE OF OTHER PEST CONTROL REPORT(S) THAT MAY BE IN CONFLICT WITH THIS REPORT WE ADVISE THAT THIS COMPANY BE CONTACTED IMMEDIATELY FOR CLARIFICATION. THANK YOU AGAIN FOR USING THE BUENA VISTA COMPANY. WE APPRECIATE YOUR BUSINESS!!

#####MOLD DISCLAIMER #####  
THIS IS NOT AN INSPECTION FOR MOLD OR MILDEW. IF PARTIES IN INTEREST DESIRE AN INSPECTION FOR MOLD, MILDEW, OR RELATED CONDITIONS WE ADVISE THAT A PROPERLY LICENSED INDUSTRIAL HYGIENIST BE CONTACTED. THANK YOU!!!  
#####

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STREET, CITY, STATE, ZIP

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OCCUPANTS CHEMICAL NOTICE

Buena Vista Termite Company will use pesticide chemical(s) specified below for the control of wood destroying pests or organisms in locations identified in the Structural Pest Control report as indicated above.

(1) The pest(s) to be controlled:

- \_\_\_ SUBTERRANEAN TERMITES \_\_\_ FUNGUS or DRY ROT
\_\_\_ DRY-WOOD TERMITES \_\_\_ DAMPWOOD TERMITES
\_\_\_ WOODBORING BEETLES \_\_\_ OTHER

(2) The pesticide(s) proposed to be used and the active ingredient(s).

- \_\_\_ A. TERMIDOR SC: Active ingredients: Fipronil
\_\_\_ B. PREMISE 75: Active ingredients: Imidacloprid
\_\_\_ C. VIKANE: Active ingredients: Sulfuryl Fluoride
\_\_\_ D. TIMBOR: Active ingredients: Disodium octaborate tetahydrate
\_\_\_ E. IMPEL ROADS: Active ingredients: Anhydrous Disodium Octaborate
\_\_\_ F.BORA-CARE: Active ingredients: Disodium octaborate tetrahydrate
\_\_\_ G. OTHER:

(3) "State Law requires that you be given the following information: CAUTION-PESTICIDES ARE TOXIC CHEMICALS. Structural Pest Control Companies are registered and regulated by the Structural Pest Control Board, and apply pesticides which are registered and approved for use by the California Department of Pesticide Regulation and the United States Environmental Protection Agency. Registration is granted when the State finds that based on existing scientific evidence there are no appreciable risks if proper use conditions are followed or that the risks are outweighed by the benefits. The degree of risk depends upon the degree of exposure, so exposure should be minimized."

"If within 24 hours following application you experience symptoms similar to common seasonal illness comparable to the flu, contact your physician or poison control center and your pest operator immediately."

For further information, contact any of the following:

- The Buena Vista Company ..... (707)838-6291
Sonoma County Health Department ..... (800)746-8181
Sonoma County Agriculture Commissioner ..... (707)565-2371
Marin County Health Department.....(415)499-6907
Marin County Agricultural Commissioner.....(415)899-8601
National Pesticide Information Center.....(800)858-7378
California Poison Control Center .....(800) 876-4766
Structural Pest Control
1418 Howe Avenue, Ste 18, Sacramento, CA 95825 ..... (800) 737-8188

Persons with respiratory or allergic conditions, or others who may be concerned about their health relative to this chemical treatment, should contact their physician concerning occupancy during and after chemical treatment prior to signing this NOTICE.

NO CHEMICAL APPLICATION WILL BE PERFORMED UNTIL SUCH TIME THAT THIS NOTICE IS RETURNED. HAVING READ THE INSTRUCTIONS, I, THE UNDERSIGNED, WILL ACCEPT RESPONSIBILITY FOR ALL THE AFOREMENTIONED.

OWNER/OCCUPANT \_\_\_\_\_ DATE \_\_\_\_\_

OWNER/OCCUPANT \_\_\_\_\_ DATE \_\_\_\_\_



# THE BUENA VISTA COMPANY

P.O. Box 1001, Windsor, CA 95492

Ph: (707) 838-6291 (707) 838-4637 Fax

## WORK AUTHORIZATION CONTRACT

Address of Property: 33 Sir Francis Drake Blvd, Ross CA 94957

Inspection Date: 10/10/2016

Report #: 983012

Title Co. & Escrow #:

SECTION 1	SECTION 2	FURTHER INSPECTION
1A \$ 200.00	2A By others	1B Incl. 1A 11I \$ 350.00
1F \$ 1650.00	2C By others	1D \$3875.00
1H \$ 4290.00	3C By others	1G Incl. 1D
2B By others	5A By others	1I Incl. 1D
2D No bid	6A By others	1J By others
6G Incl. 1H	6B By others	6C \$ 500.00
9B \$ 425.00	6D By others	6E \$ 375.00
9D By others	9A By others	6F Incl. 1D
10B By others	11A By others	7A \$ 0.00
11B By others	11C By others	7B By others
	11D By others	10A \$ 200.00
	11E By others	10C \$ 200.00
	11F By others	10D By others
		11G By others
		11H By others

We Authorized the Following Section 1 Items to be Performed.

1A, 1F, 1H, 2B, 2D, 6G, 9B, 9D, 10B

11B

We Authorized the Following Section 2 Items to be Performed.

2A, 2C, 3C, 5A, 6A, 6B, 6D, 9A, 11A

11C, 11D, 11E, 11F

We Authorized the Following Items for Further Inspection.

1B, 1D, 1G, 1I, 1J, 6C, 6E, 6F, 7A

7B, 10A, 10C, 10D, 11G, 11H, 11I

Proposed Cost Section 1: \$6,565.00

Proposed Cost Section 2: \$0.00

Proposed Cost Fur.Insp.: \$5,500.00


**Total:** \$12,065.00

**NOTICE TO OWNERS:** Under California Mechanics Lien Law any structural pest control company which contracts to do work for you any contractor, subcontractor, laborer, supplier or other person who helps to improve your property but is not paid for his other work or supplies has a right to enforce a claim against your property. This means that, after a court hearing, your property could be sold by the court officer and the proceeds of the sale used to satisfy the indebtedness. This can happen even if you have paid your structural pest control company in full, if the subcontractor, laborer, or supplier remains unpaid. To preserve their right to file a claim or lien against your property, certain claimants such as contractors or materials suppliers are required to provide you with a document entitled "Preliminary Notice." A Preliminary Notice is not a lien against your property. Its purpose is to notify you of persons who may have a right to file a lien against your property if they are not paid.

I have read this work authorization contract and WDO inspection report it refers to. SIGNED WORK AUTHORIZATION CONTRACT MUST BE RECEIVED BEFORE WORK WILL BE SCHEDULED. I have read and understand the terms of this work authorization contract and hereby agree to all terms thereof. →

APPROVED AND READ BY: \_\_\_\_\_

DATE \_\_\_\_\_

ACCEPTED FOR:  \_\_\_\_\_

DATE \_\_\_\_\_

THE BUENA VISTA COMPANY

---

## WORK AUTHORIZATION CONTRACT

Address of Property: 33 Sir Francis Drake Blvd, Ross CA 94957

Inspection Date: 10/10/2016

Report #: 983012

Title Co. & Escrow #:

---

### CUSTOMER INFORMATION

The total amount of this contract is due and payable upon completion of the work listed above unless otherwise specified. Only the work specified in the contract is being done at this time due to owners wishes. ANY WORK PERFORMED AGAINST AN EXITSTING TITLE ESCROW WILL BE THE FINANCIAL RESPONSIBILITY OF THE PARTY ORDERING THE INSPECTION REPORT, IN THE EVENT OF A CANCELLED TITLE ESCROW.

Work completed (LABOR) by operator shall be guaranteed for a period of one year from completion. Toilet plumbing(parts supplied by this firm), showers, floors or any measures for the control of moisture are guaranteed for (30) days only. Chemical treats are guaranteed for one year. Only the areas treated are guaranteed.

Customer agrees to hold company harmless for any damage which may occur to plant life, wiring, trees, vines, pets, tile roofs, plumbing leaks, or changes beyond control of the company which may occur during the performance of this work. In case of non-payment by owner, reasonable attorney's fees and costs of collection shall be paid by the owner, whether suit be filled or not. A SERVICE CHARGE OF 1-1/2 PERCENT, PER MONTH WILL BE CHARGED ON ALL BALANCES OVER (30) DAYS. THE 1-1/2 PERCENT, PER MONTH, EQUALS 18 PERCENT PER ANNUM ON THE UNPAID BALANCES.

All repairs performed by others must be re-inspected by OUR COMPANY before a CERTIFICATION will be issued. We do not guarantee work completed by others. Any repairs completed by others must be guaranteed in writing and submitted to OUR COMPANY before a CERTIFICATION will be issued. This firm does not make statements concerning workmanship. Workmanship is only determinable by those paying for or receiving those services.

If at the time of repairs to decks, the damage is found to be more extensive, a Supplmental report will be given along with a bid for any other corrections that maybe necessary. Our inspectors are not equipped with 40 ft. ladders therefore all two story building will not be inspected at the eaves unless requested.

**\*\* NOTE \*\*:** Inspection fee is billed separately above any work costs.

**MOLD DISCLAIMER:** There may be health related issues associated with the structural repairs reflected in the inspection report referenced by this Work Authorization Contract. These health issues include but are not limited to the possible release of mold spores during the course of repairs. We are not qualified to and do not render any opinion concerning such health issues or any special precautions. Any questions concerning health issues or any special precautions to be taken prior to or during the course of such repairs should be directed to a Certified Industrial Hygienist before any such repairs are undertaken.

BY EXECUTING THIS WORK AUTHORIZATION CONTRACT, CUSTOMER ACKNOWLEDGES THAT HE OR SHE HAS BEEN ADVISED OF THE FOREGOING AND HAS HAD THE OPPORTUNITY TO CONSULT WITH A QUALIFIED PROFESSIONAL.

\_\_\_\_\_  
Customer's Initials

\_\_\_\_\_  
Date

## **APPENDIX D**

### **NorBay Environmental Assessment Report dated 10/15/2016**

## *NorBay Consulting*

---

**LOGICAL**

**ENVIRONMENTAL**

**SOLUTIONS**

---

*(415) 507-9786 Phone  
(415) 507-9760 Fax*

*2400 Las Gallinas Avenue, Suite 110  
San Rafael, California 94903*

October 15, 2016

Mr. Del Nordby  
Construction & Development Solutions, Inc.  
511 Humboldt Street  
Santa Rosa, CA 95404

**SUBJECT: ENVIRONMENTAL ASSESSMENT REPORT  
ROSS TOWN HALL COMPLEX  
ROSS, CALIFORNIA**

Dear Mr. Nordby:

NorBay Consulting was contracted by Construction and Development Solutions, Inc., to conduct an environmental assessment at the above referenced complex. NorBay Consulting's scope of services included the visual inspection of the Police and Fire Wings for suspect asbestos containing materials, components/fixtures coated with lead based paint or glazing and microbial issues. The assessment was conducted on October 11, 2016.

### **FINDINGS**

#### **Suspect Asbestos Containing Materials**

The following suspect asbestos containing materials were identified during our walkthrough and should be sampled for asbestos prior to any activities taking place that would disturb them.

- Roofing felt under the cement-like roofing tiles on all the wings;
- Tar and gravel roofing on the flat portion of the fire wing;
- Exterior stucco on all the wings;
- Exterior window putty on all the wings;
- Drywall/taping mud, plaster and 12" vinyl floor tile/mastic in the old and new Apparatus Bays;
- Non-textured and textured drywall/taping mud, plaster, sheet vinyl flooring and vinyl floor tile/mastic in the fire wing,
- Non-textured and textured drywall/taping mud, plaster and sheet vinyl flooring in the police wing.

Since the assessment was only visual other suspect asbestos containing materials may exist which were not observed. These materials could include flooring materials under carpet and under new flooring applications and insulation behind walls and above ceilings.

Environmental Assessment Report  
Ross Town Hall Complex  
Ross, California

### **Suspect Lead Based Paint and Glazing**

Based on the age of the various wings (pre-1978) it can be assumed that lead based paint and/or glazing is present on building components and fixtures, both interior and exterior.

NorBay Consulting recommends that a lead inspection be conducted in the various wings prior to any activities taking place that would disturb the painted or coated components/fixtures.

### **Microbial Growth**

Microbial growth was observed in various locations in the fire wing. The areas in which microbial growth was observed did not appear to be occupied so it does not appear to be a major concern at this time.

NorBay Consulting recommends that the microbial growth be remediated either as a separate item or possible in conjunction with other remediation activities.

We appreciate the opportunity to assist you with this environmental assessment. If you have any questions regarding this report or if you require additional information please do not hesitate to contact me at (415) 507-9786

Sincerely,  
NORBAY CONSULTING

*Bob Gerhold*

Bob Gerhold  
Director, Environmental Services  
Certified Asbestos Consultant #92-0157  
CDPH Lead Inspector/Assessor #2108

**APPENDIX E**

**Brokaw Design Electrical, Telephone, Lighting, Data & Fire safety dated  
10/24/2016**

# BrokawDesign

CCR Registered; DUNS Registered; LEED Accredited Professionals

October 24, 2016

Mr. Del Nordby  
**Construction and Development Solutions, Inc.**  
511 Humboldt Street  
Santa Rosa, CA 95404

**RE: Ross Valley Fire Department Station 18  
33 Sir Francis Drake Boulevard**

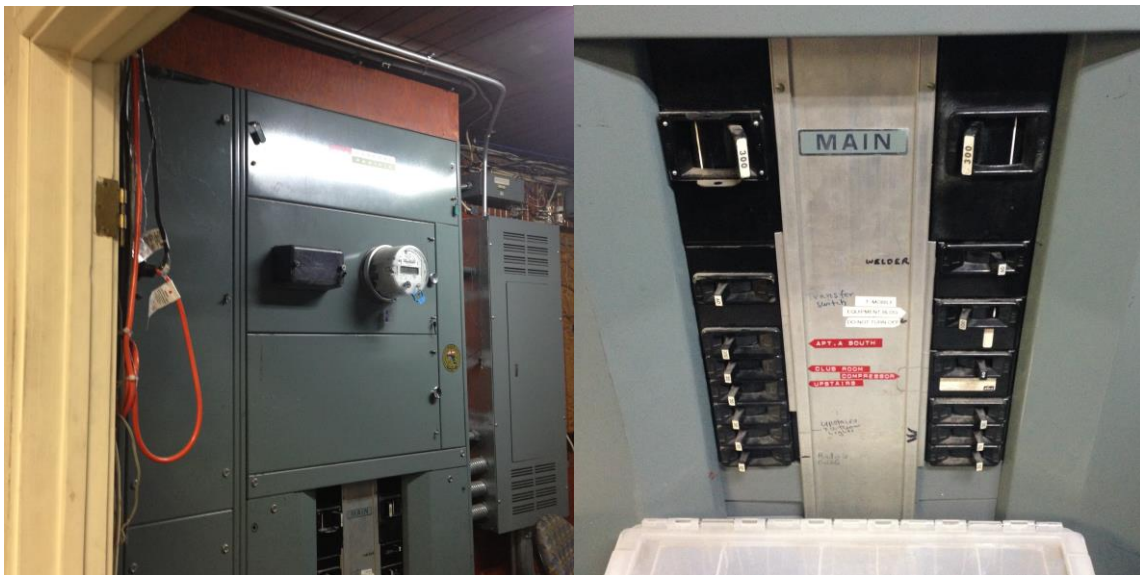
## INTRODUCTION

This study was commissioned to address the existing condition of the electrical service, distribution, lighting and fire life safety systems of the existing facilities. This report notes the existing condition of the building services and the ability to meet the needs of continued use of the facility for the foreseeable future.

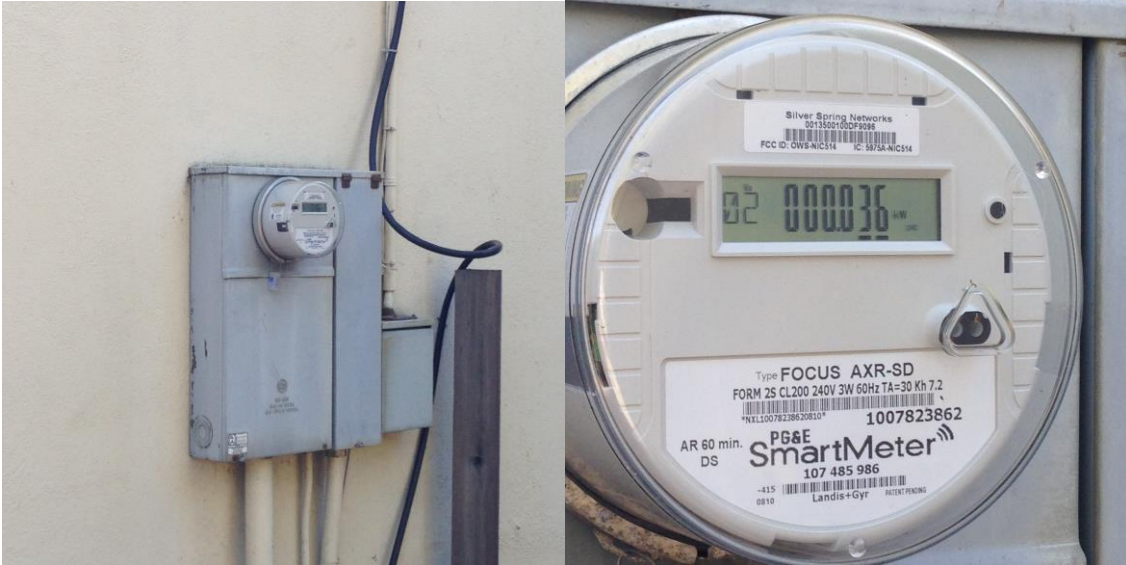
## EXISTING CONDITIONS

### 1. Electrical Power Service

- a. The building electrical main service is provided by PG&E and feeds a 400-ampere main switchboard with a service voltage of 120/240V, single-phase. The switchboard is located in the main electrical room of the Fire Station portion of the building. The main circuit breaker is rated at 300 amperes and there is a secondary main circuit breaker rated at 300 amperes for the emergency generator feed. The switchboard is manufactured by Federal Pacific. Although vintage, the board showed no noticeable deficiencies. The utility service meter is #1003173037.



- b. A small 120/240V, single-phase exterior service is fed underground and is located on the backside of Apartment A. The service was originally fed overhead and the former service conductors are cut at the weather-head. The service has a Smart Meter #1007823862. It is unclear as to what this service feeds, but might feed the panels in the apartments.



- c. Another small 120/240V, single-phase exterior service is fed overhead and is located on the backside of the portable unit near Apartment B. The service meter is #10036550302.





## **2. Electrical Distribution**

- a. Electrical distribution is accomplished at 120/240V, single-phase to surface or flush mounted panelboards throughout the facility. The panels are varying in age depending on location.
- b. Distribution feeders are either run surface mounted in conduit or concealed in walls. No apparent deficiencies to the power distribution feeders were observed at the time of inspection. It is unknown if there have been any deficiencies or reasons for repair in the past.

## **3. Telephone Service and Distribution**

- a. The telephone service is fed to the main electric room of the Fire Station portion of the building in the same room as the electric main switchboard. It is unknown if the existing telephone service is adequate for the facility.

## **4. Lighting Systems**

- a. Interior Lighting Fixtures – Interior lighting fixtures are a mix of fluorescent and incandescent. There are surface and recessed mounted fixtures as well as some track lighting. A few rooms have ceiling fans with light kits that contain screw-in fluorescent lamps. Most light fixtures have reached the end of their useful life and should be replaced.
- b. Interior Lighting Controls – Interior lighting controls are line voltage toggle switches and generally multi-level switching is not provided.
- c. Exterior Lighting Fixtures – Exterior lighting is accomplished with building mounted fixtures. There is a variety of different fixtures and lamp sources including incandescent, fluorescent and HID. There are not pole standards for the parking lot or site fixtures at the entry sidewalks. Incandescent and HID flood lights have been added in some locations in attempt to improve exterior lighting.
- d. Emergency Lighting – Emergency lighting is achieved by emergency generator.
- e. Exit Signage – Exit signs are scarce within the building.

## **5. Fire Alarm System**

- a. There is no central fire alarm system in the facility. There are only single-station smoke detectors in some locations.

## **6. Electrical Branch Circuit Wiring**

- a. The branch circuits are a mix of concealed and surface mounted boxes/conduit. Surface raceway (Wiremold) is also being utilized. The branch circuits are of varying ages and have been added to over time. In the Apartments, some branch circuitry is in a state of disrepair and some exposed Romex was noted. In the main electric room, exposed Romex is noted near and above the switchboard. Some branch circuits in the facility have been disabled/cut and it is not known if the serving overcurrent protection devices have been shut-off. The exposed Romex wiring and cut-off branch circuits are a safety concern.



## 7. Emergency Generator

- a. There is an emergency generator at the rear of the building as Manufactured by Generac. The unit is rated 100kW and has a 300-ampere circuit breaker. The unit appears to be in good shape.

## 8. Data Systems

- a. The server is located in the main electric room. It is unknown if the existing system and cabling is adequate for the facility. It is unknown if there are wireless access points located in the facility.

## RECOMMENDATIONS

The following recommendations are offered presuming that the facility will be renovated in order to serve future needs:

### 1. Electrical Power Service

- a. Even though the main electrical service equipment appears to be functional and without noted deficiencies, it should be replaced with new equipment as parts for this equipment will be increasingly harder to find over time. Accordingly, replacement parts will be increasingly more expensive as their availability diminishes. It is also recommended to replace the main switchboard in order to remove the two other smaller services on site.
- b. In the event of electric service equipment replacement, coordination with PG&E will be required and the service entrance would need to be upgraded to the current utility company standards.

### 2. Electrical Distribution

- a. It is recommended to replace old panelboards with new panelboards and new feeders. Branch circuitry of these replaced panels will need to comply with the latest Title 24 standards for circuit disaggregation.
- b. Newer panelboards in the facility might be left as-is or reused. If the main switchboard is replaced, re-work of the existing feeders to panels that remain will be required.

### **3. Telephone Service and Distribution**

- a. If additional telephone lines are required by the facility, it is recommended to coordinate with the serving utility.
- b. It is recommended that a dedicated room for telephone and data services is provided.

### **4. Lighting Systems**

- a. It is recommended to replace the existing interior lighting fixtures. New light fixtures should have energy efficient lamping, multi-level controls and shut-off that meet current energy codes.
- b. It is recommended to provide new interior lighting controls and daylight controls that will meet current energy codes.
- c. It is not recommended to improve exterior building lighting and parking lot lighting in order to provide a safe environment at night.
- d. It is recommended to provide exit signs to clearly indicate exit paths.

### **5. Fire Alarm System/Sprinkler Monitoring**

- a. It is recommended to provide a fire alarm and notification system throughout the facility.

### **6. Electrical Branch Circuit Wiring**

- a. It is highly recommended to disconnect and remove existing branch circuitry and provide new branch circuitry in most the facility.
- b. Any open boxes with exposed wiring should have cover plates installed.
- c. Replace all outlets within 6'-0" of sinks or water supplies with GFCI type outlets.
- d. Disconnect and remove any temporary wiring or extension cords found on site.
- e. Provide new electrical devices, switches and cover plates.

### **7. Emergency Generator**

- a. It is recommended to have the emergency generator serviced and tested to ensure continued use.

### **8. Data Systems**

- a. It is recommended to provide a new dedicated and secured server room with adequate clearances, ventilation and power circuits.
- b. It is recommended that the server room be fed from a different panel than that which serves other spaces.
- c. A new ground bar with dedicated ground wire tied to the electrical service equipment should be provided in the new server room. All racks and ladder trays should be grounded to the ground bar.

- d. With the increasing bandwidth required by the latest IT equipment, building station cabling should be upgraded to minimum Category 6 UTP. Cable. Distances from patch panels to data outlet should not exceed 295 feet and should not be allowed in the proximity of power cables. Each station cable should be “home run” (no splices or cross connection points) between jacks and patch panels. The Building voice and data system should be installed to meet EIA/TIA Standards. All openings or raceway transitions through firewalls and floors should utilize UL listed fire-rated penetrations. After installation, all new cabling should be tested to ensure that it achieves the manufacturer’s rated transmission rates.

**9. Distribution Studies**

- a. It is recommended that the existing Ampere Interrupting Current (AIC) rating of the system be verified with the Utility Company. New equipment should be designed to accommodate the AIC values given by the Utility Company.
- b. An AIC coordination study of all protective devices should be performed for all existing and new circuit breakers on the facility.

Please do not hesitate to contact us with any questions.

Regards,



Michael Mindeman,  
BrokawDesign

## APPENDIX F

**15000 Inc., Heating, Ventilating and Air Conditioning Systems dated 11/15/2016**

November 15, 2016

**Del Nordby, LEED AP**  
CDS, Inc.

Re: Ross Police and Fire Station.

Del,

The following is an assessment of the current conditions at Ross Fire Station regarding the mechanical and plumbing systems.

### **Heating, Ventilating and Air Conditioning (HVAC) Systems**

---

- The existing HVAC system within the fire/police offices and residential spaces are gas fired forced air furnaces. Currently there are three zones throughout the firehouse. One zone for the ground floor office spaces and two zones for the second floor residential spaces. The equipment is approximately 25 to 30 years old.
- There are small ceiling mounted exhaust fans throughout the restrooms and are interlocked with the light switches. The equipment is approximately 25 to 30 years old.
- The kitchen is provided with a stainless steel hood over the existing gas-fired range. Currently the hood does not extend 6" past the front edge or sides of the range as recommended by engineering best practices (figure 1). The age of the hood could not be determined.
- Existing HVAC controls are a combination of thermostats ranging from programmable thermostats to mercury thermostats (figure 2). The HVAC controls are antiquated and do not meet current Title 24 requirements.
- The existing HVAC system within the apparatus bay includes a gas-fired unit heater for general heat and vehicle exhaust. Both systems are approximately ten years old and are in good working order.
- As it currently exists, there is a dehumidification unit located in the hallway of the residential portion of the building on the second floor. The unit is currently ducted out through a permanently open unit that is not sealed properly (figure 3).
- The data/server room is not provided with any cooling. Temperature was noticeably warmer within the room as compared to adjacent spaces.
- The observable sections of the HVAC air distribution was noticed to be pre-insulated flexible ductwork.

## Plumbing Systems

---

- The existing sanitary sewer and vent piping was observed as cast iron with heavy duty couplings.
- The existing domestic water systems was observed as soldered copper system. Locations that were observable demonstrated corrosion (figure 4).
- The air compressor and associated storage tanks were noted as being approximately 30 to 40 years in age.
- Natural gas system is delivered to the building through a single gas meter/regulator assembly on the east side of the building and has been retrofitted for a PG&E smart meter.
- The doors at the apparatus bay is provided with a trench drain and catch basin. No oil/grease/sand interceptor was noticed during our evaluation.
- All bathrooms throughout the building were noted as not being ADA compliant. This applies to the water closets, lavatories and showers.
- Site domestic water assembly was noted as corroded and included several unnecessary valves. In addition, the assembly is located exposed in the drive area without vehicle damage protection.

## Recommendations

---

- The existing HVAC systems are at the end of their life expectancy and should be replaced with new high efficient gas fired equipment.
- The exhaust fans within the bathrooms are at the end of their life expectancy and should be replaced. New fans should be provided with humidistats per current CalGreen requirements where showers are present.
- Although current code does not require a fire station kitchen hood to be permitted through local environmental health departments, the hood should be replaced with a Type I stainless steel hood that extends 6" over all sides of the range.
- Existing HVAC controls should be replaced with current Title 24 code compliant programmable thermostats.
- New HVAC units shall be provided with a dehumidification accessory to maintain 40-60% relative humidity.
- Data/Server room should be provided with stand-alone split-system cooling coil to maintain proper temperatures within the room (65-75 degree Fahrenheit).
- Ductwork throughout the space should be evaluated and leak tested. Where possible, flexible ductwork shall be replaced with spiral ductwork.
- Portions of the domestic water system where there is corrosion (including water heater) shall be replaced in its entirety.
- Air compressor and storage tank should be replaced with modern and higher efficient equipment.
- Bathrooms shall be remodeled in their entirety to comply with the Americans with Disabilities Act.
- Domestic water entrance should be protected from possible vehicle damage and replaced with modern valves and pressure regulator.



Figure 1.



Figure 2.





Figure 3.

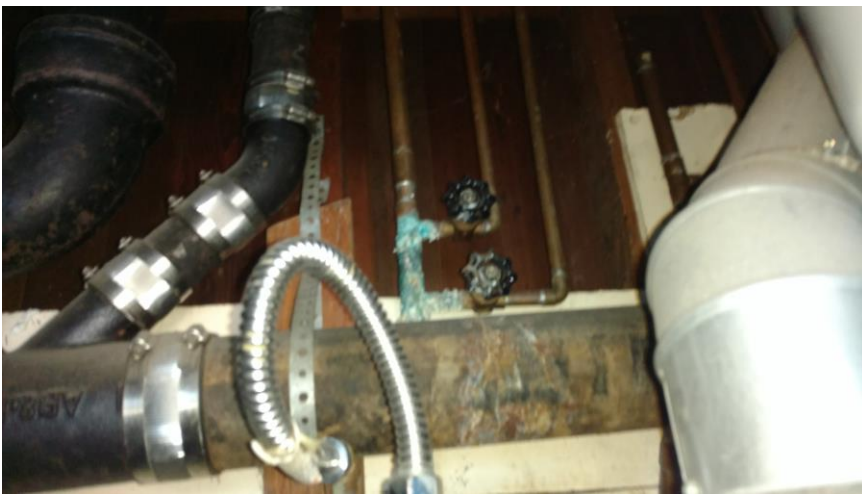


Figure 4.

If you should have any questions, please do not hesitate to call.

Sincerely,

Jay Takacs LEED AP, Principal

## APPENDIX G

Archlogix, Property Condition Assessment Report dated 11/12/2016



**November 12, 2016**

**Town of Ross Public Safety Building  
PROPERTY CONDITION ASSESSMENT REPORT**

**Property Identification**

Town of Ross Public Safety Building  
33 Sir Francis Drake Blvd.  
Ross, CA 94957-0320

**Prepared for:**

Del Nordby  
Construction and Development Solutions, Inc.  
Santa Rosa, CA 95404

**Prepared By:**

ArchiLOGIX  
Contact: Mitchell S. Conner, AIA, NCARB  
50 Santa Rosa Avenue, Suite 400  
Santa Rosa, California 95404

## INTRODUCTION

ArchiLOGIX had recommended to the Town of Ross that a facilities assessment be completed on the police and fire station building. The range of topics included the following:

- Essential services facility structural analysis (seismic) and flexibility of existing exterior and interior demising walls framing for possible reconfiguration opportunities
- ADA and CBC Chapter 11 compliance for existing building and adjacent site improvements
- Fire Protection system
- Exiting analysis
- Condition and capacity of building systems (electrical, mechanical, ventilation and plumbing) for creature comfort and/or reconfiguration as well as compliance with Title 24 and Cal-Green (if applicable)
- Environmental assessment (mold and asbestos, etc.)
- Waterproof integrity and water damage due to previous flooding
- Condition of all windows and doors
- General condition of building

The context of the Property Condition Assessment was to determine whether we can create another 30 to 50 years of functional life from this historical public safety building and to have the building operate under extreme conditions for at least 72 hours as expected for an essential service facility.

### ArchiLOGIX Scope or Work for the PCA report includes

1. Existing site conditions and relationship to circulation patterns and natural features;
2. General condition of exterior and interior of the existing public safety building;
3. Status of life safety exiting
4. Status of ADA / CBC Chapter 11 accessibility compliance.
5. Review as-built documents and the “Historical Resource Evaluation” for the public safety building as needed to complete our report
6. Provide one site/building visit.

### #1 / Existing Site Conditions

As noted in the historical resource evaluation the location of the public safety building reflects the evolution of the Town of Ross and its obligation to the community to provide public services including police and fire protection. Through the consolidation of the fire service component with nearby fire departments the daily operation of this facility resulted in a decrease in fire and emergency medical calls as we understand it.

The location of this building and its day in and day out operation reflects several challenges that may be difficult to address but worth noting.

Proximity to the existing creek highlights the fact that the 1995 apparatus bay addition sits in the 25-foot creek setback. It’s our understanding that from time to time when substantial rain events occur the

apparatus bays have been flooded and not able to be used for their intended use. If we were locating / designing a public safety facility like this today, we would establish the finish floor elevation above flood level especially given the fact that this is an essential service facility and must operate under emergency conditions for 72 hours.

Vehicular and pedestrian on-site circulation present a potential safety challenge. Fire stations require a clear and unimpeded path of travel for apparatus and support vehicles to and from the site. Categorically the type of vehicles used by Town staff or the public to and from the civic center campus present possible circulation and parking conflicts as well as safety concerns for pedestrian's visiting the various buildings. If the existing police and fire use remain in this building a wayfinding system of exterior signs, pavement markings and possible warning signals (flashing lights) along with strategically place decorative/security lighting should be considered to assist with on-site circulation.

## **#2 / Assessment of exterior building conditions**

Based on our visual survey of the existing exterior conditions of this historical facility, a refurbishing / replacement plan should be prepared to address the deterioration of exterior finishes (cement plaster), various flashing and caulking details, repair and/or replacement of windows and doors and repair of the tile roof. The façade facing Sir Francis Drake Boulevard should be handled with care to maintain the exact architectural features from the original building.

## **#3 / Status of life safety exiting**

An interior exiting plan should be prepared and posted based on the existing room layouts for both police and fire. The exiting plan for the fire station side of the existing building is more difficult to prepare because several rooms are not being occupied by staff and basically serve as storage or fitness rooms. Circulation through all circulation hallways are not fully compliant including connection to the modular building.

If the interior of the existing building is remodeled or reconfigured to meet the demands of an up-to-date police and fire station, exiting for all staff including all other city departments that visit the building will need to be identified; the fire station side of the building will need to be worked out such that unimpeded access for fire department personnel to apparatus is always maintained. Public access is a question / issue that the Town must establish a policy that defines the extent of the public's interface with the entire public safety building.

## **#4 / Status of ADA / CBC Chapter 11 accessibility compliance**

Public safety buildings have a challenge when it comes to disabled accessibility to comply with CBC Chapter 11 as well as ADA. The Town must determine the extent of public access as noted in Item #3 and then to what extent the police and fire stations are available to individuals with disabilities. The fire station side of the building has added challenges because fire apparatus and other emergency equipment need to be accessed without interference from the public including a disabled person. Accessibility and safety are important considerations that must coexist.

We would recommend completing a CASP review of the existing police and fire station building. A transition plan should be prepared that memorializes the Town's adopted approach to making interior and exterior building improvements that comply with the applicable accessibility codes and laws. If the public safety use remains the CASP review can guide future building and site design decisions whether it's a remodel, or reconfiguration scope of work for the existing building. Our general impression of the existing interior of the police and fire station layout for accessibility is that they are significantly out of compliance. The Town must determine an acceptable level of access for public and staff with disabilities and prepare

an implementation plan for related remodeled or reconfigured improvements. If the Town requires the entire police and fire station building must be entirely accessible meeting CBC Chapter 11 and ADA, then it is likely a significant demolition and reconstruction approach should be prepared.

Accessibility for the exterior of the building must be clearly defined and a compliant path-of-travel identified and implemented. This could require replacing existing ramps and parking locations. As part of the CASP review existing exterior accessibility should be defined and a scope of work that the Town can adopt as part of their transition plan memorialized. The challenge with the existing civic center site layout is the conflicting uses as noted above and the added challenge of accessible circulation to and from the existing admin and public safety buildings that must be resolved through new site improvements and/or a combination of wayfinding signage to clearly direct someone as to a safe and compliant path-of travel.

#### **#5 / Review as-built documents and the “Historical Resource Evaluation” for the public safety building**

As-built drawings and photos were reviewed along with several visits to the building (Archilogix scope Item #6). The “Historic Resource Evaluation” completed by “Ver Planck Historic Preservation Consulting” (September 2016) was reviewed as well. Besides the evolution of the initial building design and subsequent modifications, the report describes an approach to exterior improvements whereby the Sir Francis Drake Boulevard building elevation must be maintained with no deviations from the original design other than maintenance considerations. Beyond the street elevation the building exterior could be slightly modified because of refurbishing the exterior finishes, replacing windows and doors and/or possibly adding new windows and doors as well as exterior changes that reflect a remodeled or reconfigured interior layout.

In the conclusion of the Historic Resource Evaluation, the following statement helps determine the extent of future interior improvements:

*“Except for the original vehicle bays at the front of the firehouse and the stair leading to the second floor, the interior of the Ross Public Safety Building retains nothing of architectural or historical value”.*

All exterior and interior improvements will need to be reviewed in detail as it relates to the historical listing of this building on the California Register.

## APPENDIX H

VerPlanck Historic Resource Evaluation Draft dated 09/10/2016



# HISTORIC RESOURCE EVALUATION

## Town of Ross Public Safety Building

33 Sir Francis Drake Boulevard

Ross, California

**DRAFT**



September 10, 2016

Prepared by

**Ver** **Planck**  
HISTORIC PRESERVATION CONSULTING

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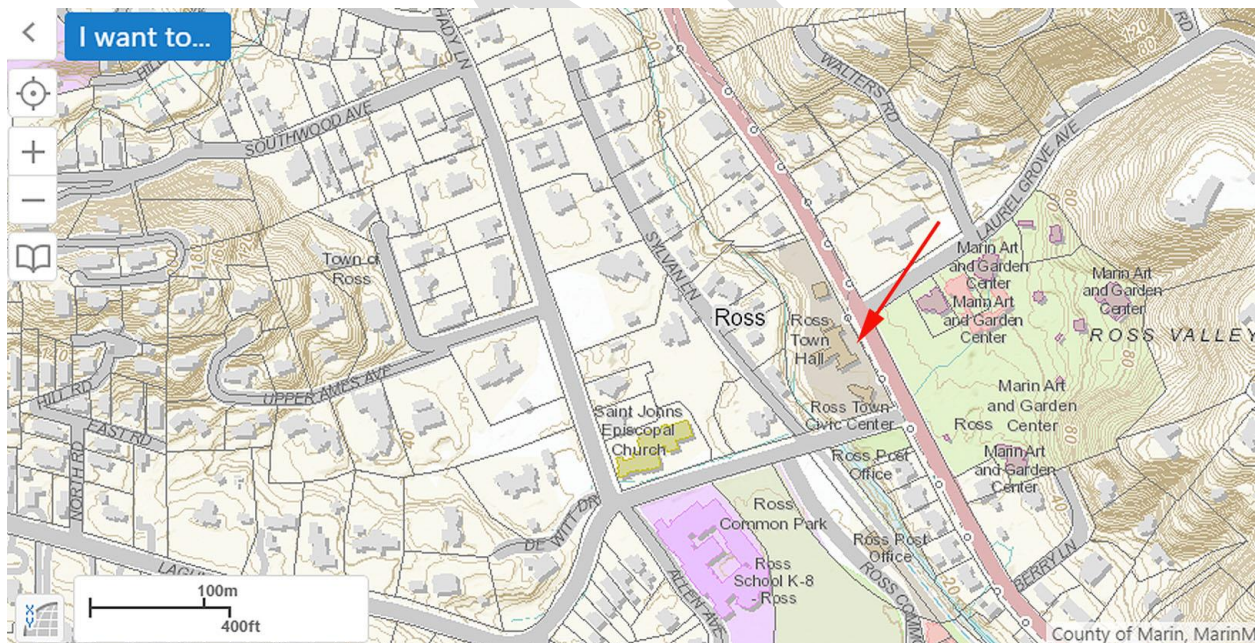
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DRAFT

## I. Introduction

VerPlanck Historic Preservation Consulting prepared this Historic Resource Evaluation (HRE) for the Ross Public Safety Building. This HRE describes the property, summarizes its history, and analyzes it for eligibility for listing in the California Register of Historical Resources (California Register). The building, which occupies a portion of Assessor Parcel 073-191-16 (**Figure 1**), is part of the Ross Civic Center, which also includes Ross Town Hall at 31 Sir Francis Drake Boulevard, and the Corporation Yard at 35 Sir Francis Drake Boulevard. Designed by architect John White in the Spanish Colonial Revival style, the Ross Public Safety Building includes the firehouse proper and two former residential wings, including the south wing, which presently houses the Ross Police Department, and the vacant north wing. F. R. Siegrist Co. constructed the building in 1927-28. In 1995, the Town of Ross constructed a large addition at the rear of the firehouse. This addition, also designed in the Spanish Colonial Revival style, is compatible with the firehouse. This HRE concludes that Ross Public Safety Building is eligible for listing in the California Register under Criterion 1 (Events), for its association with the development of the Ross Civic Center in the late 1920s. It is also eligible under Criterion 3 (Design/Construction) as an excellent example of a civic building designed in the Spanish Colonial Revival style. It is also the work of a master architect, John White. White was an early associate of Bernard Maybeck, as well as a prominent society architect in his own right, who designed many important buildings in Ross and other affluent Bay Area enclaves during the early twentieth century. The Ross Civic Center is the best remaining example of a civic project by the architect, who also designed public buildings in Atherton, Hillsborough, and Burlingame.



**Figure 1. Map showing location of the Ross Public Safety Building.**  
Source: MarinMap; annotated by Christopher VerPlanck

## II. Methods

This HRE provides a description, historical context, and an evaluation of the Ross Public Safety Building. Christopher VerPlanck, the author of this report, visited the site on August 19, 2016 to photograph and survey the building and the adjoining Ross Civic Center. VerPlanck researched the property in local archives and government offices, including the Marin County Recorder's Office, the Town of Ross Planning and Building Department, the Ross Historical Society, and the Environmental Design Archives at UC Berkeley. For general contextual history on Ross, we consulted the Ross Historical Society's publication, *Ross, California: The People, the Places, the History* (2008), as well as general histories of Marin County. Unless otherwise noted, all photographs in this report were taken by Christopher VerPlanck on August 19, 2016.

## III. Regulatory Framework

VerPlanck Historic Preservation Consulting searched federal, state, and local records to determine if the Ross Public Safety Building had been previously identified in any survey or official register of historic resources. We started by consulting the National Park Service's National Register Information System (NRIS) and the California Office of Historic Preservation's California Historical Resource Information System (CHRIS). We also consulted the Junior League of San Francisco's 1968 publication, *Here Today*, which includes Marin County, including a section on Ross and San Anselmo. The Ross Public Safety Building is listed in the CHRIS Historic Property Data File for Marin County. It is assigned a Status Code of 2S2, meaning that it is individually eligible for listing in the National Register as part of the Section 106 process conducted by JRP Historical Consulting when the Town of Ross replaced the Lagunitas Road Bridge in 2009. The bridge is located near the intersection of Lagunitas Road and Sir Francis Drake Boulevard, and the adjoining Ross Civic Center was part of the project's Area of Potential Effect (APE) (Figure 2). As a consequence of this finding, the Ross Public Safety Building is individually listed in the California Register, meaning that it is already considered to be a "historical resource" under the California Environmental Quality Act (CEQA).<sup>1</sup>

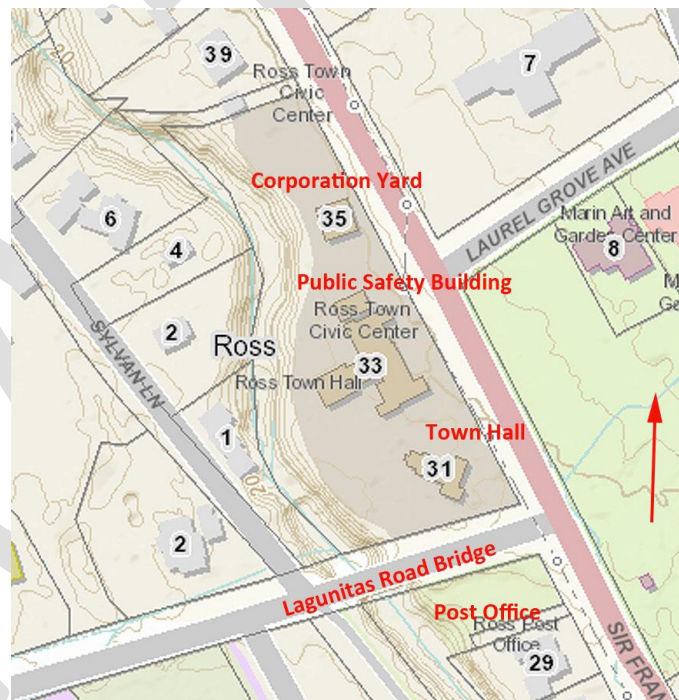


Figure 2. Map showing location of Ross Civic Center in relationship to the Lagunitas Road Bridge.

Source: MarinMap; annotated by Christopher VerPlanck

<sup>1</sup> California Office of Historic Preservation, *Historic Property Data File for Marin County – Ross*. The only other building in Ross in the directory is the Phoenix Lake Log Cabin. The other six properties are bridges.

## IV. Property Description

### A. Context

The Ross Public Safety Building is located in the Ross Civic Center, a 2.33-acre property bounded by Sir Francis Drake Boulevard to the east, Lagunitas Road to the south, Corte Madera Creek to the west, and a single-family property at 4 Skyhaven Lane to the north. The Ross Civic Center is located near the center of the town. Other nearby public/civic uses include the Marin Art and Garden Center at 8-10 Laurel Grove Avenue, the Ross Post Office at 1 Ross Common, and the Ross School at 9 Lagunitas Road. The Ross School and the Ross Post Office bookend Ross Common, which is just south of the Civic Center. Ross Common is an approximately four-acre public park located between Ross's compact commercial district and the Civic Center. Ross Post Office is a ca. 1995 reconstruction of the former Ross Station, a depot that once served the Northwestern Pacific Railroad, an interurban line that connected the Ross Valley to Corte Madera, Mill Valley, and Sausalito. Although it is not officially part of the Ross Civic Center, in terms of its Spanish Colonial Revival styling, the Ross Post Office closely resembles Ross Town Hall and the Ross Public Safety Building (**Figure 3**).



Figure 3. Ross Post Office; view toward northeast

### B. Site

The Ross Civic Center site is generally level, though it slopes gently downhill toward the west as it approaches Corte Madera Creek. The landscaped parts of the site are concentrated around the Town Hall at the intersection of Lagunitas Road and Sir Francis Drake Boulevard. The southeast corner of the Civic Center has some formal landscaping, including hedges and foundation plantings. There is also a strip of landscaping in front of the Ross Public Safety Building along Sir Francis Drake Boulevard. The Civic Center property also has several dozen large redwoods, which either may have been planted or seeded themselves from a larger stand along Corte Madera Creek (**Figure 4**). The parts of the Civic Center property not occupied by buildings or landscaping are primarily asphalt-paved parking lots and staging areas.

Ross Town Hall, at 31 Sir Francis Drake Boulevard, is a one-story, wood-frame office/assembly building designed in the Spanish Colonial Revival style (**Figure 5**). The building, which contains several offices, an auditorium, toilet rooms, and storage, is complementary to the nearby Public Safety Building, sharing the same stucco exterior finishes, terra cotta tile roofing, and monumental arched openings. Located in front of Ross Town Hall is an abstract stone sculpture of a bear executed by Beniamino Bufano, a well-known Bay Area artist active during the middle of the twentieth century. Jerome and Peggy Flax donated the bear to the Town in 1971.<sup>2</sup> The "Ross Bear" is a well-known landmark and it has been adopted as the Town's symbol (**Figure 6**).

<sup>2</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, The Places, The History* (Ross Historical Society: 2008), 158.



Figure 4. Overall view of the Ross Civic Center; looking northwest from the intersection of Lagunitas Road and Sir Francis Drake Boulevard.



Figure 5. Ross Town Hall; looking northwest.  
Source: Kelley Eling



Figure 6. Bear sculpture by Beniamino Bufano.

Parking lots flank the Ross Public Safety Building on all sides. Located in the parking lot on the north side of the building is a modular building that was moved to the site in 2006 by the Town to provide living quarters for on-duty Ross firefighters (**Figure 7**). Beyond the modular building to the north is an asphalt-paved driveway that leads to the northernmost part of the Civic Center property, which contains the Corporation Yard. The Corporation Yard consists of a two-story, wood-frame workshop/garage building built or enlarged ca. 2000 (**Figure 8**).



Figure 9. Modular building north of the Ross Public Safety Building; view toward west.



Figure 10. Ross Corporation Yard; view toward north.

### C. Exterior Description

The Ross Public Safety Building is a two-story, wood-frame firehouse with two one-story wings flanking it to either side (**Figure 11**). Designed in the Spanish Colonial Revival style, the two-story section houses the Ross Fire Department and the Ross Valley Paramedic Authority. The one-story wing to the south houses the Ross Police Department. A nearly identical one-story wing to the north is another former dwelling that is presently unoccupied. At the rear of the two-story firehouse is a ca. 1995 addition containing three large vehicle bays at the first floor level and residential quarters upstairs. The entire building is finished in stucco and the combination hip and gable roof is clad in terra cotta roofing tiles. The windows are mostly multi-light wood casements. Built nearly a century ago, the Ross Public Safety Building has been unevenly maintained, with sections of the building – particularly the north wing – in poor condition. In the sections below, we describe the exterior of the Ross Public Safety Building in its constituent sections, beginning with the south wing.



Figure 11. East façade of the Ross Public Safety Building; south wing at left, firehouse at center, and north wing at right.

### South Wing

The south wing of the Ross Public Safety Building, which is to the left of the firehouse when facing the building from Sir Francis Drake Boulevard, was designed as a dwelling. Originally, it housed the Fire Chief; since 1982, it has housed the Ross Police Department. Its primary façade, which faces east, is a one-story, gable-roofed pavilion finished in stucco and punctuated by a tripartite window containing three six-light, wood casement sashes (**Figure 12**). The gable is outlined in terra cotta roof tiles and there is no ornament except for a pair of *canales*, or decorative drain spouts, at the apex of the gable. Its north façade, which is where the primary entrance is located, is detailed similarly to the primary façade and articulated by a pair of wood casement windows and a single-panel wood door. A concrete wheelchair ramp extends the length of this elevation from the parking lot to the main entrance. The main entrance is sheltered beneath a broad shed roofed porch clad in terra cotta tiles. The porch shelters a windowless, one-story hyphen that links the south wing to the firehouse. A door provides access to the dispatch room. The south façade is articulated by five pairs of multi-light wood casement sash windows (**Figure 13**). The roof of the south wing is gabled, except for the westernmost bay, which is an addition capped by a flat roof. The west façade of the south wing is L-shaped and articulated by four six-light, wood casement windows (**Figures 14 – 15**).



Figure 12. North and east façades of south wing.



Figure 13. South façade of south wing.



Figure 14. West façade of south wing.



Figure 15. South and west façades of south wing.



### Firehouse

The central portion of the Ross Public Safety Building has always been the home of the Ross Fire Department, and in recent years, the Ross Valley Paramedics. It is a two-story, wood-frame building capped by a two-part gable roof. The primary façade faces east toward Sir Francis Drake Boulevard. It is massed as a gable-roofed pavilion flanked by a lower, one-story section to the left and a higher, gable-roofed tower to the right (**Figure 16**). The one-story contains one six-light, wood casement window. The tower, which contains the fire alarm mechanism, is articulated by an arched opening infilled louvers. Telecommunication equipment is mounted to the back wall. The central section contains a pair of arched vehicular entrances. The openings, which are recessed within an open-air vestibule, contain large, multi-light roll-up doors with fixed semi-circular transoms above. The area above the arches features a bronze American eagle crest, metal signage reading: “ROSS FIRE DEPT,” and a lantern.

The south façade of the firehouse comprises the original 1927-28 building to the right and the ca. 1995 addition to the left (**Figure 17**). The 1927-28 section is finished in stucco and has no ornament aside from a recessed arch above one of the pedestrian entrances. The south façade is two-stories high and articulated by a mixture of single, paired, and tripartite wood casement windows. The ca. 1995 addition at the rear is also two stories, consisting of three vehicular bays at the first floor level and a pair of tripartite wood windows at the second floor level. The roof steps up several feet from the 1927-28 building to provide additional headroom in the addition, which is slightly higher than the original building, but otherwise detailed almost exactly like it.



Figure 16. East façade of firehouse.



Figure 17. South façade of firehouse.

The west façade of the 1927-28 firehouse is concealed behind the ca. 1995 addition. The west wall of the addition is windowless and partly concealed behind a one-story storage enclosure and exposed equipment and pipes (Figure 18). The north façade of the firehouse is largely identical to the south façade, though “flipped” (Figures 19 – 20). The north façade of the 1927-28 building faces an asphalt-paved courtyard enclosed by a stucco wall. A wood stair leads from the courtyard to the second floor level. Fenestration consists of single, paired, and tripartite wood casement windows. The pedestrian entrances both contain modern replacement doors. The north façade of the ca. 1995 addition is the same as the south façade except that it contains only two vehicular bay.



Figure 18. West façade of firehouse.



Figure 19. North façade of firehouse addition.



Figure 20. North façade of 1927-28 firehouse.

### North Wing

The north wing, which is to the right of the firehouse when facing the building from Sir Francis Drake Boulevard, was originally a dwelling and though it is presently not occupied, its interior finishes suggest that it was last used as a dwelling, with a smaller studio apartment at the rear. In terms of its materials and design, the north wing is very similar to the south wing. The east façade of the north wing is a narrow gable wall containing a tripartite wood casement window (**Figures 21 –22**). The gable is outlined by terra cotta roof tiles and the only ornament is a pair of *canales* at the apex of the gable. The south façade of the north wing consists of a wood door at the left side, which is sheltered beneath a terra cotta tile-clad porch. At the right side of the south façade is a pair of wood casement windows. A windowless hyphen sheltered beneath the porch roof connects the north wing to the firehouse. The north façade of the north wing is largely hidden behind the modular building in the north parking lot (**Figure 23**). It is simply an expanse of stucco punctuated by several wood casement windows of various size. The west façade of the north wing is slightly smaller and more symmetrical than the corresponding elevation of the south wing; it is simply an expanse of stucco fenestrated by three pairs of six-light, wood casement windows (**Figure 24**). The north wing is capped by a combination hip and gable roof. The overall plan of the Ross Public Safety Building is overall T-shaped and symmetrical, with the large firehouse at the center flanked by a pair of F-plan dwellings (**Figure 25**). In aerial photographs, it is clear that the formerly open-air courtyards between the north and south wings and the firehouse have been infilled for additional office and living space. The infilled sections are the only part of the roof not clad in terra cotta roof tiles.



Figure 21. Hyphen and porch connecting north wing to firehouse.



Figure 22. South and east façades of north wing.



Figure 23. Part of the north façade of north wing.



Figure 24. West façade of north wing.



Figure 25. Roof plan of Ross Public Safety Building.

#### D. Interior Description

The interior of the Ross Public Safety Building is composed of a warren of rooms linked together by narrow corridors and passageways. The character and condition of the various interior spaces varies according to each part of the building, with the interior of the south wing being the most heavily altered and the first floor level of the firehouse remaining the most intact. In the sections below, we describe each part of the building's interior.

##### South Wing

As mentioned previously, the south wing of the Ross Public Safety Building was originally the fire chief's residence. Since ca. 1982 it has housed the Ross Police Department. The interior of the south wing retains some vestiges of its original residential use, including some exposed hardwood flooring and bits of original door and window trim, but for the most part, it is finished in off-the-shelf materials dating to recent decades (**Figures 26 – 27**). The south wing has an L-shaped floorplan, with a single-loaded corridor running along its north side, and then turning ninety degrees northward near the rear of the wing. There are four offices in this part of the building. Most have industrial-grade carpeting over the original wood flooring. The perimeter walls are partly original lath-and-plaster with some original wood baseboards, window trim, and crown moldings. However, the majority of the demising walls are stud and gypsum board, suggesting a more recent origin. The doors are all hollow-core examples from the 1970s or 1980s. There is a pair of toilet rooms at the west side of the building and a dispatch/reception area at the center of the building. The dispatch area is located in what used to be the open-air courtyard between the firehouse and the south wing. It and the toilet rooms are finished in contemporary materials dating to the 1970s or 1980s.



Figure 26. Typical office in south wing.

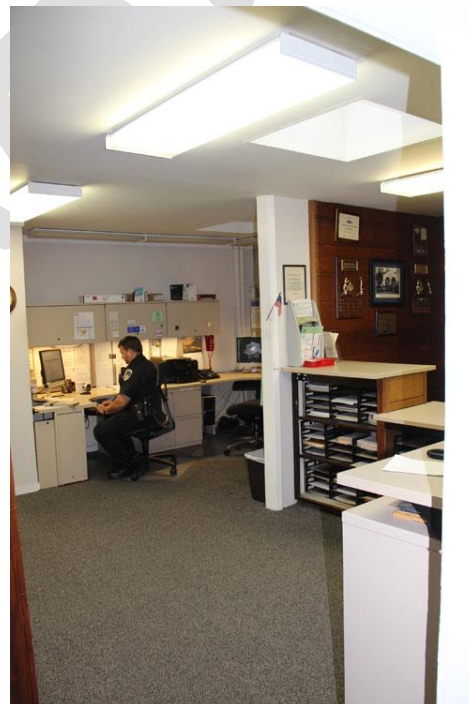


Figure 27. Dispatch area.

### Firehouse

In comparison to the south wing, the interior of the firehouse retains a much higher degree of integrity. The firehouse is two stories high and is much larger than the other parts of the building. In keeping with firehouse typology, the first floor level is primarily devoted to operations, including vehicle and equipment storage, as well as a kitchen and laundry area; the second floor level is devoted to residential quarters. The original 1927-28 section contains two vehicle bays at the east (front) end of the building. This area, as well as the adjoining storage and laundry rooms, retains the highest degree of integrity inside the Ross Public Safety Building (**Figures 29 – 31**). It has concrete flooring and the walls are finished in unpainted redwood paneling with single-panel redwood doors. Antique firefighting equipment, including an alarm system, fire pole, and coded maps of Ross, evoke the character of an old-fashioned firehouse. The rear part of the first floor level contains a kitchen. This room, which was originally a garage, was enclosed and converted into a kitchen ca. 1995. A door in the rear wall of the kitchen provides access to the ca. 1995 addition, which contains three large vehicle bays on its first floor level (**Figure 32**).



Figure 29. Redwood paneling in firehouse.



Figure 30. Vehicle bays in firehouse.



Figure 31. Antique alarm in firehouse.



Figure 32. Vehicle bays in ca. 1995 addition.

The second floor level of the firehouse provided living quarters to firefighters until ca. 2006. It is still used for this purpose by the Ross Valley Paramedic Authority. The Ross Valley Fire Department uses the second floor as an office and an area to relax between calls. The second floor level is reached by a redwood-paneled stairwell with a vintage map of Ross mounted to the north wall (**Figure 32**). The original living quarters on the second floor appear to have been entirely rebuilt ca. 1995 and it contains no visible historic fabric (**Figures 33 – 34**). In terms of its layout, the second floor level consists of a pair of bedrooms and a toilet room at the front (east) end, an office at the center, and a lounge at the west end, in the ca. 1995 addition (**Figure 35**). The entire second floor is finished in contemporary materials, including carpeted floors, gypsum board walls, narrow wood moldings, and 1990s-era plumbing fixtures.



Figure 32. Redwood-paneled stairwell in firehouse.



Figure 33. Residential quarters on second floor of firehouse.



Figure 34. Toilet room on second floor of firehouse.



Figure 35. Lounge on second floor of ca. 1995 addition.

**North Wing**

The north wing was built as a dwelling and it retains some finish materials from its original use, including hardwood flooring, lath-and-plaster walls and ceilings, molded door and window trim, and narrow crown moldings (Figures 36 – 39). The north wing, which at one time housed on-duty firefighters, with a separate apartment for the assistant fire chief, is now unused except for storage and exercise equipment. In regard to its floorplan, the north wing is L-shaped, with a double-loaded corridor running through the center of the long side of the “L.” The north wing has a studio apartment at the rear containing a bedroom, a bathroom, and a kitchenette. The front portion contains two bedrooms, a bathroom, a kitchen, a dining room, and a living room. One of the bedrooms occupies a portion of what was originally an open-air courtyard between the firehouse and the north wing. The bathrooms and kitchens appear to date to the late 1970s or 1980s in terms of their finish materials, while the rest of the north wing appears to retain the bulk of its original materials.



Figure 36. Bedroom in north wing.



Figure 37. Kitchen in north wing.



Figure 38. Hall in north wing.



Figure 39. Dining room and living room in north wing.



### E. Condition

The condition of the Ross Public Safety Building varies, with the firehouse remaining in the best condition, the south wing in moderate condition, and the north wing in poor condition. Much of the firehouse was remodeled in the mid-1990s, presumably when the addition was constructed. The south wing, which has housed the Police Department since ca. 1982, appears to have undergone few significant improvements since then, aside for occasional repairs made by staff. The north wing is in the worst condition, with little evidence of any significant maintenance having occurred within the last few decades.

### E. Spanish Colonial Revival Style

Historically rooted in the domestic architecture of Spain and its New World colonies, the Spanish Colonial Revival style became the preeminent style in California between World War I and the Depression. During the nineteenth century, most architects in California ignored the state's Hispanic heritage. Most came from other places and they brought their favored architectural styles with them from the East Coast and Europe. By the mid-1890s, a newfound sense of California identity, combined with the growth of tourism from outside the state, led to the development of an architectural vocabulary better-suited to the state's heritage, landscape, and climate. The Mission Revival style was the earliest of the Hispanic revivals in California. Influenced by contemporary efforts to restore the state's crumbling missions, architects mined their architectural vocabulary for new buildings as well. The California Building at the 1894 Columbian Exposition in Chicago (no longer extant), designed by San Francisco's A. Page Brown, is widely recognized as being the first major Mission Revival style building. The Mission Inn in Riverside, California (1902-35) is another prime example. The elaborate Mission Inn excepted, most Mission Revival buildings are simple structures characterized by horizontal massing, shallow-pitch gable roofs clad in terra cotta tiles, arcaded fenestration, sculpted and lobed parapets, and thick stucco-finished walls evoking traditional adobe construction. More elaborate examples of the style, like the Mission Inn, incorporate an *espanaña*, or free-standing belfry tower. The Mission Revival style remained the most popular style in California well into the first decade of the twentieth century.

Because the California missions were relatively simple and uniform in regard to their design and construction, there was only so far that an architect could go with the Mission Revival style. By the 1910s, architects began turning toward the more fanciful Spanish colonial buildings of Arizona and Texas, as well as the Mexican heartland itself. Taking advantage of these richer sources, architects designed much more elaborate buildings incorporating towers, domes, and Churrigueresque frontispieces. Colorful Mexican tilework, hand-tooled wood trim, and wrought iron balconies and light fixtures rounded out the buildings designed in the new style, which became known as the Spanish Colonial Revival style. In California, the style emerged full-fledged in San Diego with the Panama-California Exposition of 1915. In addition to several exhibition halls designed by Bertram Goodhue on the fair ground, the best-known early example of the style is the Santa Fe Railroad's San Diego Depot, designed by Arthur Brown Jr. and built in 1915 (Figure 40).



Figure 40. Santa Fe Depot, San Diego

From San Diego, the Spanish Colonial Revival style quickly spread north throughout the rest of the state. Notable examples include the Santa Barbara County Courthouse (1926), Pasadena City Hall (1927), as well as several new suburban and resort communities, ranging from the affluent rural enclaves of Rancho Santa Fe (San Diego County) and San Clemente (Orange County) to middle-class residential districts like San Diego's Kensington district or San Francisco's Westwood Highlands neighborhood (Figure 41).



Figure 41. Westwood Highlands

Source: San Francisco Historical Photograph Collection, San Francisco Public Library

Though it never gained the same level of popularity as it did in Southern California, there are still many good examples of the Spanish Colonial Revival style in Northern California. Railroad companies were especially enamored with the style and many historic depots and hotels in the northern part of the state are designed in the Spanish Colonial Revival style, including the Southern Pacific Railroad's San Francisco Depot (1915 – demolished) and Hotel Woodland, in Yolo County (1928) (Figure 42). The style was also popular in northern California for churches, theaters, and public buildings, such as Mission Dolores Basilica (1926), San Francisco's Castro Theater (1922), and a series of fire and police stations designed by San Francisco's City Architect in the 1920s.



Figure 42. Hotel Woodland, Woodland, California.

Source: Noehill.com

In regard to more commonplace domestic architecture, the Spanish Colonial Revival style surged during the 1920s-era building boom, as speculative builders built entire tracts of stucco-finished houses with red clay tile roofs and tile and wrought-iron detailing. Not all were fancy; many Spanish Colonial Revival houses of the 1920s were exceedingly simple and stripped down interpretations of Spanish and Mexican houses. Occasionally the only stylistic clues are the stucco walls and terra cotta roofing tiles. In addition, the windows are usually wooden or metal casements and any applied ornament, if any, consists of a few wrought-iron details, such as window guards or lanterns, or tiled stairs.

### F. American Firehouse Design

The American firehouse is a unique building type that arose in response to this country's peculiar social institution, the volunteer fire company. Throughout the first century of the nation's existence, firefighting was a non-professional affair carried out by volunteer forces. Many of these volunteer fire companies more closely resembled fraternal organizations than the professional paramilitary forces that exist today. At a minimum, volunteer fire companies needed a centrally located building in which to store their equipment, including hand-drawn pumpers, buckets, hooks, and ladders. Better-funded companies built or leased buildings with a ground-level garage and a meeting room on the second floor. During the 1840s, urban volunteer fire companies began lavishing a significant amount of money on their buildings, which often resembled contemporary fraternal lodges or men's clubs. In addition to well-appointed meeting halls/club rooms, the American firehouse of the middle of the nineteenth century adopted many features seen later on urban firehouses across the country, including a hose-drying tower, large barn doors emblazoned with the company's insignia, and either a red paint scheme or a single red light above the primary entrance.<sup>3</sup>

After the Civil War, many American cities had become dissatisfied with the disorganized service provided by volunteer fire companies and replaced them with paid, professional companies. During this period, the municipal urban American firehouse came into its own as a readily recognizable building type. Most retained the traditional two-story format with vehicle and equipment storage on the first floor and living quarters on the second floor. However, the adoption of horse-drawn pumpers led to the expansion of ground-floor operations to include stables, a blacksmith's shop, and various other workshops and storage rooms. Because municipal firefighters were expected to live at the firehouse while on duty, the second floor level evolved from a single large room to include dormitory-style sleeping quarters, a kitchen, a dining room, and a reading room/social hall. To speed up response times, fire departments installed poles so firefighters could get from their living quarters in much less time than going down the stairs. Installation of fireboxes in many communities resulted in the installation of fire alarm equipment in the firehouse, as well as illuminated maps to indicate which firebox was activated. In terms of their design, architects sought to disguise these large barn-like buildings behind traditional historicist façades, which aside from the large barn doors at the ground floor level and a protruding hose tower, looked very much like any other commercial building.<sup>4</sup> A good example of this type is SFFD Engine Co. #33 at 117 Broad Street in San Francisco (Figure 43).



Figure 43. SFFD Engine Co. No. 33

<sup>3</sup> Rebecca Zurier, "Firehouses," in Diane Maddux, ed., *Built in the U.S.A.: American Buildings from Airports to Zoos* (Washington, D.C.: National Trust for Historic Preservation, 1985), 78-79.

<sup>4</sup> Ibid.

After the turn of the twentieth century, interest in the City Beautiful movement inspired many municipalities to design their firehouses and other public buildings in traditional neoclassical garb. Embracing another tenet of the City Beautiful Movement, cities grouped their public buildings within a centrally located precinct known as a “civic center.” The buildings that made up the civic center were typically designed in the same style to produce a harmonious effect. Sometimes neighborhood public buildings shared the same aesthetic, especially if designed in-house by a city architect. During the late nineteenth and early twentieth centuries, San Francisco’s City Architect designed firehouses throughout the city that embraced the new neoclassical style favored by the City Beautiful Movement. Most were simple, two-story masonry buildings with garages and workshops on the first floor and living quarters above, such as SFFD Engine Co. #16 at 997-97 Tennessee Street (**Figure 44**). On the other hand, residents of many suburban communities wanted their public buildings to “blend in,” often using popular domestic architectural styles, including (in California) the Mission Revival, Craftsman, and Spanish Colonial Revival styles, for their public buildings.<sup>5</sup>



Figure 44. SFFD Engine Co. No. 16

The replacement of horse-drawn equipment with gasoline-powered trucks eliminated the need for stables and blacksmith shops, as well as the need to house the firefighters on the second story of the firehouse. Though the two-story prototype continued in densely developed urban areas well into the twentieth century, in lower-density suburban and rural areas, where land was more plentiful, single-story firehouses became increasingly common. In addition, by the late 1930s and early 1940s, many American architects dispensed with historicist styles and began designing firehouses and other public buildings in stripped-down styles, including the Streamline Moderne style, that were inspired by European modernist architects and American industrial designers like Raymond Loewy. By World War II, most new American firehouses no longer had much, if any, applied ornament, with their designs were based solely on their functional requirements. After World War II, the rapid suburbanization of the United States led to the development of integrated public safety complexes incorporating multiple departments, including police, fire, and ambulance crews, that were housed in sprawling, one-story complexes on the edge of town.

<sup>5</sup> Ibid.

## V. Historical Context

### A. Historical Background of Ross: 1776-2015

The Coast Miwok people inhabited most of what is now Marin County for millennia. They lived, hunted, and fished along the creeks in relative peace until the arrival of Spanish explorers and missionaries during the last quarter of the eighteenth century. The Spanish mission system doomed the Coast Miwok people's traditional culture and livelihood, and thousands eventually died of European diseases after being rounded up and sent to live at Mission Dolores in San Francisco. Following the establishment of Mission San Rafael de Arcangel in 1817, the remaining Coast Miwok were sent to live in what is now San Rafael. California became a Mexican territory after Mexico won its independence from Spain in 1822. In 1833, the Mexican government began secularizing the Franciscan missions of California, stripping them of their accumulated wealth and vast landholdings, which were then redistributed to favored Mexican citizens. In 1840, Governor Juan Bautista Alvarado granted an 8,877-acre rancho, called *Rancho Punta de Quentin Cañada San Anselmo*, to Juan (John) B.R. Cooper (Figure 45). Cooper, a native of Boston, was a sea captain and businessman, who became a Mexican citizen in the 1830s. He exploited his rancho for redwood, which he sold locally and shipped to the Sandwich Islands (Hawaii).<sup>6</sup>



Figure 45. Map showing the ranchos of Marin County  
Source: Anne T. Kent California Room, Marin County Free Library

The American conquest of California in 1846-47, and the ensuing discovery of gold at Sutter Creek in 1848, spelled the end of the rancho era in California. Marin County was established in 1850 as one of California's original 27 counties. The sudden influx of Americans during the Gold Rush exerted huge pressures on Bay Area *rancheros*. Many *rancheros* hired lawyers to combat illegal squatters, but the protracted legal battles bankrupted many, who were then forced to sell their land – often to the lawyers they had hired to defend them. In 1857, James Ross, a native of Scotland by way of Australia, bought a substantial portion of Rancho Punta de Quentin Cañada San Anselmo for \$50,000 from a man named Benjamin Buckelew. Ross, a Forty-Niner, had become a rich man with a wholesale liquor business in San Francisco. After buying the ranch, he established a trading post, called Ross Landing, which was located in what is now Kentfield Corners. He moved into the old Buckelew homestead at what is now 111 Redwood Drive in Ross, and set himself up as a country squire. Ross's business ventures included cutting and selling redwoods and operating a packet schooner between Ross Landing and San Francisco.<sup>7</sup>

<sup>6</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, The Places, The History* (Ross Historical Society: 2008).

<sup>7</sup> Ibid.

James Ross died in 1862 at the age of 50, having lived on his ranch for five short years. James' widow, Annie Ross, divided the rancho amongst her daughters, keeping 297 acres for herself at the heart of what was already known as Ross Valley. Over time, most of James Ross' heirs sold off their holdings to newcomers, including many prominent San Francisco businessmen. Most of the newcomers were not attracted by logging, but instead by Ross Valley's beautiful scenery and mild fog-free climate. In 1873, the North Pacific Coast Railroad acquired a right-of-way through the Ross Valley, and in 1882, Annie Ross donated 1.4 acres of land to the railroad with the stipulation that the depot be named for her family. In 1887, the first post office was constructed in the tiny village of Ross, which grew up around the railroad depot (**Figure 46**).



**Figure 46. Ross Depot, 1893**

Source: Anne T. Kent Room, Marin County Free Library

The depot allowed wealthy San Franciscans to become weekend residents of Ross, leading to the first wave of estate development. Some of San Francisco's most prominent residents developed estates in Ross, including William Barber, James Moore, Clinton James, Robert Dwis, Pelham Ames, William Boole, James Coffin, Albert Kent, and others.<sup>8</sup> Social life in Ross revolved around the Lagunitas Country Club (established 1903) and several churches, including St. Anselm's Catholic Church and St. John's Episcopal Church.

After the 1906 Earthquake and Fire, owners of several of the large estates in Ross broke them up into "villa" lots and put them up for sale. The concurrent opening of the Northwest Pacific Railroad's inter-urban line parallel to what is now Sir Francis Drake Boulevard made daily commuting between San Francisco and Ross feasible, leading to a burst of large-lot suburban development in and around the small town. The resulting demand for services, including new roads, sewers, bridges, and schools –coupled with fears that Ross could be annexed by San Anselmo – led to the community's incorporation in 1908. One of the first projects that the new Town carried out was the construction of the five bridges spanning Corte Madera Creek. In 1910, two years after incorporation, Ross had a population of only 556. It grew slowly but steadily over the next two decades, reaching 727 in 1920, and then doubling to almost 1,800 residents in 1930. Since 1930, the population of Ross has grown very slowly, to only around 2,500 people in 2010.<sup>9</sup> Like a handful of several other exclusive, semi-rural enclaves in the Bay Area, including Hillsborough, Atherton, Portola Valley, and Woodside, Ross has taken great pains to harness growth and keep physical changes to a minimum.

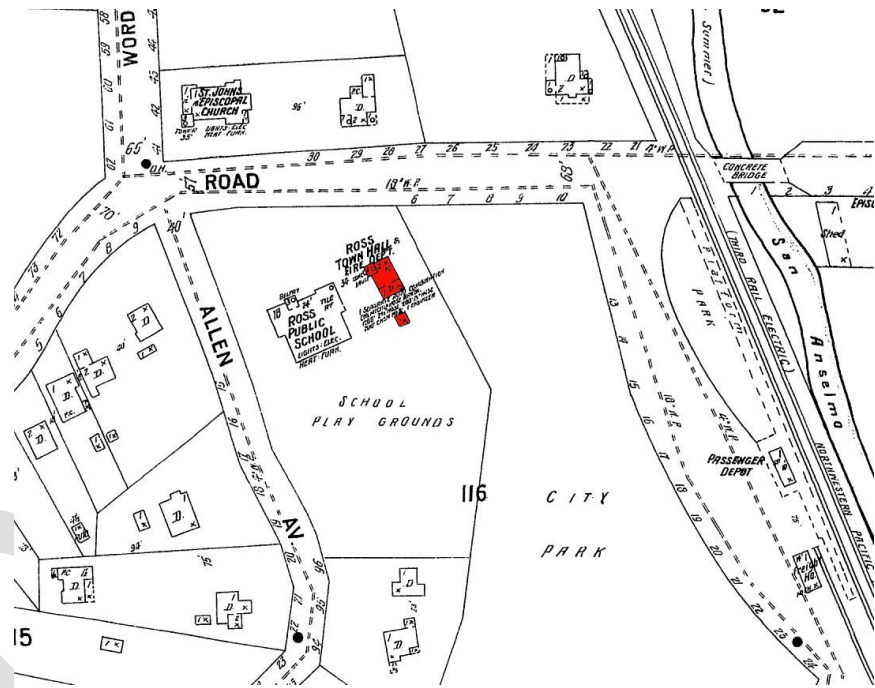
<sup>8</sup> José Moya del Piño Library – Ross Historical Society, "A Ross History – Time Line," (December 9, 1990).

<sup>9</sup> U.S. Census Bureau, Census Statistics for Marin County, 1910-2010.

### B. Ross Fire and Police Departments: 1908-1927

Prior to incorporation in 1908, Ross received police service from the Marin County constable and had no organized fire services. If a building caught fire, it was up to the property owner and/or concerned neighbors to put it out, and many buildings were simply left to burn because there was nothing else that could be done. Grass and forest fires in the adjoining wilderness lands west of the community posed a huge risk, providing one of the main reasons to incorporate in 1908.

At its first meeting on September 2, 1908, the Ross Board of Trustees (Town Council) appointed H. C. Rodgers as the town's first police chief and Sean Murray as the first fire chief. Chief Murray oversaw an all-volunteer department whose principal piece of equipment was a hand-drawn pump.<sup>10</sup> Ross' firefighting infrastructure gradually improved over the next few years with the installation of 19 fireboxes, 42 fire hydrants, and the hiring of Joseph E. Green, an engineer, to assist Chief Murray.<sup>11</sup> The main fire station was located at the corner of Lagunitas Road and Shady Lane, on the site of the present-day Ross School. In addition, this building housed all of the Town's administrative officers, including the town clerk, police chief, and fire chief (**Figure 47**). It also had a garage for the fire department's Seagrave chemical and hose engine. The Ross Fire Department also maintained two horse-drawn hose carts at a pair of auxiliary facilities in other parts of town. The system worked fairly well as long as the fire was located within 1,600 feet of a fire hydrant. But fires in outlying parts of town remained serious hazards.<sup>12</sup> Early newspaper accounts discuss the valiant work of the volunteer firemen who diligently worked to save local properties from destruction. Indeed, some believed that tiny Ross had the best volunteer fire department on the West Coast.<sup>13</sup>



**Figure 47. 1914 Sanborn Map showing original location of Ross Town Hall and Fire Department**

Source: Sanborn Fire Insurance Co. Archive, San Francisco Public Library

<sup>10</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, the Places, the History* (Ross, CA: Ross Historical Society, 2008), 130.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*

<sup>13</sup> "News Notes from the Valley: Ross," *Marin Journal* (April 4, 1912), 3.

Though renowned for their ability and bravery, the Ross Fire Department operated on a shoestring budget, forcing its staff to host fundraisers to raise the money necessary to buy new equipment. However, it is likely that the fundraisers were also an excuse to bring together the residents of the town to enjoy dancing, cards, and drinking with a social group of volunteer firefighters that included many local residents in its roster.<sup>14</sup> In operation since 1908, the Ross Fire Department suddenly disbanded in 1924 following the dismissal of Chief George Kroetz by the Town's Board of Trustees and the appointment of F. C. Schumacher in his place.<sup>15</sup>

#### *D. Construction of the Ross Public Safety Building: 1927-28*

Shortly after his appointment, Chief Schumacher concluded that a volunteer fire department was no longer sufficient to protect Ross. He decided to create a professional fire department and he immediately requested funds from the Town to pay for two full-time firefighters, a new firetruck, and a new firehouse. Schumacher's request gained traction over the next few years and became part of a larger proposal to construct a new Civic Center on Red Hill Road (now Sir Francis Drake Boulevard). In addition to honoring Chief Schumacher's request, Town officials wanted to move the Fire Department (and the rest of the Town's officials) out of its old quarters on Lagunitas Road so that the Ross School could expand. To fund the new Civic Center, the Board of Trustees organized a special election in March 1927 to give residents of Ross the opportunity to approve the allocation of municipal funds to build the following infrastructure:

- \$20,000 to acquire the old Minnie Shotwell property at the northwest corner of Lagunitas Road and Red Hill Road (now Sir Francis Drake Boulevard) to build a new Civic Center;
- \$15,000 to build and equip a new Town Hall;
- \$31,000 to build and equip a new Firehouse;
- \$14,500 to acquire a new fire engine;
- \$18,500 on various street and road improvements.

Ross residents resoundingly approved the \$100,000 bond, the largest in the town's history up until that point, in March 1927.<sup>16</sup> The Town then hired John White, a prominent San Francisco architect, to draw up plans for the new Ross Civic Center. White was a well-known figure in Ross, having designed the Lagunitas Country Club and houses for several of the town's most influential residents. White had recently completed a Civic Center for Atherton, another affluent enclave in San Mateo County that had similar origins to Ross. White's Ross Civic Center designs were based very closely on the recently completed Atherton Civic Center project (See Figure 49). Indeed, White's designs for the town halls in both communities (both of which are still extant and highly intact) are one-story, wood-frame, stucco-finished buildings with a cruciform plan and Spanish Colonial Revival detailing. The town halls for both communities also have nearly identical floorplans, with a large council chamber and men's and women's toilet rooms taking up the majority of the footprint, and two small offices for the Town Clerk and the Police Chief in volumes flanking the main entrance.

White's design for the Ross Firehouse resembled the new Ross Town Hall in regard to its construction materials and styling. The Firehouse though was a much larger and more complicated building, consisting of the firehouse proper at the center, and two residential wings (labeled on the architect's drawings as

<sup>14</sup> "Local Happenings," *Marin Journal* (December 2, 1920), 2.

<sup>15</sup> "Brief Items of Local Interest," *Sausalito News* (January 19, 1924).

<sup>16</sup> Town of Ross Board of Trustees, Minutes, March 14, 1927.



“Apartment A” and “Apartment B” flanking it to either side. The drawings indicate that Apartment A, now the Ross Police Department, was originally set aside for Fire Chief Schumacher. Apartment B, now the unoccupied north wing, had the same plan as Apartment A, although its plan was flipped. It is not known who this unit was built for, but it was likely set aside for the Assistant Fire Chief (Figures 48 – 50). According to the original design drawings, the first floor level of the firehouse section was similar to the way it is now, with two vehicle bays at the front of the building and a workroom and a stair at the center. What is now the kitchen was a garage originally. The second floor of the firehouse section of the building contained a small dormitory for four men, a toilet room, a small kitchen, and a “club room.”



Figure 48. Color rendering of proposed Ross Firehouse by John White, 1927.

Source: Howard & White Collection, University of California Berkeley, Environmental Design Archives

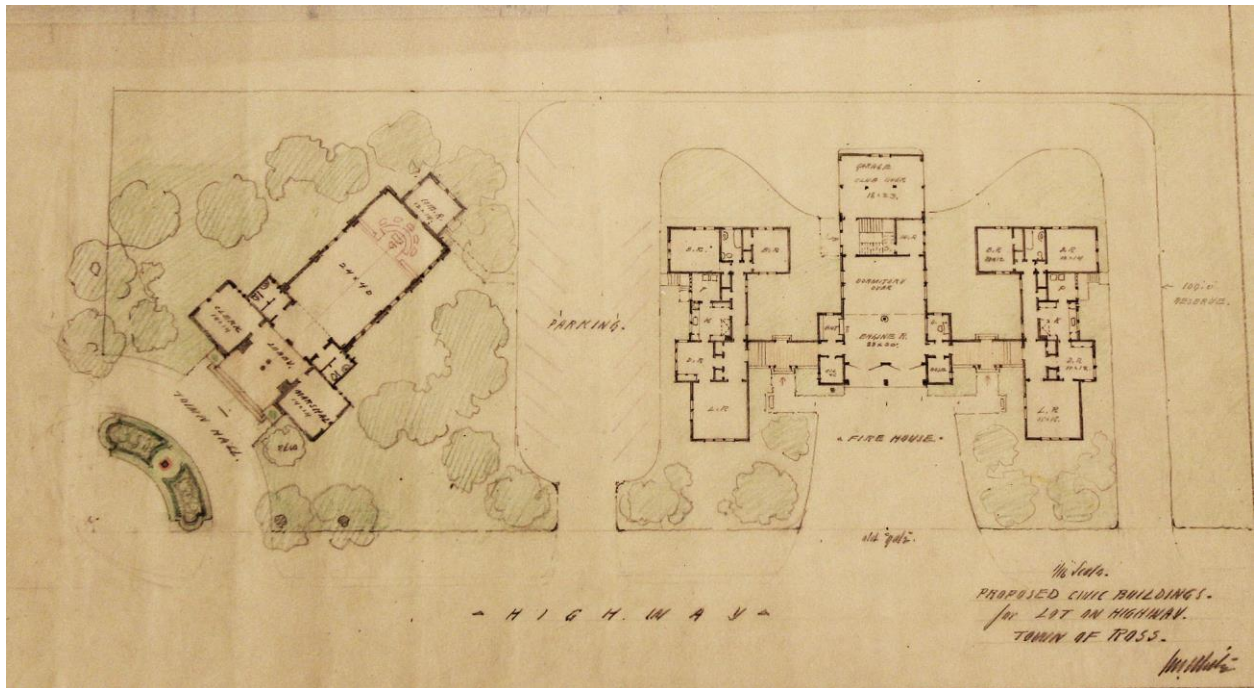


Figure 49. Site plan of Ross Civic Center by John White, 1927.

Source: Howard & White Collection, University of California Berkeley, Environmental Design Archives

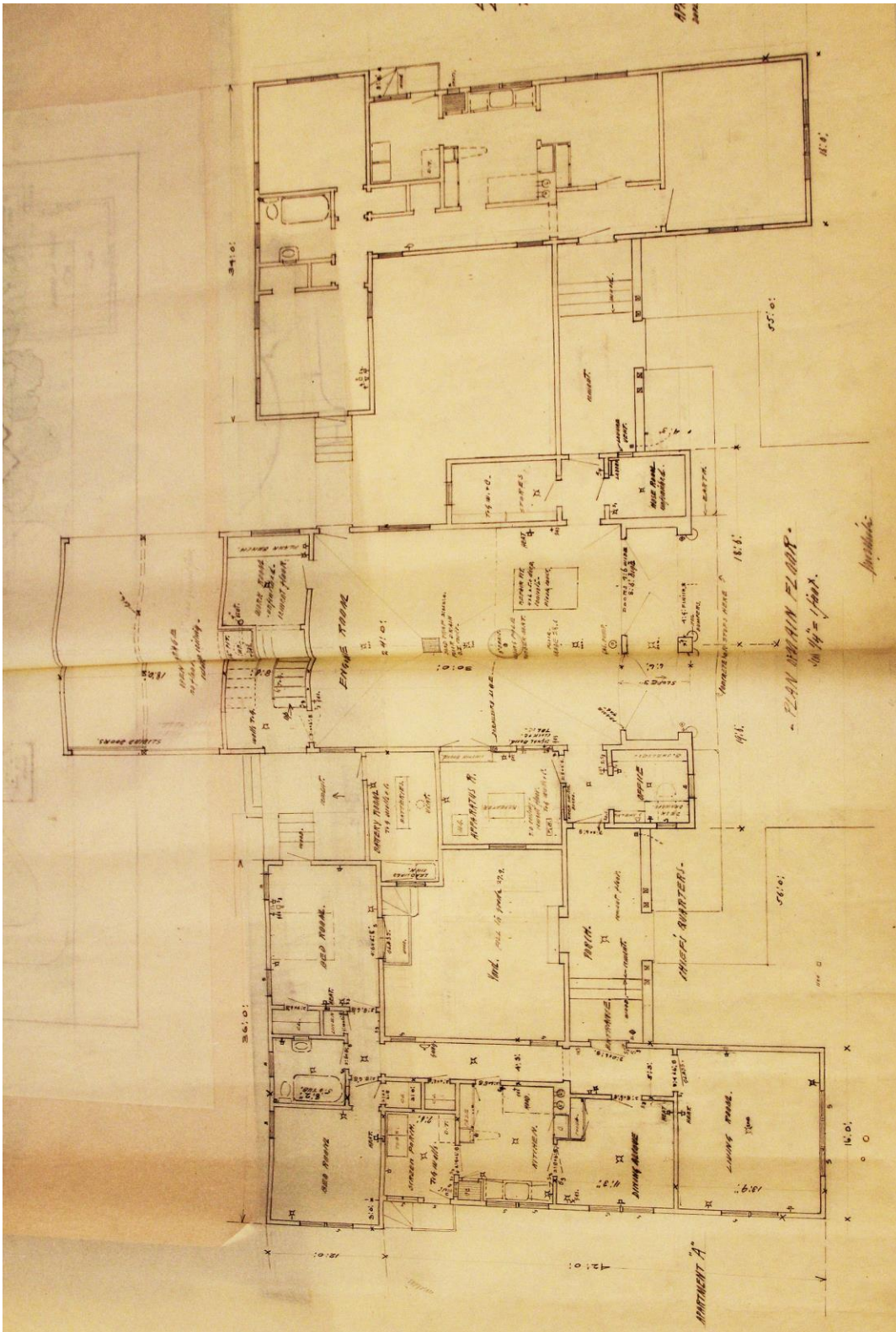


Figure 50. Floorplan of Ross Fire house by John White, 1927.  
Source: Howard & White Collection, University of California Berkeley, Environmental Design Archives

Following the passage of the bonds in the March 1927 special election, the Ross Board of Trustees, which soon subsequently changed its name to the Ross Town Council, set about acquiring the old Shotwell property from the Estate of Harriet De Witt Kittle. In May 1927, the Town bought the property, which consisted of approximately two-and-a-third acres, for \$16,500.<sup>17</sup> The property, which had previously belonged to Minnie Shotwell, appears on the 1914 Sanborn Maps as consisting of a two-story Victorian dwelling located where the Ross Public Safety Building is today, as well as a tankhouse and a garage located where the Corporation Yard is now (Figure 51). The Kittles, who had purchased the property from the Shotwell heirs after 1908, rented the old Shotwell house to Dr. Harry Hund, who refused to vacate the property after the Town bought it, forcing the Town Council to sue to evict him.<sup>18</sup> After getting Hund out of the house in July 1927, the Town Council hired Otis H. Smith and E. G. Jackson to demolish the Shotwell house, fill the basement, and shut off all utility connections.<sup>19</sup>

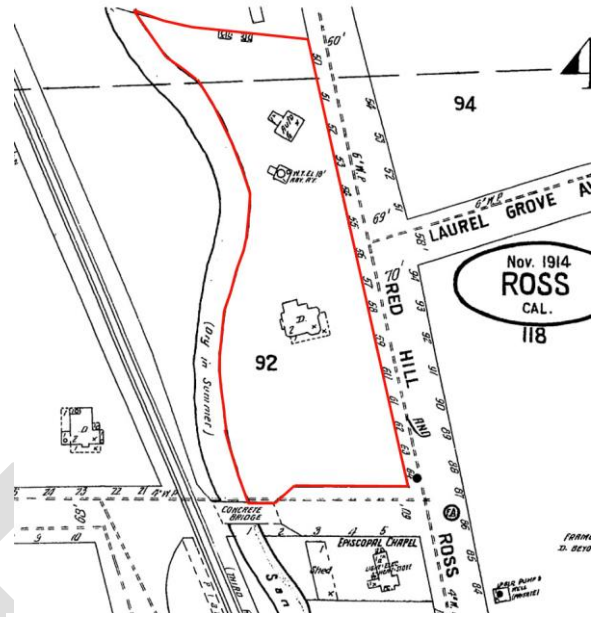


Figure 51. 1914 Sanborn Map showing Ross Civic Center property (outlined in red)  
Source: Sanborn Fire Insurance Co. Archive, San Francisco Public Library

On August 22, 1927, the same day that the Town Council contracted with Smith & Jackson, it contracted with F. R. Siegrist Co. to construct the new Town Hall and Firehouse. F. R. Siegrist Co. submitted the lowest bids in a pool of seven firms, promising to build the Town Hall for \$27,777 and the Firehouse for \$25,777.<sup>20</sup> Construction of the buildings got underway in September 1927 and work was completed in February 1928, which was very impressive given that the bulk of the work had taken place during the winter rainy season.<sup>21</sup>

#### F. History of the Ross Public Safety Building and Ross Civic Center: 1928-2016

Following the completion of the Town Hall and Firehouse in early 1928, the Town moved its administrative offices, Police Department, and Fire Department to the new Ross Civic Center. The Ross Police Department, which at this point hired only one person, occupied one of the small offices at the front of the Town Hall, where the Planning and Building Department is now. In comparison with the original firehouse-cum-town hall on Lagunitas Road, the new Ross Civic Center sat squarely in the middle of Ross at a highly visible intersection facing the County Highway, which was then locally known as Red Hill Road (now Sir Francis Drake Boulevard). In addition to being convenient to most of the town's residents, the new Firehouse had ready access to both sides of town, meaning that its trucks were within a four or five-minute radius from nearly every property within the borders of Ross.

<sup>17</sup> Town of Ross board of Trustees, Resolution No. 203, April 14, 1927. Marin County Recorder's Office.

<sup>18</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, the Places, the History* (Ross, CA: Ross Historical Society, 2008), 62.

<sup>19</sup> "Agreement: Town of Ross and Otis H. Smith and E. G. Jackson," August 22, 1927.

<sup>20</sup> Town of Ross Council, Resolution 225, August 11, 1927.

<sup>21</sup> Town of Ross Council, Minutes, February 9, 1928.

**1942 Sanborn Maps**

The Ross Civic Center first appears on the 1942 Sanborn Maps (**Figure 52**). The property consisted of, as it does now, the Town Hall at the southeast corner of the property and the Firehouse toward the center of the property. The Corporation Yard site was in 1942 the location of a garage left over from the old Shotwell Estate. The 1942 Sanborn Maps indicate that the footprint of the Firehouse was largely identical to what exists today, though the two courtyards between the firehouse and the north and south wings had not been infilled yet. Other later changes not shown on the 1942 maps include the small one-story, flat-roofed addition at the rear of the south wing, or the ca. 1995 addition to the firehouse. Within a short distance of the Civic Center, the 1942 Sanborn Maps indicate that the Ross School had been expanded to absorb the site of the old Ross Firehouse at Lagunitas Road and Shady Lane (formerly Wordsworth Avenue).

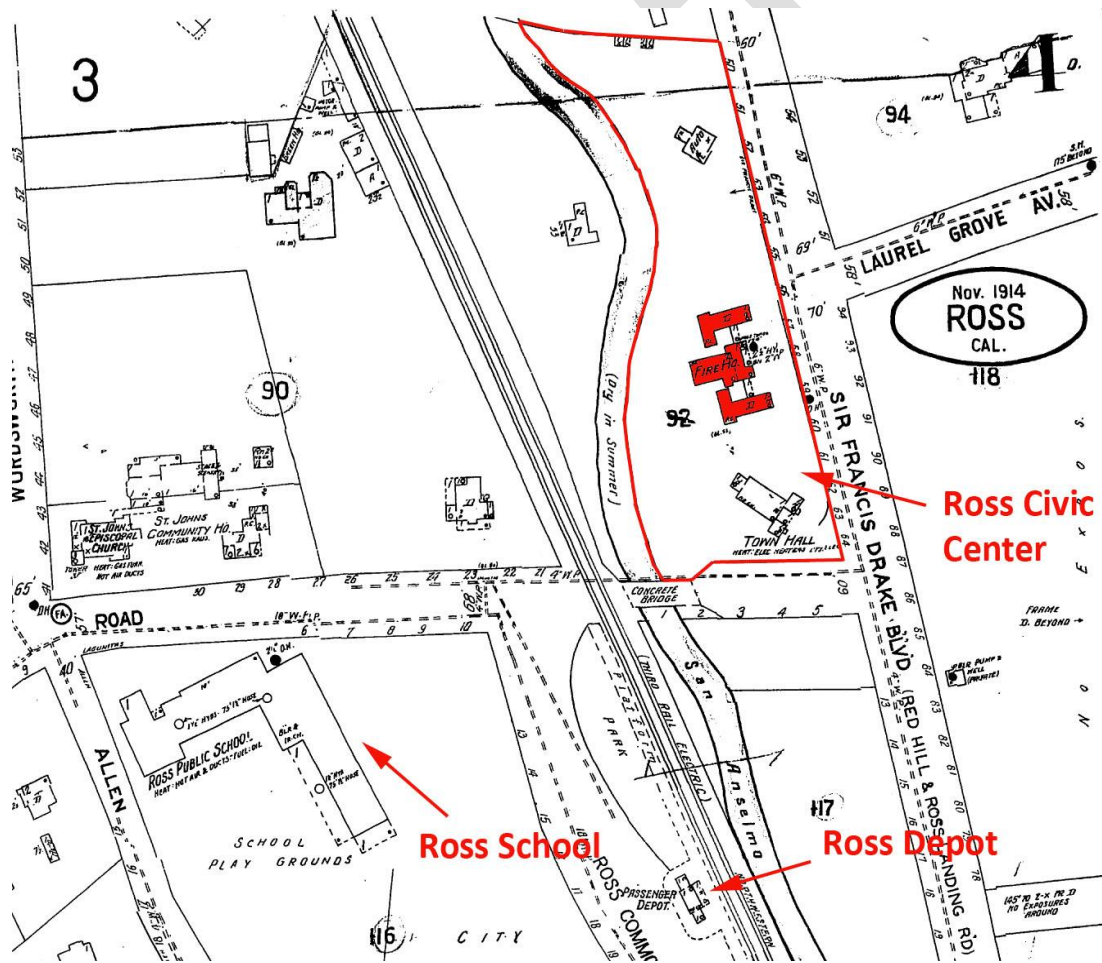


Figure 52. 1942 Sanborn Map showing Ross Civic Center property (outlined in red) and firehouse (solid red)

Source: Sanborn Fire Insurance Co. Archive,

**Ross Fire Department: 1945-1982**

Throughout the 1950s, 1960s, and 1970s the Ross Fire Department continued to operate as a hybrid volunteer/paid force composed of a paid fire chief and assistant fire chief and 10-15 volunteer firefighters. Local newspapers during the postwar era chronicle a sequence of small house fires and brush fires interleaved among the occasional major fire and fundraisers held at the Ross Firehouse. In 1968, the 12-man Ross Fire Department, with assistance from the Kentfield Fire Department, put out a huge fire at the old Greene mansion at Lagunitas Road and Shady Lane. Onlookers became concerned that flames from the major conflagration would spread to adjoining houses and trees, but the men saved the center of town from destruction.<sup>22</sup> When they were not battling fires, the Ross Fire Department prided itself on its Christmas decorating skills, which they used to create elaborate holiday scenes in front of, and on the roof of, the Ross Firehouse during the 1950s and 1960s, winning several county-wide competitions among Marin County fire departments.<sup>23</sup> In 1981, two captains were hired to assist the fire chief and assistant fire chief, and in 1982, the Town merged the Police and Fire Departments into the Department of Public Safety.

**Ross Police Department: 1945-1982**

The Ross Police Department remained a much smaller department than the Ross Fire Department throughout most of the town's history. From 1930 until 1964, the Ross Police Department was essentially a one-man operation run by Chief Joe Regoni. Chief Regoni, who was also the Town's chief building inspector, coroner, and fire chief for a time, finally got some help in 1945 when the Town hired L. E. Flowers, making Ross a two-man force, which it remained until the early 1960s.<sup>24</sup> In 1962, John F. Harris was hired, becoming chief in 1965 when Joe Regoni retired. Chief Harris, who faced a growing amount of serious crime as southeast Marin County suburbanized during the postwar era, made national news after capturing two murderers who had escaped from San Quentin Prison in 1967. Newspaper accounts from the late 1960s and 1970s chronicle a more dangerous time, with more car thefts, break-ins, and the occasional violent crime. Harris served as the Town of Ross's Chief of Police until 1980, when he retired.<sup>25</sup>

**Ross Department of Public Safety: 1982-2016**

As mentioned previously, in 1982, the Ross Town Council decided to merge the Ross Police and Fire Departments, renaming the joint agency the Ross Department of Public Safety. The Town also changed the name of the Ross Firehouse to the Ross Public Safety Building, indicating that the Ross Police Department had moved into the south wing of the building by this time.<sup>26</sup> From 1982 until 1998, the firefighting wing of the Department of Public Safety operated with three full-time captains, several paid reserves, as well as a few volunteers. In 2012, residents of Ross voted to consolidate its fire department with departments in the three nearby communities of San Anselmo, Fairfax, and Sleepy Hollow to create the Ross Valley Fire Department.<sup>27</sup> Mark Mills is the Fire Chief and the firehouse is known as Station 18.

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<sup>22</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, the Places, the History* (Ross, CA: Ross Historical Society, 2008), 131.

<sup>23</sup> "Ross Fire Department Wins Yule Decorations Contest," *Marin Independent-Journal* (January 3, 1955), 6.

<sup>24</sup> Expert Starts Survey of Ross Police Force," *Marin Independent-Journal* (October 14, 1960), 9.

<sup>25</sup> José Moya del Piño Library – Ross Historical Society, *Ross, California: The People, the Places, the History* (Ross, CA: Ross Historical Society, 2008), 134.

<sup>26</sup> *Ibid.*

<sup>27</sup> "About the Ross Valley Fire Department," <http://www.rossvalleyfire.org/about/history>, Accessed August 29, 2016.

### G. Alterations to the Ross Public Safety Building: 1928-2016

Since 1928, the Ross Firehouse/Public Safety Building has undergone few significant physical changes. Between 1928 and 1982, the only documented change to the building occurred in 1959, when the Town replaced the two hinged doors at the front of the firehouse with new overhead doors made of redwood.<sup>28</sup> At some point after 1942, a small, flat-roofed addition was built on the west façade of the south wing. The bulk of the changes to the building mainly occurred in or after 1982, when the Police Department moved into the south wing. Unfortunately, there are no building or maintenance records, making documentation a bit of a challenge. Based on our fieldwork, it seems likely that the south wing was reconfigured after the Police Department moved in ca. 1982, with doors infilled and new partition walls installed to create private offices. A large portion of the south courtyard was also infilled to build a reception/dispatch room. The north wing has undergone fewer changes, though the master bedroom in the southwest corner was converted into a studio apartment in the late 1970s or early 1980s. Around the same time, the north courtyard was partially infilled with what appears to have been a bedroom. The most significant changes to the Ross Public Safety Building occurred ca. 1995 when the Town built an addition at the rear of the original firehouse. The addition, which is compatible with the older building, contains three vehicle bays on the ground floor and living space on the second floor level. Likely completed around the same time, the garage at the rear of the 1927-28 firehouse was converted into a kitchen and the living quarters on the second floor remodeled. Ca. 2005, the Town began remodeling the north wing, only to find out that it was affected by black mold. Work was stopped and the Town brought in a modular building to house on-duty firefighters in 2006.<sup>29</sup>

### H. John White, Esq., Architect

The Ross Public Safety Building was designed by John White, a prominent Bay Area architect who was active from around 1890 until his death ca. 1941. John White was born in Kansas City, Missouri ca. 1870. Little is known about his early education or training, though census records indicate that he only went as far as high school. In 1890, when he was working as a draftsman in Kansas City, his sister Annie married Bernard Maybeck, one of the Bay Area's most prominent early architects and an important innovator of the First Bay Region Tradition. John followed his sister west to Berkeley, where he began working with Maybeck. Maybeck eventually formed a partnership with John's younger brother, Mark White, who was an engineer.<sup>30</sup> John White worked as a draftsman in the office of Maybeck & White from the early 1890s until the 1906 Earthquake. In 1909, he started working for George H. Howard, Jr., a prominent society architect based in San Mateo. Ca. 1910, White became a partner in the new firm of Howard & White. The firm, which was based in San Francisco, specialized in designing mansions and estates in affluent enclaves in the semi-rural hinterlands of San Mateo and Marin Counties, including Atherton, Ross, Hillsborough, Burlingame, Mill Valley, Palo Alto, and Woodside. A selection of the firm's best-known estates includes the J. W. Bothin House in San Mateo, the Kohl Mansion in Burlingame (1914), and the W. I. Glascock House in Hillsborough (1924).

Howard & White completed at least 10 projects in Ross and its immediate vicinity, including the E. G. Schmiedell House (1896 – Maybeck & White), the Albert J. Dibblee House (construction date unknown), the B. H. Dibblee House (1907), the Crawford Greene House (ca. 1913), the J. H. Hopps House

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<sup>28</sup> "New Doors Installed at Ross Firehouse," *Marin Independent-Journal* (April 15, 1959), 12.

<sup>29</sup> Heidi Scoble, interview with Christopher VerPlanck, August 30, 2016.

<sup>30</sup> Bob Johnson, "John White, Architect (1870-1941)," <http://berkeleyplaques.org/e-plaque/john-white/>, accessed August 30, 2016.

(construction date unknown), Lagunitas Country Club (ca. 1908), the J.B. McNear House (construction date unknown), Ross Town Hall and Firehouse (1927), and an unidentified house on Upper Road.<sup>31</sup>

As architects operating in the highest circles in the Bay Area's most affluent communities, George Howard and John White likely had plenty of contacts with the powerful figures who ran the local governments in towns like Atherton, Hillsborough, and Ross. As such, the firm was in a good position to win the commissions to design these communities' civic buildings. Indeed, the firm completed at least four major civic commissions, including Atherton Town Hall (1927), Ross Town Hall and Firehouse (1928), Burlingame Civic Center (1934), and Firehouse No. 1 in Hillsborough (construction date unknown). As mentioned previously, Atherton Town Hall very closely resembles its counterpart in Ross, which was built less than a year later (**Figures 53 – 54**). The Burlingame Civic Center project was designed to be built at Coyote Point in that city, but it does not ever seem to have been built.

John White and his wife Edith (née Sawyer) lived at 1163 Euclid Avenue in Berkeley for most of their adult lives. They do not appear to have had any children. The firm of Howard & White maintained its office at 235 Montgomery Street, in the Russ Building. Howard & White appeared in San Francisco city directories as late as 1935. The Burlingame Civic Center appears to have been the last major project completed by the firm, and by 1940, John White was listed in the Census as having retired.<sup>32</sup> It appears that he died in 1941.



Figure 53. Atherton Town Hall, Atherton, California.



Figure 54. Ross Town Hall, Ross, California.

<sup>31</sup> UC Berkeley, Environmental Design Archive, "Howard & White Collection," <http://archives.ced.berkeley.edu/collections/howard-white>, accessed August 30, 2016.

<sup>32</sup> U.S. Bureau of the Census, 1940 Census for Berkeley City, Alameda County, California, Enumeration District 8-150, Sheet 12A.

## VI. Determination of Eligibility

### A. California Register of Historical Resources

The California Register is an authoritative guide to significant architectural, archaeological, and historical resources in the State of California. Resources are listed in the California Register through a number of methods. State Historical Landmarks and National Register-eligible properties (both listed and formal determinations of eligibility) are automatically listed. The California Register also includes properties identified in historical resource surveys with California Historic Resource Status Codes of 1 to 5 and resources designated as local landmarks by municipal or county ordinances. Properties may also be nominated to the California Register by local governments, non-profit organizations, or private citizens. The eligibility criteria used by the California Register are closely based on those developed by the National Park Service for the National Register of Historic Places (National Register). In order to be eligible for listing in the California Register a property must be demonstrated to be significant under one or more of the following criteria:

**Criterion 1 (Event):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

**Criterion 2 (Person):** Resources that are associated with the lives of persons important to local, California, or national history.

**Criterion 3 (Design/Construction):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.

**Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California or the nation.

In 2009, the Office of Historic Preservation determined the Ross Public Safety Building to be eligible for listing in the California Register as part of Section 106 review for the replacement of the Lagunitas Road Bridge. The summary of the Section 106 findings provided by the Office of Historic Preservation do not provide in-depth information on why the Ross Public Safety Building appeared eligible. Though we concur in general with these findings, in the following sections we have evaluate the building under each of the four California Register eligibility criteria.

#### Criterion 1

The Ross Public Safety Building appears eligible for listing in the California Register under Criterion 1 (Events) as a building constructed as part of the Town's first Civic Center. Prior to 1928, the Town of Ross kept all of its administrative offices in the original Ross Fire House, which was located on Lagunitas Road, where the Ross School is now. Not much is known about this building, but by all accounts, it was an inexpensive and utilitarian structure that was not intended to serve indefinitely as the community's main administrative building. The construction of a new Civic Center to house all of the Town's administrative staff and public services occurred at a time when the town was growing and when it had begun to out-grow its old, ad hoc system of governance. Many Bay Area communities began building City Beautiful-inspired civic centers during the early twentieth century, and even though Ross was a small and exclusive residential enclave in a rural area, it still needed government services – chief among them fire protection.



The new Ross Civic Center, which was built at the town's main crossroads in 1927-28, symbolized the professionalization and growth of government during the 1920s-era building boom. Since its completion, the compact Ross Civic Center, which includes the Town Hall, the Firehouse (now the Public Safety Building), and the Corporation Yard, has served the Town of Ross with few changes. By 1930, Ross had largely been built out and its minimal civic infrastructure has continued to serve the town's needs until comparatively recently. The lack of growth in the town has meant that the two main buildings in the Civic Center have not been replaced or significantly modified.

### Criterion 2

The Ross Public Safety Building appears ineligible for listing in the California Register under Criterion 2 (Persons). Though several of the fire and police chiefs who have occupied the building have been well-known public figures in Ross, none appears to have made any lasting notable contributions to state or national history.

### Criterion 3

The Ross Public Safety Building appears eligible for listing in the California Register under Criterion 3 (Design/Construction) as a structure that embodies the distinctive characteristics of a type, period, and method of construction, and as the work of a master. Designed in 1927 by architect John White, a notable society architect closely associated with Bernard Maybeck, the Ross Public Safety Building (originally known as the Ross Firehouse) is rendered in the same Spanish Colonial Revival style as the nearby Ross Town Hall – the other major component of the Ross Civic Center and also a work of White's. In regard to its materials and design, the building is a very good example of a public building designed in the Spanish Colonial Revival style, which thrived in California between 1915 and 1930. Quite modest in terms of its scale and detailing, the building nonetheless embodies many characteristics of the style, including its overall horizontal massing with vertical counterpoint (tower), stucco finish, hand-tooled wood trim, wood casement windows, red clay tile roofing materials, and simple detailing, such as the *canales* in the gables of the north and south wings. The building's massing as three linked but functionally separate wings, with the firehouse at the center and the two flanking residential wings, appears to be unique in terms of firehouse design in the Bay Area. It was probably a function of both the relative isolation of Ross when the building was constructed and the perennial high cost of residential property in the town, which has traditionally excluded Town employees from living there.

Though little-known today, John White undoubtedly qualifies as a master architect. Long an employee of Bernard Maybeck, White joined George Howard's office in 1909, making partner ca. 1910. Together and individually the two men designed some of the most impressive and well-known mansions in some of the wealthiest Bay Area enclaves, including Atherton, Hillsborough, Woodside, and Burlingame in San Mateo County; and Ross, Mill Valley, and Belvedere in Marin County. On the basis of their residential work in these towns, the firm of Howard & White earned several commissions to design civic buildings in Atherton, Burlingame, Hillsborough, and Ross. Though only consisting of two buildings, Ross Civic Center is the largest and most intact complex of civic buildings designed by the firm.

### Criterion 4

Analysis of significance under Criterion 4 (Information Potential), which is primarily concerned with archaeological resources, is beyond the scope of this report.

### B. Integrity

The Ross Public Safety Building retains a moderate degree of integrity, with some parts of the building remaining more intact than others. In general, the exterior is more intact than the interior and the front of the building more intact than the rear. There are seven aspects used by the California Register to assess integrity: location, design, setting, materials, workmanship, feeling, and association. The following sections analyze the property under each of the seven aspects:

- **Location:** “Location is the place where the historic property was constructed or the place where the historic event occurred.”

The Ross Public Safety Building retains the aspect of location because it has never been moved.

- **Design:** “Design is the combination of elements that create the form, plan, space, structure, and style of a property.”

The Ross Public Safety Building retains the aspect of design, especially its exterior, where it retains its original form, plan, and massing, with the exception of the two partially infilled courtyards between the firehouse and the north and south wings, which were partially infilled ca. 1982, and the rear façade, which was concealed when the rear addition was built ca. 1995. However, none of these additions are visible from Sir Francis Drake Boulevard or from any other important public vantage point.

- **Setting:** “Setting is the physical environment of a historic property.”

The Ross Public Safety Building does not retain the aspect of setting. It retains its historical relationship with the Town Hall, which remains separated from the Public Safety Building by a small parking lot and landscaping, which were both part of the original Civic Center design. It also retains its relationship to the redwoods and Corte Madera Creek to the west. According to the original drawings, the Public Safety Building was originally surrounded by a generous amount of landscaping like the Town Hall. Over time, the landscaping was gradually paved over or built upon. Today, very little original landscaping remains at the side or the front of the building, though new landscaping along Sir Francis Drake Boulevard provides a hint of the original conditions. Though it is nominally a temporary structure, the modular building that has been located north of the Public Safety Building since 2006, also detracts from its setting.

- **Materials:** “Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.”

At least on its exterior, the Ross Public Safety Building retains integrity of materials because it appears to retain all of its original materials, including its stucco finish, wood trim, wood casement windows, terra cotta roofing materials, and several wood doors. Some parts of the interior retain their original materials as well, especially the two vehicle bays at the front of the firehouse and the stair leading to the second floor. Otherwise, the interior of the building has been incrementally remodeled so that it no longer retains its original materials in their original configuration.

- **Workmanship:** “Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.”

The Ross Public Safety Building retains the aspect of workmanship. The exterior of the building retains its original hand-troweled stucco finish, hand-tooled wood trim, and hand-laid terra cotta tile roofing. Certain hand-fabricated detailing, including the *canales*, the signage, and the vintage light fixtures on the front of the building remain present and intact.

- **Feeling:** “Feeling is a property’s expression of the aesthetic or historic sense of a particular period of time.”

The Ross Public Safety Building retains the aspect of feeling because it embodies the aesthetic sensibilities of the 1920s building boom and the Spanish Colonial Revival style that was popular during that decade.

- **Association:** “Association is the direct link between an important historic event or person and a historic property.”

The Ross Public Safety Building retains the aspect of association because it retains enough of its original appearance, when it was constructed as part of the Ross Civic Center in 1928, to recall this important event in the history of the Town government.

The Ross Public Safety Building retains in full the aspects of location, design, workmanship, feeling, and association. It partially retains the aspect of materials. It does not retain the aspect of setting.

## VII. Conclusion

Designed by John White and originally known as the Ross Firehouse, the Ross Public Safety Building was constructed in 1927-28 as part of the new Ross Civic Center. The building has served as the town's firehouse ever since, though in 1982 it was renamed the Ross Public Safety Building when the Ross Police Department moved in. Prior to that time the Police Department and the bulk of the rest of the Town's small government was housed in Ross Town Hall, which was also designed by John White and built in 1928. In 2012, the Town of Ross voted to consolidate its fire department with fire departments in the nearby communities of San Anselmo, Fairfax, and Sleepy Hollow to create the Ross Valley Fire Department. Over time, the Ross Public Safety Building has undergone several notable changes. Ca. 1982, when it became the Ross Public Safety Building, the open-air courtyards between the firehouse and the north and south wings were infilled, and ca. 1995 the Town built a major addition on the rear of the firehouse. With the exception of the original vehicle bays at the front of the firehouse and the stair leading to the second floor, the interior of the Ross Public Safety Building retains nothing of architectural or historical value. In 2009, the California Office of Historic Preservation determined that the Ross Public Safety Building was eligible for listing in the California Register as part of Section 106 review for the replacement of the Lagunitas Road Bridge. The analysis in this HRE concurs with this finding, further concluding that the building appears individually eligible under Criterion 1 (Events) for its association with the development of the Ross Civic Center in 1928 and under Criterion 3 (Design/Construction) as a reasonably intact example of a civic building designed in the Spanish Colonial Revival style. The architect, John White, is a master architect on the basis of his associations with Bernard Maybeck and his own work designing mansions and public buildings for the Bay Area elite during the first quarter of the twentieth century. The period of significance for the Ross Public Safety Building is 1928.

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## **Appendix I**

### **Bay Area Mold Pros January 3, 2020 and January 22, 2020 Reports**



January 3, 2020

Mr. Gavin Illingworth  
Deputy Chief, Ross Valley Fire Department  
777 San Anselmo Avenue  
San Anselmo, Ca. 94960

Dear Gavin,

This letter will serve to document the recent inspection of your fire station, along with a synopsis of your lab results, which were just released by the lab.

**1. PROBLEM DESCRIPTION AND MY OBSERVATIONS**

You described the problem as follows: You have seen mold in various locations in your fire house and wanted to find out the extent of mold growth. I saw issues which can affect mold growth, they are addressed in this report.

**2. AIR SAMPLES RESULTS**

Mold Score for Sample One (Exercise Room): 278  
Mold Score for Sample Two (Old gym): 300

**Score of over 250 is high and indicates a high probability of indoor fungal growth.**

**3. MOISTURE AND HUMIDITY**

My meters detected moisture in the flooring of both the toilet room and the shower room of the portable dormitory. The interior humidity in the exercise room measured **58** percent, which is elevated.

**4. CONCLUSION**

The results of your air sample tests suggest that **you have a mold problem that is originating within the exercise room and the "old gym" of the firehouse complex.** See following pages for additional conclusions.

**5. RECOMMENDATIONS**

I recommend that you contract with a professional mold remediation company to perform a thorough cleaning of the exercise room. The mold remediation company needs to follow standard remediation protocols (see end of report). The problems in the "old gym" are much more advanced, see subsequent pages for specific recommendations. Aside from cleaning the original single-pane windows and frames in the other rooms inspected, no further recommendations aside from using dehumidifiers where ever the humidity is elevated.

Sincerely,

Rick Bruce 1234567  
Bay Area Mold Pros

1. Certified Mold Inspector (CMI #83203 Micro Training)
2. Certified Mold Remediation Contractor (CMRC #83503 Micro Training)
3. Certified Mold Inspector (Compliance Training)
4. IAQA Indoor Environmentalist Course completion (FL Course 0000070)
5. National Association of Mold Remediators and Inspectors (Member)
6. California State Contractor's license 872600
7. Owner, Bruce Construction

4014 4867

Cleanup Gym  
HEPA filters  
De-humidifiers.  
Del Norby - update C  
link to files in Public Works



## 2.a. Mold Score Explanations

**What these numbers mean.** In essence, the lab personnel at EMLab are looking for two things. First, they are counting the mold spores found on the slides for both the outside (control) sample, and the inside (location) sample, and comparing the numbers. In the simplest terms, ***you should have fewer mold spores in your home than outside your home***, although this is affected by the weather. During the rainy season, some of the more common mold species are washed away, and result in low numbers for the outside sample. The lab accounts for this, and will substitute historical data by neighborhood during rainy spells.

The second thing the lab is looking for is if the species found inside (location sample) match the species found in the control sample (outside). ***If a species is detected in one of the interior samples, and it is not found in the outside control sample, this suggests that this particular mold species is being produced inside the home***, rather than being a part of the natural environment. All of the numbers listed below reflect the number of mold spores found *per cubic meter*.

When interpreting these numbers, it's important to remember that there are no national standards that establish unhealthy levels for mold. The general guideline that most people follow is this:

***If mold is actively growing within your home, you should both address the underlying cause of the mold, and have the mold removed. Even though there are no standards for specific levels of mold that are unhealthy, any mold can be unhealthy, and the safest approach that you can take to protect yourself and your family is to remove any mold found growing within your home, and address the issue(s) underlying why the mold is growing.***

If you have a health concern that you believe may be related to mold growth in your home, you should consult with a medical professional. It may be helpful to bring the Lab Report completed for this Mold Inspection (along with this cover letter), to any consultations so that your medical professional is aware of the specific mold spore species and spore counts that were present within your home at the time of this Mold Inspection.

---

**Exercise Room** Sample (Sample One, see page 4) Score of **278** was based primarily on the following mold spore counts: Penicillium / Aspergillus spore count was 6900, versus control spore count of 0. Cladosporium spore count was 1,300, versus control spore count of 640. Basidiospore spore count was 15,000, versus control spore count of 12,000.

---

**Old Gym** Sample (Sample Two, see page 5) Score of **300** was based primarily on the following mold spore counts: **Penicillium / Aspergillus spore count was 69,000**, versus control spore count of 0.

---

### Air Sample Protocol:

Per industry standards, the interior samples are taken for exactly five minutes with a Zefon Z-Lite IAQ Air Sampling Pump (2017 model) set at 15 cubic liters per minute. The exterior samples are taken for either five or ten minutes, depending on environmental factors, also at 15 cubic liters per minute. All air samples are marked at the time the samples are taken and delivered by Rick Bruce personally to EMLab P&K at 6000 Shoreline Court, suite 205, South San Francisco, Calif. 94080.

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## 3.a. Moisture Meter Assessment

The following moisture meters were used during this inspection:

Flir MR160 Moisture Meter (Thermal Imager).  
Tramex Moisture Encounter Plus (Electric Meter).

---

## 4.a. Additional Conclusions

According to the lab, there are two problem areas in the firehouse complex: the exercise room and the "old gym."

**Exercise Room.** The lab found three elevated mold spore counts in this room. See above for breakdown. I am not concerned about the numbers found here. Categories A and B are both elevated in comparison to the control (on the day of the inspection), but the totals are relatively common. The Category C numbers vary widely during the rainy months, and because this room has garage doors that can be opened, it would be very common to have lots of Basidiospores introduced on a rainy

day. It is possible that the numbers here are elevated due to the missing window and the prior water leaks here, but I attribute the numbers to the fact that the room is essentially a garage-like structure with an old concrete slab. See additional recommendations below regarding slabs and ground water. My only recommendation for this room is that you may wish to have it professionally cleaned. Again, I don't think there is a serious mold issue in the exercise room.

Old gym. This entire series of rooms is a big problem. There is visible water-staining in numerous areas. There is visible mold in numerous rooms on walls and ceilings and around window openings. The Category A (*Penicillium* / *Aspergillus*) mold spore count is exceedingly high here (69,000 mold spores per cubic meter as opposed to a control of 0 at the time of the inspection). There is no way to bring the mold spore count under control in these rooms without doing major remediation work. It is likely that mold growth is being exacerbated by ground water issues also. I recommend that these rooms be cordoned off and not used until they receive either a major mold remediation, or are essentially gutted and re-built. Should you decide to have a major mold remediation completed here, you should probably have additional testing done in every room so that you can begin to pinpoint the origin of the problem here. I believe that there are several points of origin in these rooms, and my advice as a general contractor is to either totally gut and rebuild this structure, or demolish it and replace it with a new structure (which would probably be more cost effective and would result in a better product). Humidity 68.

In all of the below listed spaces there is some visible mold on the original wood windows. This mold can be seen on the wood sashes, the wood frames, and some areas of the wood trim. This is common on these old single-pane windows, and can be controlled through periodic cleaning. These windows should eventually all be replaced with modern, dual-pane window inserts.

Paramedics sleeping area. See window notes above, no other problems seen here. Humidity 57.

Paramedics second sleeping room. Same as above, no problems seen.

Paramedics full bathroom. Same as above, no moisture in walls, no problems seen.

Paramedics hallway. Same as above, no problems seen.

Office. Some obvious water-staining is visible under some of the windows. No moisture found in water-stained plaster. Sample was taken here and the mold spore numbers were not elevated. Humidity 43.

TV Room. Same as above, no problems seen. Humidity 36.

Kitchen. Same as above, no problems seen. Humidity 43.

Portable dormitory. Aluminum windows, no problems seen. Humidity 56.

Portable dormitory toilet room. High moisture detected in flooring here, but no elevated mold spore count detected in air sample.

Portable dormitory shower room. Same as above, high moisture detected in flooring here. I recommend that the flooring substrate in both areas be removed, and that new sheet vinyl be installed over the new substrate.

---

### 5.a. Additional Recommendations

In addition to the recommendations described above:

- **Humidity.** In the exercise room and the old gym, the humidity is elevated. Regardless of any actual moisture issues present in the firehouse, an elevated humidity will exacerbate this condition and may encourage mold growth. In terms of what "ideal humidity" is for interior spaces, there is some disagreement here, with the upper limit varying from 50 to 60 percent. In my experience, having inspected hundreds of homes, homeowners who keep their humidity at under 50 percent do not have mold problems related to their humidity. *I recommend that you run dehumidifiers if your humidity measures greater than 50 percent. A very effective dehumidifier can be purchased on-line from Amazon for about \$200 (Homelabs manufacturer).*
- **Insulation.** Many (if not all) of the firehouse exterior walls are likely lacking in wall insulation. This exacerbates the tendency of exterior walls to "sweat" on the inside. This condensation can lead to mold growth on the lower portions of the walls. *Ideally, you will want to eventually insulate your exterior walls. In the interim, I recommend that all furniture and personal property be kept at least 2" from any walls to allow for maximum air flow.*
- **Bathroom Ventilation.** The older bathrooms do not have adequate ceiling fans that are vented to the outside. It is not only recommended that all bathrooms have an effective ceiling fan which is vented to the outside of the home, it has

actually been required as part of the building code for many years. These fans should be controlled via a humidistat, so that the fan remains running as long as is necessary following baths and showers. *I recommend that you have a high capacity (110 cfm) ceiling fan installed in the bathroom, and ensure that it is properly vented to the outside.*

- **Drainage.** The excessive humidity in the exercise room and the old gym rooms may be related to drainage issues. When there is ground water present in the crawl space of a structure (or under the concrete of a slab foundation home), it is often necessary to divert this ground water away from the home. The most effective means of doing this is to have a French drain system installed by a drainage contractor. These drains need to be installed at the proper depth, and these systems really require that both the design and the installation are completed by contractors who specialize in this type of work. *I recommend that you consult with a drainage expert to determine the best course of action to take in regards to drainage.*
  - **Vapor barriers.** The moisture in your crawl space under the old gym rooms appears to be making its way into the living space above. Once all standing water issues have been addressed, the installation of a vapor barrier in a crawl space can be very effective at preventing the moisture from the soil from making its way into the home above. These vapor barriers should be installed by contractors who are familiar with how best to install them. *I recommend that you consult with a vapor barrier installation company to determine if this product may assist with your moisture issues.*
- 

### Standard Remediation Protocols

The general rule of thumb for remediation is the following: if the area to be remediated is less than 10 square feet (and the mold growth is not severe), this can generally be cleaned by the homeowner, but if the area to be remediated is greater than 10 square feet, the remediation should be performed by a certified mold remediation company. The specific remediation and cleaning procedures to be employed should be determined by the certified mold remediation company chosen for this project. Standard remediation-protocols that are routinely utilized by professional remediation companies may include, but are not limited to, the following:

- Complete containment of the area where remediation will occur (and demolition if needed). At least one Decon chamber should be utilized as part of the containment.
- Use of plastic covers, plastic zip walls, wall zippers, etc.
- Use of appropriate PPE by all personnel performing remediation.
- Use of negative air pressure during remediation.
- Use of dehumidifier machines when needed following any needed demolition.
- Use of HEPA-filtered vacuums to clean all surfaces in remediation areas.
- Use of air scrubber machines during and following remediation (and demolition if needed). Note that air scrubbers should be in operation a minimum of 48 hours after the completion of any remediation and cleaning.
- Use of biocides and other cleaners as required.

It is also recommended that a mold inspection company take new air samples once the demolition and remediation has taken place, to ensure that all mold issues have been addressed. Note that any air scrubbers used during the demolition and cleaning phases should be shut down approximately 8 hours prior to the re-inspection.

Bay Area Mold Pros  
Rick Bruce  
1530 Claremont Dr.  
San Bruno, CA 94066 USA  
(650) 296-0323



**Eurofins EMLab P&K**

[www.MoldREPORT.com](http://www.MoldREPORT.com)

[info@MoldREPORT.com](mailto:info@MoldREPORT.com)

Approved by:

Dates of Analysis:  
MoldReport Spore trap: 01-02-2020

Technical Manager  
Murali Putty

Service SOPs: MoldReport Spore trap (EM-MY-S-1038)  
AIHA-LAP, LLC accredited service, Lab ID #102856

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All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

**Client: Bay Area Mold Pros**  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
 Date of Receipt: 12-30-2019  
 Date of Report: 01-02-2020

**MoldREPORT**  
 Eurofins EMLab P & K  
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## Laboratory Results

### MoldREPORT: Spore Trap Analysis

Location:	1: Exercise room		2: Paramedics		3: Office	
Comments (see below)	None		None		None	
Lab ID-Version‡:	11067232-1		11067233-1		11067234-1	
Analysis Date:	01/02/2020		01/02/2020		01/02/2020	
Spore types detected:	raw ct.	per m <sup>3</sup>	raw ct.	per m <sup>3</sup>	raw ct.	per m <sup>3</sup>
Aureobasidium	-	-	-	-	-	-
Basidiospores	278	15,000	4	210	5	270
Chaetomium	-	-	-	-	-	-
Cladosporium	25	1,300	-	-	6	320
Fusarium	-	-	-	-	-	-
Penicillium/Aspergillus types	13	690	-	-	-	-
Stachybotrys	-	-	-	-	-	-
Trichoderma	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-
Others	41	2,200	2	110	-	-
§ Total:		19,000		320		590
Additional Information:						
Hyphal fragments	-		-		-	
Skin cells	13 - 67		4,000 - 8,000		4,000 - 8,000	
Pollen	< 13		< 13		< 13	
Background debris (1-4)†	3		3		3	
Limit of detection	13		13		13	
Sample volume (liters)	75		75		75	

#### Comments:

**Basidiospores (basidiomycetes):** Basidiospores are extremely common outdoors and originate from fungi in gardens, forests, and woodlands. It is rare for the source of basidiospores to be indoors. However, basidiospores may be an indicator of wood decay.

**Cladosporium:** One of the most commonly found molds outdoors and frequently found growing indoors. Spores from Cladosporium are generally present in outdoor and indoor air, even in relatively clean, mold-growth-free, indoor environments. Levels vary based upon activity levels, weather conditions, dustiness, outside air exchange rates, and other factors.

**Penicillium/Aspergillus types:** Penicillium and Aspergillus are among the most common molds found growing both indoors and outdoors (even in relatively clean, mold-growth-free, indoor environments). Levels vary based upon activity levels, dustiness, weather conditions, outside air exchange rates, and other factors.

**Stachybotrys and other marker types:** Certain types of mold, such as Aureobasidium, Chaetomium, Fusarium, Trichoderma, and Ulocladium, are generally found in very low numbers outdoors. Consequently their presence indoors, even in relatively low numbers, is often an indication that these molds are originating from growth indoors. When present, these mold types are often the clearest indicator of a mold problem.

**Others:** Molds in the "Others" category are generally found outdoors in moderate numbers, and are therefore not considered markers of indoor growth.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

† Background debris is an indication of the amounts of non-biological particulate matter present on the slide (dust in the air) and is graded from 1 to 4 with 4 indicating the largest amounts.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total has been rounded to two significant figures to reflect analytical precision.

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 Contact: Rick Bruce  
 Project: Russ  
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## Laboratory Results

### MoldREPORT: Spore Trap Analysis

Location:	4: TV room		5: Kitchen		6: Dorm toilet	
Comments (see below)	None		None		None	
Lab ID-Version‡:	11067235-1		11067236-1		11067237-1	
Analysis Date:	01/02/2020		01/02/2020		01/02/2020	
Spore types detected:	raw ct.	per m <sup>3</sup>	raw ct.	per m <sup>3</sup>	raw ct.	per m <sup>3</sup>
Aureobasidium	-	-	-	-	-	-
Basidiospores	15	800	57	3,000	2	110
Chaetomium	-	-	-	-	-	-
Cladosporium	-	-	1	53	-	-
Fusarium	-	-	-	-	-	-
Penicillium/Aspergillus types	-	-	1	53	-	-
Stachybotrys	-	-	-	-	-	-
Trichoderma	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-
Others	2	67	8	430	-	-
§ Total:		870		3,600		110
Additional Information:						
Hyphal fragments	-		-		-	
Skin cells	80 - 4,000		80 - 4,000		80 - 4,000	
Pollen	< 13		< 13		< 13	
Background debris (1-4)†	3		3		3	
Limit of detection	13		13		13	
Sample volume (liters)	75		75		75	

#### Comments:

**Basidiospores (basidiomycetes):** Basidiospores are extremely common outdoors and originate from fungi in gardens, forests, and woodlands. It is rare for the source of basidiospores to be indoors. However, basidiospores may be an indicator of wood decay.

**Cladosporium:** One of the most commonly found molds outdoors and frequently found growing indoors. Spores from Cladosporium are generally present in outdoor and indoor air, even in relatively clean, mold-growth-free, indoor environments. Levels vary based upon activity levels, weather conditions, dustiness, outside air exchange rates, and other factors.

**Penicillium/Aspergillus types:** Penicillium and Aspergillus are among the most common molds found growing both indoors and outdoors (even in relatively clean, mold-growth-free, indoor environments). Levels vary based upon activity levels, dustiness, weather conditions, outside air exchange rates, and other factors.

**Stachybotrys and other marker types:** Certain types of mold, such as Aureobasidium, Chaetomium, Fusarium, Trichoderma, and Ulocladium, are generally found in very low numbers outdoors. Consequently their presence indoors, even in relatively low numbers, is often an indication that these molds are originating from growth indoors. When present, these mold types are often the clearest indicator of a mold problem.

**Others:** Molds in the "Others" category are generally found outdoors in moderate numbers, and are therefore not considered markers of indoor growth.

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The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total has been rounded to two significant figures to reflect analytical precision.

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 Contact: Rick Bruce  
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 Date of Sampling: 12-30-2019  
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## Laboratory Results

### MoldREPORT: Spore Trap Analysis

Location:	7: Dorm room		8: Old gym		9: Outside control	
Comments (see below)	None		None		None	
Lab ID-Version‡:	11067238-1		11067239-1		11067240-1	
Analysis Date:	01/02/2020		01/02/2020		01/02/2020	
Spore types detected:	raw ct.	per m3	raw ct.	per m3	raw ct.	per m3
Aureobasidium	-	-	-	-	-	-
Basidiospores	1	53	1	110	228	12,000
Chaetomium	-	-	-	-	-	-
Cladosporium	1	53	4	440	12	640
Fusarium	-	-	-	-	-	-
Penicillium/Aspergillus types	-	-	624	69,000	-	-
Stachybotrys	-	-	-	-	-	-
Trichoderma	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-
Others	1	13	1	110	34	1,500
§ Total:		120		70,000		14,000
Additional Information:						
Hyphal fragments	13		-		-	
Skin cells	4,000 - 8,000		4,000 - 8,000		13 - 67	
Pollen	13		27		67	
Background debris (1-4)†	3		3		3	
Limit of detection	13		13		13	
Sample volume (liters)	75		75		75	

#### Comments:

**Basidiospores (basidiomycetes):** Basidiospores are extremely common outdoors and originate from fungi in gardens, forests, and woodlands. It is rare for the source of basidiospores to be indoors. However, basidiospores may be an indicator of wood decay.

**Cladosporium:** One of the most commonly found molds outdoors and frequently found growing indoors. Spores from Cladosporium are generally present in outdoor and indoor air, even in relatively clean, mold-growth-free, indoor environments. Levels vary based upon activity levels, weather conditions, dustiness, outside air exchange rates, and other factors.

**Penicillium/Aspergillus types:** Penicillium and Aspergillus are among the most common molds found growing both indoors and outdoors (even in relatively clean, mold-growth-free, indoor environments). Levels vary based upon activity levels, dustiness, weather conditions, outside air exchange rates, and other factors.

**Stachybotrys and other marker types:** Certain types of mold, such as Aureobasidium, Chaetomium, Fusarium, Trichoderma, and Ulocladium, are generally found in very low numbers outdoors. Consequently their presence indoors, even in relatively low numbers, is often an indication that these molds are originating from growth indoors. When present, these mold types are often the clearest indicator of a mold problem.

**Others:** Molds in the "Others" category are generally found outdoors in moderate numbers, and are therefore not considered markers of indoor growth.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

† Background debris is an indication of the amounts of non-biological particulate matter present on the slide (dust in the air) and is graded from 1 to 4 with 4 indicating the largest amounts.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total has been rounded to two significant figures to reflect analytical precision.

Bay Area Mold Pros  
Rick Bruce  
1530 Claremont Dr.  
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**Eurofins EMLab P&K**

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[info@MoldREPORT.com](mailto:info@MoldREPORT.com)

Approved by:

Technical Manager  
Murali Putty

Dates of Analysis:  
MoldReport Spore trap: 01-02-2020

Service SOPs:

MoldReport Spore trap (EM-MY-S-1038)†

†AIHA-LAP, LLC accredited service, Lab ID #102856

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.



**Client: Bay Area Mold Pros**

Contact: Rick Bruce

Project: Russ

Date of Sampling: 12-30-2019

Date of Receipt: 12-30-2019

Date of Report: 01-02-2020

**MoldREPORT**

Eurofins EMLab P &amp; K

6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080

(866) 888-6653 Fax (623) 780-7695

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## Table of Contents

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Thank you for choosing MoldREPORT™ from Eurofins EMLab P&K. Our mission is to provide industry leadership for the assessment of mold in the home indoor environment.

Your MoldREPORT™ is designed and intended for use by professional inspectors in office and residential home inspections to help in the assessment of mold growth in the living areas sampled by professional inspectors. Our laboratory analysis is based on the samples submitted to Eurofins EMLab P&K. Please read the entire report to fully understand the complete MoldREPORT™ process. The following is a summary of the report sections:

- 1. Detailed Results of Sample Analysis** - Laboratory results from the samples collected at the site.
- 2. Understanding Your Sample Analysis Results** - Detailed summary of how to understand the analytical results from the air samples and/or surface samples including interpretive guidelines.
- 3. Important Information, Terms and Conditions** - General information to help you understand and interpret your MoldREPORT™, including important terms, conditions and applicable legal provision relating to this report.
- 4. Scope and Limitations** - Important information regarding the scope of the MoldREPORT™ system, and limitations of mold inspection, air sampling, and surface sampling.
- 5. Glossary** - Definitions and descriptions of frequently used terms and commonly found mold.
- 6. References and Resources** - Literature, websites, and other materials that can provide more in-depth information about mold and indoor air quality.

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EMLab ID: 2324935, Page 2 of 22

**Client: Bay Area Mold Pros**  
 Contact: Rick Bruce  
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 Date of Sampling: 12-30-2019  
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### Summary of Sample Analysis Results

**Do not take any action based on the results of this report until you have read the entire report.**

#### Air Sample Summary:

The MoldSCORE™ was in the HIGH range for the following area(s): 1, 8. A high MoldSCORE™ indicates a high likelihood of mold growth in the area tested at the time of the inspection. If mold growth is in fact present, it should be cleaned or physically removed using appropriate controls and precautions by a trained professional and any associated water source that led to the problem should also be corrected.

The MoldSCORE™ was in the LOW range for the following area(s): 2, 3, 4, 5, 6, 7. A low MoldSCORE™ indicates the air sample did not detect, relative to the outside air, the presence of indoor mold growth in this room at the time of sampling.

Please see the sections titled "Detailed Results of the Air Sample Analysis" and "Understanding Your Air Sample Analysis Results" for important additional information.

Location	MoldSCORE™				Exposure Level					
	Lower <110	200	Higher 300	Mold Score	Lower <200	1K	10K	Higher >70K	Location spores/m3	Outside spores/m3
1: Exercise room * see p. 4 for details				278					19,000	14,000
2: Paramedics * see p. 5 for details				100					320	14,000
3: Office * see p. 6 for details				119					590	14,000
4: TV room * see p. 7 for details				106					870	14,000
5: Kitchen * see p. 8 for details				108					3,500	14,000
6: Dorm toilet * see p. 9 for details				102					110	14,000
7: Dorm room * see p. 10 for details				103					120	14,000
8: Old gym * see p. 11 for details				300					70,000	14,000

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**Detailed Results of the Air Sample Analysis**

Location Lab ID-version: ‡ 11067232-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1	
	Lower <110	Higher 200	Mold Score 300	Lower <200	Higher 1K	Location spores/m <sup>3</sup> raw ct	Higher 10K	>70K	spores/m <sup>3</sup>
1: Exercise room								9 14,000 274	

**Indicators of Mold Growth  
Indoors**

	Indicator Mold Source Assessment* (Likelihood spores originated inside)			Indicator Exposure Level (Shown on a log scale)				Outside	
	Lower <110	Higher 200	Mold Score 300	Lower <200	Higher 1K	Location spores/m <sup>3</sup> raw ct	Higher 10K	>70K	spores/m <sup>3</sup>
A) <i>Penicillium/Aspergillus</i> types**								< 13 0	
B) <i>Cladosporium</i> species spores								640 12	
C) Basidiospores								12,000 228	
D) "Marker" spore types***								< 13 0	
E) "Other" spore types***, ****								106 8	

**Other Sample Information**

**Sample clarity & visibility**

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

**Other "normal trapping" spores\*\*\***

Exposure Level (Highly unlikely to be from indoors)				Location		Outside	
Lower <200	Higher 1K	10K	>70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup>	raw ct	raw ct
				2,200 41	1,400	26	

Sample volume (liters)	Location	Outside
	75	75

**Comments**

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

\*\*\*\* The spores of smuts, *Periconia*, and myxomycetes look similar and cannot generally be distinguished by spore trap analysis. Smuts are plant pathogens and are not likely to be on indoor surfaces. *Periconia* is rarely found growing indoors. However, myxomycetes, the spores of which look similar, can occasionally grow indoors. Because there is a small probability of indoor sources, these spore types are indicated in the "other" spore types category. False positives may result if the spores are smuts, not myxomycetes.

‡A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Total spores/m<sup>3</sup> has been rounded to two significant figures to reflect analytical precision.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

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**Client: Bay Area Mold Pros**  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
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 6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080  
 (866) 888-6653 Fax (623) 780-7695

**Detailed Results of the Air Sample Analysis**

Location Lab ID-version: † 11067233-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1		
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	
2: Paramedics								320	6	14,000 9 274

**Indicators of Mold Growth**

**Indoors**

A) *Penicillium/Aspergillus* types\*\*

Indicator Mold Source Assessment* (Likelihood spores originated inside)	Indicator Exposure Level (Shown on a log scale)				Outside					
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	
A) <i>Penicillium/Aspergillus</i> types**								<13	0	<13 0

B) *Cladosporium* species spores

B) <i>Cladosporium</i> species spores								<13	0	640 12
---------------------------------------	--	--	--	--	--	--	--	-----	---	-----------

C) Basidiospores

C) Basidiospores								210	4	12,000 228
------------------	--	--	--	--	--	--	--	-----	---	---------------

D) "Marker" spore types\*\*\*

D) "Marker" spore types***								<13	0	<13 0
----------------------------	--	--	--	--	--	--	--	-----	---	----------

E) "Other" spore types\*\*\*, \*\*\*\*

E) "Other" spore types***, ****								<13	0	106 8
---------------------------------	--	--	--	--	--	--	--	-----	---	----------

**Other Sample Information**

**Sample clarity & visibility**

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

**Other "normal trapping" spores\*\*\***

Exposure Level (Highly unlikely to be from indoors)				Location		Outside	
Lower <200	1K	10K	Higher >70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct
				110	2	1,400	26

Sample volume (liters)	Location	Outside
	75	75

**Comments**

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

\*\*\*\* The spores of smuts, *Periconia*, and myxomycetes look similar and cannot generally be distinguished by spore trap analysis. Smuts are plant pathogens and are not likely to be on indoor surfaces. *Periconia* is rarely found growing indoors. However, myxomycetes, the spores of which look similar, can occasionally grow indoors. Because there is a small probability of indoor sources, these spore types are indicated in the "other" spore types category. False positives may result if the spores are smuts, not myxomycetes.

†A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Total spores/m<sup>3</sup> has been rounded to two significant figures to reflect analytical precision. The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

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 Contact: Rick Bruce  
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 Date of Sampling: 12-30-2019  
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 6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080  
 (866) 888-6653 Fax (623) 780-7695

**Detailed Results of the Air Sample Analysis**

<b>Location</b> <b>Lab ID-version: ‡ 11067234-1</b> 3: Office	<b>Overall Mold Source Assessment*</b> (Likelihood spores originated inside)			<b>Overall Exposure Level</b> (Shown on a log scale)				Outside ‡11067240-1		
	Lower <110	Higher 200	Mold Score 300	Lower <200	Higher 1K	Location spores/m <sup>3</sup>	Higher 10K	Location raw ct	spores/m <sup>3</sup>	raw ct
								9	14,000	274

**Indicators of Mold Growth**  
**Indoors**

- A) *Penicillium/Aspergillus* types\*\*
- B) *Cladosporium* species spores
- C) Basidiospores
- D) "Marker" spore types\*\*\*
- E) "Other" spore types\*\*\*, \*\*\*\*

<b>Indicator Mold Source Assessment*</b> (Likelihood spores originated inside)	<b>Indicator Exposure Level</b> (Shown on a log scale)				Outside						
	Lower <110	Higher 200	Mold Score 300	Lower <200	Higher 1K	Location spores/m <sup>3</sup>	Higher 10K	Location raw ct	spores/m <sup>3</sup>	raw ct	
								<13	0	<13	0
								640	12		
								12,000	228		
								<13	0	<13	0
								106	8		

**Other Sample Information**

Sample clarity & visibility

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

Other "normal trapping" spores\*\*\*

<b>Exposure Level</b> (Highly unlikely to be from indoors)							
Lower <200	Higher 1K	Location spores/m <sup>3</sup>	Higher 10K	Location raw ct	Outside spores/m <sup>3</sup>	Outside raw ct	
				<13	0	1,400	26
<b>Sample volume (liters)</b>					<b>Location</b>	<b>Outside</b>	
					75	75	

Comments

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

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**Detailed Results of the Air Sample Analysis**

Location Lab ID-version: ‡ 11067235-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1			
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	Higher 10K	>70K spores/m <sup>3</sup>	Location raw ct	Outside spores/m <sup>3</sup>	raw ct	
4: TV room								870	17	14,000	274

**Indicators of Mold Growth**

**Indoors**

- A) *Penicillium/Aspergillus* types\*\*
- B) *Cladosporium* species spores
- C) Basidiospores
- D) "Marker" spore types\*\*\*
- E) "Other" spore types\*\*\*, \*\*\*\*  
 1) Smuts, *Periconia*, Myxomycetes

Indicator	Indicator Mold Source Assessment* (Likelihood spores originated inside)			Indicator Exposure Level (Shown on a log scale)				Outside			
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	Higher 10K	>70K spores/m <sup>3</sup>	Location raw ct	Outside spores/m <sup>3</sup>	raw ct	
A) <i>Penicillium/Aspergillus</i> types**								<13	0	<13	0
B) <i>Cladosporium</i> species spores								<13	0	640	12
C) Basidiospores								800	15	12,000	228
D) "Marker" spore types***								<13	0	<13	0
E) "Other" spore types***, ****								13	1	106	8

**Other Sample Information**

**Sample clarity & visibility**

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

**Other "normal trapping" spores\*\*\***

Exposure Level (Highly unlikely to be from indoors)										
Lower <200	1K	Higher 10K	>70K spores/m <sup>3</sup>	Location		Outside				
				raw ct	spores/m <sup>3</sup>	raw ct	spores/m <sup>3</sup>	Location	Outside	
				53	1	1,400	26			
Sample volume (liters)							75	75		

**Comments**

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

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\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

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‡A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Total spores/m<sup>3</sup> has been rounded to two significant figures to reflect analytical precision.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

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EMLab P&K, LLC

**Client: Bay Area Mold Pros**  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
 Date of Receipt: 12-30-2019  
 Date of Report: 01-02-2020

**MoldREPORT**  
 Eurofins EMLab P & K  
 6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080  
 (866) 888-6653 Fax (623) 780-7695

**Detailed Results of the Air Sample Analysis**

Location Lab ID-version: ‡ 11067236-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1		
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	Outside spores/m <sup>3</sup> raw ct	
5: Kitchen	[Progress bar: 108]			[Progress bar: 3,500]				3,500	67	14,000 274

**Indicators of Mold Growth**  
**Indoors**

Indicator	Indicator Mold Source Assessment* (Likelihood spores originated inside)			Indicator Exposure Level (Shown on a log scale)				Outside		
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	Outside spores/m <sup>3</sup> raw ct	
A) <i>Penicillium/Aspergillus</i> types**	[Progress bar: 108]			[Progress bar: 53]				53	1	< 13 0
B) <i>Cladosporium</i> species spores	[Progress bar: 100]			[Progress bar: 53]				53	1	640 12
C) Basidiospores	[Progress bar: 100]			[Progress bar: 3,000]				3,000	57	12,000 228
D) "Marker" spore types***	[Progress bar: 100]			[Progress bar: <13]				< 13	0	< 13 0
E) "Other" spore types***,****	[Progress bar: 100]			[Progress bar: <13]				< 13	0	106 8

**Other Sample Information**

**Sample clarity & visibility**

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

**Other "normal trapping" spores\*\*\***

Exposure Level (Highly unlikely to be from indoors)				Location		Outside	
Lower <200	1K	10K	Higher >70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct
[Progress bar: 430]				430	8	1,400	26

Sample volume (liters)	Location	Outside
	75	75

**Comments**

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

\*\*\*\* The spores of smuts, *Periconia*, and myxomycetes look similar and cannot generally be distinguished by spore trap analysis. Smuts are plant pathogens and are not likely to be on indoor surfaces. *Periconia* is rarely found growing indoors. However, myxomycetes, the spores of which look similar, can occasionally grow indoors. Because there is a small probability of indoor sources, these spore types are indicated in the "other" spore types category. False positives may result if the spores are smuts, not myxomycetes.

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EMLab P&K, LLC

Client: Bay Area Mold Pros  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
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**MoldREPORT**  
 Eurofins EMLab P & K  
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 (866) 888-6653 Fax (623) 780-7695

### Detailed Results of the Air Sample Analysis

Location Lab ID-version: ‡ 11067237-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1			
	Lower <110	Higher 200	Mold Score 300	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	Location spores/m <sup>3</sup> raw ct	Outside spores/m <sup>3</sup> raw ct	
6: Dorm toilet	[Progress bar]			[Progress bar]				110	2	14,000	274

#### Indicators of Mold Growth

##### Indoors

- A) Penicillium/Aspergillus types\*\*
- B) Cladosporium species spores
- C) Basidiospores
- D) "Marker" spore types\*\*\*
- E) "Other" spore types\*\*\*,\*\*\*\*

Indicator Mold Source Assessment* (Likelihood spores originated inside)	Indicator Exposure Level (Shown on a log scale)				Location		Outside				
	Lower <110	Higher 200	Mold Score 300	Lower <200	1K	10K	Higher >70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct		
A) Penicillium/Aspergillus types**	[Progress bar]			[Progress bar]				< 13	0	< 13	0
B) Cladosporium species spores	[Progress bar]			[Progress bar]				< 13	0	640	12
C) Basidiospores	[Progress bar]			[Progress bar]				110	2	12,000	228
D) "Marker" spore types***	[Progress bar]			[Progress bar]				< 13	0	< 13	0
E) "Other" spore types***,****	[Progress bar]			[Progress bar]				< 13	0	106	8

#### Other Sample Information

##### Sample clarity & visibility

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

##### Other "normal trapping" spores\*\*\*

Exposure Level (Highly unlikely to be from indoors)				Location		Outside	
Lower <200	1K	10K	Higher >70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct
[Progress bar]				< 13	0	1,400	26

Sample volume (liters)	Location	Outside
	75	75

#### Comments

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

\*\*\*\* The spores of smuts, *Periconia*, and myxomycetes look similar and cannot generally be distinguished by spore trap analysis. Smuts are plant pathogens and are not likely to be on indoor surfaces. *Periconia* is rarely found growing indoors. However, myxomycetes, the spores of which look similar, can occasionally grow indoors. Because there is a small probability of indoor sources, these spore types are indicated in the "other" spore types category. False positives may result if the spores are smuts, not myxomycetes.

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Total spores/m<sup>3</sup> has been rounded to two significant figures to reflect analytical precision.

The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

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Client: Bay Area Mold Pros  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
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MoldREPORT  
 Eurofins EMLab P & K  
 6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080  
 (866) 888-6653 Fax (623) 780-7695

Detailed Results of the Air Sample Analysis

<b>Location</b> <b>Lab ID-version: ‡ 11067238-1</b> 7: Dorm room	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1	
	Lower <110	Higher 200	Mold 300 Score	Lower <200	Higher 1K	Location 10K >70K spores/m <sup>3</sup>	raw ct	spores/m <sup>3</sup>	raw ct
	103			120 3				14,000	274

Indicators of Mold Growth  
 Indoors

	Indicator Mold Source Assessment* (Likelihood spores originated inside)			Indicator Exposure Level (Shown on a log scale)				Outside	
	Lower <110	Higher 200	Mold 300 Score	Lower <200	Higher 1K	Location 10K >70K spores/m <sup>3</sup>	raw ct	spores/m <sup>3</sup>	raw ct
A) <i>Penicillium/Aspergillus</i> types**	100			< 13 0				< 13	0
B) <i>Cladosporium</i> species spores	103			53 1				640	12
C) Basidiospores	100			53 1				12,000	228
D) "Marker" spore types***	100			< 13 0				< 13	0
E) "Other" spore types***, ****	102			13 1				106	8
1) Smuts, <i>Periconia</i> , <i>Myxomycetes</i>									

Other Sample Information

Sample clarity & visibility

	Good	Moderate	Poor
Location		X	
Outside		X	

\*Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

Other "normal trapping" spores\*\*\*

Exposure Level (Highly unlikely to be from indoors)								
Lower <200	Higher 1K	Location 10K >70K spores/m <sup>3</sup>	raw ct	Outside spores/m <sup>3</sup>		raw ct		
< 13 0				1,400	26			
							Location	Outside
Sample volume (liters)							75	75

Comments

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

\*\* The spores of *Penicillium* and *Aspergillus* (and others such as *Acremonium* and *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by spore trap sampling methods. Also some species with very small spores are easily missed, and may be undercounted. The *Penicillium/Aspergillus* indicator operates on the assumption that the majority of the spores in this category are, in fact, *Penicillium* or *Aspergillus*.

\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

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Total spores/m<sup>3</sup> has been rounded to two significant figures to reflect analytical precision.

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**Client: Bay Area Mold Pros**  
 Contact: Rick Bruce  
 Project: Russ  
 Date of Sampling: 12-30-2019  
 Date of Receipt: 12-30-2019  
 Date of Report: 01-02-2020

**MoldREPORT**  
 Eurofins EMLab P & K  
 6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080  
 (866) 888-6653 Fax (623) 780-7695

**Detailed Results of the Air Sample Analysis**

Location Lab ID-version: ‡ 11067239-1	Overall Mold Source Assessment* (Likelihood spores originated inside)			Overall Exposure Level (Shown on a log scale)				Outside ‡11067240-1 9			
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	Outside spores/m <sup>3</sup> raw ct		
8: Old gym								70,000	630	14,000	274

**Indicators of Mold Growth**  
**Indoors**

- A) *Penicillium/Aspergillus* types\*\*
- B) *Cladosporium* species spores
- C) Basidiospores
- D) "Marker" spore types\*\*\*
- E) "Other" spore types\*\*\*, \*\*\*\*

Indicator	Indicator Mold Source Assessment* (Likelihood spores originated inside)			Indicator Exposure Level (Shown on a log scale)				Outside			
	Lower <110	Higher 200	Mold 300 Score	Lower <200	1K	10K	Higher >70K	Location spores/m <sup>3</sup> raw ct	Outside spores/m <sup>3</sup> raw ct		
A) <i>Penicillium/Aspergillus</i> types**								69,000	624	< 13	0
B) <i>Cladosporium</i> species spores								440	4	640	12
C) Basidiospores								110	1	12,000	228
D) "Marker" spore types***								< 13	0	< 13	0
E) "Other" spore types***, ****								< 13	0	106	8

**Other Sample Information**

**Sample clarity & visibility**

	Good	Moderate	Poor
Location		X	
Outside		X	

"Good" = background debris is light enough to pose no difficulty in analyzing air samples.  
 "Poor" = background debris so heavy that it poses a significant difficulty in analyzing the air sample accurately. Results are most likely lower limits.

**Other "normal trapping" spores\*\*\***

Exposure Level (Highly unlikely to be from indoors)				Location		Outside	
Lower <200	1K	10K	Higher >70K	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct	spores/m <sup>3</sup> raw ct
				110	1	1,400	26

Sample volume (liters)	Location	Outside
	75	75

**Comments**

Location	None
Outside	None

\* Rated on a scale from low to high. A MoldSCORE™ rating of <150 is low and indicates a low probability of spores originating inside. A MoldSCORE™ rating of >250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A MoldSCORE™ between 150 and 250 indicates a moderate likelihood of indoor fungal growth. Eurofins EMLab P&K's MoldSCORE™ analysis is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the MoldSCORE™ analysis on other samples (like wall cavity samples) will lead to misleading results.

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\*\*\* The spores reported in this category come from many different mold types. As a result, the mold types represented by the counts for the "Location" sample may be different than the mold types represented by the counts for the outside sample. The totals shown are the summation of the rounded values for the spores types in the category and may contain more than two significant figures.

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The analytical sensitivity is the spores/m<sup>3</sup> divided by the raw count, expressed in spores/m<sup>3</sup>. The limit of detection is the analytical sensitivity (in spores/m<sup>3</sup>) multiplied by the sample volume (in liters) divided by 1000 liters.

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**MoldREPORT**

Eurofins EMLab P &amp; K

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## Understanding Your Air Sample Analysis Results

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### Description of the Air MoldREPORT™ Analysis

Mold spores are present in virtually all environments, both indoors and outdoors, with a few notable exceptions such as industrial clean rooms and hospital organ transplant rooms. Generally, in "normal" or "clean" indoor environments, indoor spore levels are lower, on average, than outdoor levels. However, even the most simple rules (such as "inside/outside" ratios) are not always appropriate for determining whether there is a source of mold growth indoors, and may provide false or misleading results. One reason these simple methods do not always work is because both outdoor and indoor spores levels vary widely due to factors such as weather conditions and activity levels within the room. For example, even in a "normal" home, spore levels can be higher than outdoors at certain times, such as after vacuuming (when airborne indoor levels could be unusually high) or after a heavy snow (when outdoor levels could be unusually low).

MoldREPORT™ is designed and intended to provide an easily understood report for residential home inspections to help in the assessment of mold growth in the living areas sampled. MoldREPORT™ relies on non-invasive and non-destructive tests, so it cannot guarantee that hidden mold problems will be detected and reported. MoldREPORT™ results apply only to the rooms or areas tested, at the time of sampling. Factors taken into consideration include, but are not limited to, the distribution of spore types, absolute levels inside and outside, relative levels inside and outside, the range and variation of spore levels that normally occur outside, and the types of spores present.

Providing you with a helpful, understandable and top quality interpretation requires special expertise. Eurofins EMLab P&K recognizes this and has taken the following steps to provide the best possible interpretation of your air sampling results.

1. Your samples were analyzed by Eurofins EMLab P&K,
2. We utilize the proprietary MoldREPORT™ analysis system, which was developed by a team including leading professionals in the indoor air quality (IAQ) industry.

### MoldSCORE™

The MoldSCORE™ indicates the likelihood, based upon the air sample laboratory data, that there is unusual or excessive mold growth in the properly sampled indoor area(s). It is calculated using Eurofins EMLab P&K's proprietary MoldREPORT™ system, based upon the indicator scores described in the following paragraphs. When the on-site inspection and sampling are done properly, MoldREPORT™ is less likely to give false results than other, simpler methods of interpretation often employed for routine home inspections, such as ratio analysis. It is important to bear in mind that any analytical method, findings, and interpretation should be used with a degree of caution and common sense. Any decisions related to health should be made in consultation with a medical doctor, and nothing in this report is intended to provide medical advice or indicate whether a medical or safety problem exists.

### Descriptions of the indicators:

#### Quantity and concentration of *Penicillium*/*Aspergillus* spore types

This score indicates the likelihood that spores of *Penicillium* or *Aspergillus* present in the indoor sample originated from indoor sources. A high score suggests that there is a high probability that *Penicillium* or *Aspergillus* is originating indoors, such as from active mold growth. A low score indicates that the spores present are more likely to have originated from outdoor sources and come inside through doors and windows, carried in on people's clothing, or similar methods. *Penicillium* and *Aspergillus* are among the most common molds found growing indoors and are one of the more commonly found molds outside as well. Their spores are frequently present in both outdoor and indoor air, even in relatively clean, mold-growth-free, indoor environments. Additionally, their levels vary significantly based upon activity levels, dustiness, weather conditions, outside air exchange rates, and other factors.

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## **Understanding Your Air Sample Analysis Results (continued)**

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### **Quantity and concentration of *Cladosporium* spores**

This score indicates the likelihood that spores of *Cladosporium* present in the indoor sample originated from indoor sources. A high rating indicates that there is probably a source of *Cladosporium* spores in this location. *Cladosporium* is one of the most commonly found molds outdoors and is also frequently found growing indoors. Even more so than *Penicillium* and *Aspergillus*, spores from *Cladosporium* are generally present in outdoor and indoor air, even in relatively clean, mold-growth-free, indoor environments. Its levels also vary based upon activity levels, weather conditions, dustiness, outside air exchange rates, and other factors.

### **Quantity and concentration of basidiospores**

This score indicates the likelihood that basidiospores present in the indoor sample originated from indoor sources. Basidiospores are extremely common outdoors and originate from fungi in gardens, forests, and woodlands. It is rare for the source of basidiospores to be indoors because basidiospores are produced by a group of fungi that includes mushrooms and other "macrofungi" (and are not technically molds). Their concentrations can be extremely high outdoors during wet conditions such as rain. Nevertheless, in certain conditions basidiospores can be produced indoors, and a high rating indicates that there is probably a source of basidiospores indoors. One reason basidiospores are important is that they can be an indicator of wood decay (e.g. "dry rot"), a condition that can dramatically reduce the structural integrity of a building.

### **Quantity and concentration of "marker" spore types**

This score indicates the likelihood that certain distinctive types of mold present in the indoor sample originated from indoor sources. Certain types of mold are generally found in very low numbers outdoors. Consequently, their presence indoors, even in relatively low numbers compared to *Penicillium*, for example, is often an indication that these molds are originating from growth indoors. When present, these mold types are often the clearest indicator of a mold problem. Note, however, that the absence of marker spore types does not mean that a mold problem does not exist in a house; it just means that if a problem is present, it either involves types of mold that are more commonly found both indoors and outdoors, or that the spores from these molds were not airborne at the time of sampling.

### **Quantity and concentration of "other" spore types**

This score indicates the likelihood that other types of mold present in the indoor sample originated from indoor sources. This score includes a heterogeneous group of genera that are not covered by any of the scores discussed above, and so it is difficult to make generalizations about this group. Molds in the "other" category are generally found outdoors in moderate numbers, and are therefore not considered markers of indoor growth. They are frequently found indoors but in lower numbers compared to *Cladosporium* and *Penicillium/Aspergillus* spores.

### **Other Sample Information:**

#### **Sample clarity and visibility**

Air samples collect dirt and debris in addition to mold spores. Higher levels of debris make analysis more difficult, because they obscure the analyst's view of spores and can therefore lead to undercounting of the mold spores present. When sample clarity and visibility is rated "poor", the analytical results should be regarded as minimal and actual counts may be higher than reported.

#### **Other "normal trapping" spores**

Some molds do not grow on wet building materials and, consequently, are not usually indicative of building problems, or growth on building surfaces. Strict plant pathogens, for example, even if present in high numbers indoors, are not an indication of a building leak or mold growth on a wall or carpet. This section of the report focuses on the exposure level that may be due to these spore types.

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Project: Russ

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**Understanding Your Air Sample Analysis Results (continued)**

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**Sample volume**

The "sample volume" indicates the volume of air sampled and is reported in liters. A high volume indicates a greater sensitivity, but is more likely to result in poor sample clarity and visibility. A low volume is more likely to have good sample clarity and visibility, but has less sensitivity.

**Comments**

This is where analysts can comment on unusual details or add additional information that is not captured by the other areas of the air sampling report.

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## **Interpretive Guidelines to MoldSCORE™ Levels**

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### **MoldSCORE™ Level: LOW**

A low MoldSCORE™ indicates the air sample did not detect, relative to the outside air, the presence of indoor mold growth in this room at the time of sampling. This result, by itself, is evidence for, but does not prove, the absence of indoor mold growth in the location sampled.

Mold is a living organism that can grow very rapidly under certain conditions. If any portion of the room tested is, or has been, damp for an extended period since the time of testing, the likelihood of mold growth may have increased substantially since the time of the inspection.

### **MoldSCORE™ Level: MODERATE**

The air sampling MoldSCORE™ indicated the possibility of mold growth indoors. Generally, a MODERATE level means that the results are inconclusive, and suggests that a more detailed inspection may make sense if there are any other reasons to believe that mold growth could be a problem in this location. Indoor mold growth is a possibility, but was not confirmed in the areas sampled at the time of the inspection. Factors such as recent cleaning, HVAC cycles, high winds, rain, or other indoor or outdoor conditions could have contributed to a MODERATE result in the absence of indoor mold growth. If mold growth is found, regardless of the magnitude of the growth, it is recommended that the growth be physically removed using appropriate controls and precautions. If mold has been located and removed, it is also important to identify and correct the source of moisture or dampness that allowed the mold to grow. If the affected area becomes moist again, mold growth will occur again. We recommend that you consult a professional if you are not familiar with how to locate and safely remove mold growth or how to identify and correct moisture problems that may exist.

Mold is a living organism that can grow very rapidly under certain conditions. If any portion of the room tested is, or has been, damp for an extended period since the time of testing, the likelihood of mold growth may have increased substantially since the time of the inspection.

### **MoldSCORE™ Level: HIGH**

The air sampling MoldSCORE™ indicated a high likelihood of mold growth in the area tested at the time of the inspection. This result is NOT necessarily an indication that any such mold growth was extensive. If mold growth is found, regardless of the magnitude of the growth, it is recommended that the growth be physically removed using appropriate controls and precautions. If mold has been located and removed, it is also important to identify and correct the source of moisture or dampness that allowed the mold to grow. If the affected area becomes moist again, mold growth will occur again. We recommend that you consult a professional if you are not familiar with how to locate and safely remove mold growth or how to identify and correct moisture problems that may exist.

### **Health concerns**

Neither this report nor any MoldSCORE™ rating is intended to provide medical advice, nor shall it be interpreted as an indicator of potential medical or safety problems. If you have concerns or questions relating to your health, please contact your physician for advice.

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**Important Information, Terms and Conditions Relating to your MoldREPORT™**

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The study and understanding of molds is a progressing science. Because different methods of sampling, collection and analysis exist within the indoor air quality industry, different inspectors or analysts may not always agree on the mold concentrations present in a given environment. Additionally, the airborne levels of mold change frequently and by large amounts due to many factors including activity levels, weather, air exchange rates (indoors), and disturbance of growth sites. It is possible for report interpretations and ranges of accuracy to vary since comprehensive, generally accepted industry standards do not currently exist for indoor air quality inspections of mold in residential indoor environments. MoldREPORT™ is intended to provide an analysis based upon samples taken at the site at the time of the inspection. Mold levels can and do change rapidly, especially if home building materials or contents remain wet for more than 24 hours, or if they are wet frequently. MoldREPORT™ is not intended to provide medical or healthcare advice. All allergy or medical-related questions and concerns, including health concerns relating to possible mold exposure, should be directed to a qualified physician. If this report indicates scores that are higher than in typical indoor living spaces relative to the outdoor environment, or indicates any findings that are of concern to you, further evaluation by a trained mold professional or a Certified Industrial Hygienist (CIH) may be advisable.

**Warranties, legal disclaimers and limitations**

MoldREPORT™ is designed and intended for use only in residential home inspections to help in the assessment of mold growth in the living areas sampled. Our laboratory analysis and report are based on the samples submitted to Eurofins EMLab P&K. The inspection(s) and sampling should be performed only by a licensed and professional home inspector, environmental mold specialist, industrial hygienist or residential appraiser trained and qualified to conduct mold inspections in residential buildings. Client agrees to these conditions for the on-site project inspection.

This MoldREPORT™ is generated by Eurofins EMLab P&K at the request of, and for the exclusive use of, the Eurofins EMLab P&K client named on this report. The analysis of the test samples is performed by Eurofins EMLab P&K. Eurofins EMLab P&K's policy is that reports and test results will not be released to any third party without prior written consent from Eurofins EMLab P&K's client. This report applies only to the samples taken at the time, place and location referenced in the report and received by Eurofins EMLab P&K, and to the property and weather conditions existing at that time only. Please be aware, however, that property conditions, inspection findings and laboratory results can and do change over time relative to the original sampling due to changing conditions, the normal fluctuation of airborne mold, and many other factors. Client and reader are advised that Eurofins EMLab P&K does not furnish, and has no responsibility for, the inspector or inspection service that performs the inspection or collects the test samples. It is the responsibility of the end-user of this report to select a properly trained professional to conduct the inspection and collect appropriate samples for analysis and interpretation by MoldREPORT™. None of Eurofins EMLab P&K, Eurofins EMLab P&K or their affiliates, subsidiaries, suppliers, employees, agents, contractors and attorneys (each an "Eurofins EMLab P&K-related party") are able to make and do not make any determinations as to the safety or health condition of a property in this report. The client and client's customer are solely responsible for the use of, and any determinations made from, this report, and no Eurofins EMLab P&K-related party shall have any liability with respect to decisions or recommendations made or actions taken by either the client or the client's customer based on the report.

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In no event will any Eurofins EMLab P&K-related party be liable for any special, indirect, incidental, punitive, or consequential damages of any kind regardless of the form of action whether in contract, tort (including negligence), strict product liability or otherwise, arising from or related to the testing services or this report. The aggregate liability of the Eurofins EMLab P&K-related parties related to or arising from this report, whether under contract law, tort law, warranty or otherwise, shall be limited to direct damages not to exceed the fees actually received by Eurofins EMLab P&K from the client for the report.

The invalidity or unenforceability, in whole or in part, of any provision, term or condition herein shall not invalidate or otherwise affect the enforceability of the remainder of these provisions, terms and conditions.

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## **Scope and Limitations of Report and Analysis**

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The scope of the MoldREPORT™ system is limited to Eurofins EMLab P&K's proprietary MoldSCORE™ analysis of the air and surface samples taken at the time of the inspection. Eurofins EMLab P&K cannot be liable, in any form of action, for any items that are not included within the scope of the MoldREPORT™ system.

### **MoldREPORT™ Inspection Limitations**

MoldREPORT™ results are based upon mold air and surface samples. Mold surface samples are useful for confirming and identifying mold growth while air samples measure airborne mold levels.

This report provided by Eurofins EMLab P&K is based upon the assumption that the information provided by the inspector is true and correct, that a sufficient number of mold and air samples were collected at all the appropriate locations following proper inspection and sampling protocols, and that the mold samples collected represent normal conditions at the site sampled. Eurofins EMLab P&K is not able to, and cannot, guarantee the skill level or experience of the inspector performing the MoldREPORT™ inspection, nor can it guarantee that the samples have been properly collected at the site or are representative of normal conditions since many factors outside of Eurofins EMLab P&K's (and the inspector's) control can and do substantially affect mold levels. Consequently, Eurofins EMLab P&K cannot guarantee the accuracy of the interpretation provided herein. It is the responsibility of the inspector to insure that the mold samples were collected properly. MoldREPORT™ relies on non-invasive and non-destructive tests, so it cannot guarantee that hidden mold problems will be detected and reported. MoldREPORT™ results apply only to the rooms sampled, not to the entire building or any other rooms. It is the responsibility of the property owner, potential purchaser or other end-user of this report to select a properly trained and qualified inspector.

### **About Air Sample Sampling and Analysis**

Eurofins EMLab P&K requires at least one outdoor air sample and one indoor air sample in order to make indoor/outdoor comparisons and assessments of airborne mold levels, which are an integral part of the Eurofins EMLab P&K MoldREPORT™ system. The indoor air samples taken can be representative of the airborne mold present in the area sampled. The analysis and interpretation of these air samples is proprietary and is based upon: relative levels of spores present, quantities and concentration of *Penicillium/Aspergillus* type spores, quantity and concentration of *Cladosporium* spores, quantity and concentration of basidiospores, quantity and concentration of "marker" spore types, quantity and concentration of "other" spore types, and the distribution of mold spore types. Spore identification is performed visually by trained analysts according to industry norms. Using visual identification, most mold spores lack sufficient distinguishing characteristics to allow for species identification, so the MoldREPORT™ analysis is generally performed at the genus level. Currently there are no generally-accepted protocols or regulations regarding air sampling for molds, in large part due to the inability of any single technique to provide a complete analysis of all mold spores and mold growth in an area. Air sampling for MoldREPORT™ can be performed using any standard "spore trap" method, which are also called "non-viable air sampling methods" because spore traps do not require the germination and growth of the spores before identification. Commonly used spore trap equipment for performing air sampling for mold includes Zefon Air-O-Cell™ Cassettes, Burkard™ samplers, and Allergenco™ samplers.

### **About Surface Sampling and Analysis**

Surface sampling can be useful for differentiating between mold growth and stains, for identifying the type of mold growth present (if present), and, in some cases, identifying signs of mold growth in the vicinity. Although not required, surface sampling can improve the accuracy of the results and interpretation of the inspected environment if sampled correctly. Eurofins EMLab P&K accepts surface samples in the form of swabs, tapes, or bulks in order to perform a direct examination of a specific location. The MoldREPORT™ analysis system uses the direct examination data in addition to the MoldREPORT™ air sample analysis.

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## Glossary

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**Background Debris** - Material(s) found on the air sample other than mold spore(s) or mycelia. Examples include skin cells, insect parts, and fibers.

**False Positive** - A test result that incorrectly indicates mold growth, when in reality there is none. For example, an air sample test result indicating indoor mold growth, when no mold growth is actually present is a "False Positive."

**False Negative** - A test result that shows no mold growth, when in reality mold growth is present. For example, an air sample test result indicating no indoor mold growth, when mold growth is actually present.

**Fungi** - A kingdom that includes yeasts, molds, smuts, and mushrooms. Fungi are not animals, plants or bacteria, but their own kingdom.

**HVAC** - Heating, Ventilation, and Air Conditioning (HVAC) systems are possible reservoirs for mold growth.

**IAQ** - Indoor Air Quality (IAQ) is the main focus of Eurofins EMLab P&K and the majority of its customers.

**Industrial Hygienist** - A professional who monitors exposure to environmental factors that can affect human health. Examples of environmental factors include chemicals, heat, asbestos, noise, radiation, and biological hazards.

**Marker Spores** - Spore types, such as *Chaetomium* and *Stachybotrys*, that when found indoors, even in moderate numbers are an indication of indoor mold growth.

**Note:** This glossary is intended to provide general information about commonly occurring molds, and is not intended to be a complete source.

***Alternaria:***

**Distribution:** *Alternaria* is one of the most common molds and is abundant worldwide. This genus contains around 40 to 50 different species, only a few of which are commonly found indoors.

**How it is spread:** *Alternaria* spores are easily dispersed through the air by wind.

**Where it is found outdoors:** *Alternaria* is common outdoors in soil, dead organic debris, foodstuffs, and textiles. It is also a plant pathogen and is frequently found on dead or weakened plants.

**Where it is found indoors:** *Alternaria* can grow on a variety of substrates indoors when moisture is present.

***Acremonium:***

**Distribution:** *Acremonium* is a common mold, including about 80 to 90 different species.

**How it is spread:** *Acremonium* produces wet slimy spores and is normally dispersed through water flow or droplets, or by insects. Old dry *Acremonium* spores can sometimes be dispersed through the air by wind.

**Where it is found outdoors:** *Acremonium* is found in soil, on dead organic material and debris, hay, and foodstuffs.

**Where it is found indoors:** *Acremonium* can be found anywhere indoors, but requires very wet conditions in order to proliferate. The spores probably require active disturbance for release.

***Aspergillus:*** (see *Penicillium/Aspergillus*)

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## Glossary (continued)

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### **Basidiospores:**

**Distribution:** Basidiospores are produced by a very large and diverse group of fungi called basidiomycetes, which contains over 1000 different genera. This group includes many well-known macrofungi, such as mushrooms.

Basidiospores are often abundant in outdoor air and sometimes in indoor air.

**How they are spread:** Many types of basidiospores are actively released into the air during periods of high humidity or rain. Once the spores are expelled into the air, they are dispersed easily by wind.

**Where they are found outdoors:** Basidiomycetes are very common outdoors and can be found in gardens, forests, grasslands, and anywhere there is a substantial amount of dead organic material. They are also found on or near plants and some are known to be plant pathogens.

**Where they are found indoors:** Basidiospores found indoors typically come from outdoor sources and are carried inside by airflow or on clothing. Certain kinds of basidiomycetes can grow indoors, such as those that cause "dry rot", which can cause structural damage to wood. Occasionally, other basidiomycetes such as mushrooms can be found indoors, but this is not common. Generally, basidiomycetes require wet conditions for prolonged periods in order to grow indoors.

### ***Bipolaris / Dreschlera:***

**Distribution:** *Bipolaris* and *Dreschlera* are two separate genera of molds that are so visually similar that they are commonly discussed together as a group. Both genera include around 30 - 40 different species.

**How they are spread:** *Bipolaris / Dreschlera* spores are easily dispersed through the air by wind.

**Where they are found outdoors:** *Bipolaris / Dreschlera* type spores are most abundant in tropical or subtropical climates. They can grow in soils, on plant debris and grasses, and are known to be plant pathogens.

**Where they are found indoors:** *Bipolaris / Dreschlera* can grow on a variety of indoor substrates when moisture is present.

### ***Ceratocystis / Ophiostoma:***

**Distribution:** *Ceratocystis / Ophiostoma* are two separate genera of molds that are so visually similar that they are commonly discussed together as a group. These genera contain around 50 to 60 different species.

**How they are spread:** *Ceratocystis / Ophiostoma* produce wet slimy spores and are normally dispersed through water flow, droplets, or by insects. These spores are rarely identified in air samples.

**Where they are found outdoors:** *Ceratocystis / Ophiostoma* are very common in commercial lumberyards and forests.

**Where they are found indoors:** *Ceratocystis / Ophiostoma* are abundant on wood framing material in the home, although the spores are rarely found in air samples. This mold is sometimes called "lumber mold".

### ***Chaetomium:***

**Distribution:** *Chaetomium* is a common mold worldwide. This genus contains around 80 - 90 different species.

**How it is spread:** *Chaetomium* spores are formed inside fruiting bodies. The spores are released by being forced out through a small opening in the fruiting body. The spores are then dispersed by wind, water drops, or insects.

**Where it is found outdoors:** *Chaetomium* can be found in soil, on various seeds, cellulose substrates, dung, woody materials and straw.

**Where it is found indoors:** *Chaetomium* can grow in a variety of areas indoors, but is usually found on cellulose-based or woody materials in the home. It is very common on sheetrock paper that is or has been wet.

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**Glossary (continued)**

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***Cladosporium:***

**Distribution:** *Cladosporium* is an abundant mold worldwide and is normally one of the most abundant spore types present in both indoor or outdoor air samples. This genus contains around 20 - 30 different species.

**How it is spread:** *Cladosporium* produces dry spores that are formed in branching chains. Spores are released by twisting of the spore-bearing hyphae as they dry. Thus, the spores are most abundant in dry weather.

**Where it is found outdoors:** *Cladosporium* is found in a wide variety of soils, in plant litter, and on old and decaying plants and leaves. Some species are plant pathogens

**Where it is found indoors:** *Cladosporium* can be found anywhere indoors, including textiles, bathroom tiles, wood, moist windowsills, and any wet areas in a home. Some species of *Cladosporium* grow at temperatures near or below 0(C) / 32(F) and can often be found on refrigerated foodstuffs and even frozen meat.

***Curvularia:***

**Distribution:** *Curvularia* is a cosmopolitan fungus and includes approximately 30 different species.

**How it is spread:** *Curvularia* produces dry spores that are formed in fragile chains and is very easily dispersed through the air by wind.

**Where it is found outdoors:** *Curvularia* is most common in tropical or subtropical regions. It is found in soil and on debris of tropical plants.

**Where it is found indoors:** *Curvularia* can be found growing on a variety of substrates indoors.

***Epicoccum:***

**Distribution:** *Epicoccum* is a cosmopolitan mold that includes only two species.

**How it is spread:** *Epicoccum* produces large dry spores that are easily dispersed through the air by wind.

**Where it is found outdoors:** *Epicoccum* can be found in soils or on plant debris.

**Where it is found indoors:** *Epicoccum* is commonly found on many different substrates indoors including paper, textiles, and insects.

***Memmoniella:***

**Distribution:** *Memmoniella* is a cosmopolitan mold genus that includes approximately five species. It is frequently found in conjunction with *Stachybotrys* species due to its similar ecological preferences.

**How it is spread:** *Memmoniella* produces dry spores that are easily dispersed through the air by wind.

**Where it is found outdoors:** *Memmoniella* can be found outdoors in soil, in plant debris or litter, and as pathogens on some types of living plants.

**Where it is found indoors:** *Memmoniella* can grow on a variety of substrates indoors, but mainly can be found on wet cellulose-based materials, such as wallboard, jute, wicker, straw baskets, paper and other wood by-products.

***Paecilomyces:***

**Distribution:** *Paecilomyces* is ubiquitous in nature and includes between 9 and 30 different species, depending on the taxonomic system used. Its spores are visually similar to *Penicillium* / *Aspergillus* types of spores.

**How it is spread:** *Paecilomyces* produce dry spores that are easily dispersed through the air by wind.

**Where it is found outdoors:** *Paecilomyces* is found outdoors in soils and decaying plant matter, composting processes, legumes and cottonseeds. Some species parasitize insects.

**Where it is found indoors:** *Paecilomyces* can be found on a number of materials indoors. It has been isolated from jute fibers, papers, PVC, timber, optical lenses, leather, photographic paper, cigar tobacco, harvested grapes, bottled fruit, and fruit juice undergoing pasteurization.

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**Glossary (continued)**

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***Penicillium / Aspergillus:***

**Distribution:** *Penicillium / Aspergillus* are two separate genera of molds that are so visually similar that they are commonly discussed together as a group. Together, there are approximately 400 different species of *Penicillium / Aspergillus*.

**How it is spread:** *Penicillium / Aspergillus* produce dry spore types that are easily dispersed through the air by wind. These fungi serve as a food source for mites, and therefore can be dispersed by mites and various insects as well.

**Where it is found outdoors:** *Penicillium / Aspergillus* are found in soils, decaying plant debris, compost piles, fruit rot and some petroleum-based fuels.

**Where it is found indoors:** *Penicillium / Aspergillus* are found throughout the home. They are common in house dust, growing on wallpaper, wallpaper glue, decaying fabrics, wallboard, moist chipboards, and behind paint. They have also been isolated from blue rot in apples, dried foodstuffs, cheeses, fresh herbs, spices, dry cereals, nuts, onions, and oranges.

***Stachybotrys:***

**Distribution:** *Stachybotrys* is ubiquitous in nature. This genus contains about 15 species.

**How it is spread:** *Stachybotrys* produces wet slimy spores and is commonly dispersed through water flow, droplets, or insect transport, less commonly through the air.

**Where it is found outdoors:** *Stachybotrys* is found in soils, decaying plant debris, decomposing cellulose, leaf litter and seeds.

**Where it is found indoors:** *Stachybotrys* is common indoors on wet materials containing cellulose such as wallboard, jute, wicker, straw baskets, and other paper materials.

***Torula:***

**Distribution:** *Torula* is a cosmopolitan microfungus and includes approximately eight different species

**How it is spread:** *Torula* produces dry spores that are easily dispersed through the air by wind.

**Where it is found outdoors:** *Torula* is most common in temperate regions and has been isolated from soils, dead herbaceous stems, sugar beet roots, groundnuts, and oats.

**Where it is found indoors:** *Torula* is common indoors on wet materials containing cellulose, such as wallboard, jute, wicker, straw baskets, and other paper materials.

***Ulocladium:***

**Distribution:** *Ulocladium* is ubiquitous in nature and includes approximately nine different species.

**How it is spread:** *Ulocladium* produces dry spores that are easily dispersed through the air by wind.

**Where it is found outdoors:** *Ulocladium* is common outdoors in soils, dung, paint, grasses, wood, paper, and textiles.

**Where it is found indoors:** *Ulocladium* is common indoors on very wet materials containing cellulose such as wallboard, jute, wicker, straw baskets, and other paper materials. *Ulocladium* requires a significant amount of water to flourish.

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**References and Resources**

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**References:**

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*Bioaerosols: Assessment and Control*, Janet Macher, Sc.D., M.P.H., Editor. 1999. ACGIH, 1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634.

*Bioaerosols*, Harriet Burge, Ph.D. 1995. Lewis Publishers, 2000 Corporate Blvd., N.W., Boca Raton, FL 33431-9868.

*Biological Contaminants in Indoor Environments*, Morey, Feeley, Otten, Editors. 1990. ASTM, 1916 Race Street, Philadelphia, PA 19103. STP 1071.

*Fungi and Bacteria in Indoor Air Environments: Health Effects, Detection and Remediation*, Proceedings from the International Conference, Saratoga Springs, NY October 6-7, 1994.

*Health Implications of Fungi in Indoor Environments*, Edited by R.A. Samson. 1994. Elsevier Science, P.O. Box 945, Madison Square Station, New York, NY 10159-0945.

*Indoor Air and Human Health*, Gammage & Kaye. 1985. Lewis Publishers.

*Microfungi*, S.G. Gravesen, J.C. Frisvad, & R.A. Samson, published by Munksgaard.

**Useful Websites:**

[www.acgih.org](http://www.acgih.org)

American Conference of Governmental Industrial Hygienists - information on IAQ and useful links.

[www.aiha.org](http://www.aiha.org)

American Industrial Hygiene Association - general IAQ information

[www.calepa.ca.gov](http://www.calepa.ca.gov)

California Environmental Protection Agency - California IAQ resources

[www.emlab.com](http://www.emlab.com)

Eurofins EMLab P&K

[www.epa.gov](http://www.epa.gov)

Environmental Protection Agency - information regarding prevention and remediation of mold

[www.health.state.ny.us](http://www.health.state.ny.us)

New York State Department of Health - New York state recommendations for IAQ, indoor mold inspections, remediation, and prevention

[www.moldreport.com](http://www.moldreport.com)

MoldREPORT™ - online store, and other information about MoldREPORT™

[www.nih.gov](http://www.nih.gov)

National Institutes of Health - information regarding environmental health issues, including IAQ

[www.niehs.nih.gov](http://www.niehs.nih.gov)

National Institute of Environmental Health Sciences - information on mold

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EMLab P&K, LLC

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January 22, 2020

Chief Eric Masterson  
Ross Police Department  
33 Sir Francis Drake  
Ross, Ca. 94960

Dear Eric,

This letter will serve to document the recent inspection of your property, along with a synopsis of your lab results, which were just released by the lab.

### 1. PROBLEM DESCRIPTION AND MY OBSERVATIONS

You described the problem as follows: You know that mold was just found in the Fire Department buildings, which adjoin your building, and you wanted to ensure that there was no mold problem in your offices. I saw mold-related issues which are addressed in this report.

### 2. AIR SAMPLES RESULTS

Mold Score for Sample One (Room 2): 300

**Score of over 250 is high and indicates a high probability of indoor fungal growth.**

Mold Score for Sample Two (Room 3): 146

**Score under 150 is low and indicates a low probability of indoor fungal growth.**

### 3. MOISTURE AND HUMIDITY

My meters detected moisture in the following locations: on the rotted sash material on the windows in room 2. The interior humidity in room 2 measured **51** percent, which is at the high end of the acceptable range (30 to 50).

### 4. CONCLUSION

The results of your air sample tests suggest that **you have a mold problem that is originating within room 2 of the police station.** See following pages for additional conclusions.

### 5. RECOMMENDATIONS

I recommend that you contract with a professional mold remediation company to remove all rotted and water-damaged windows from their frames. I also recommend a thorough cleaning of all the window frames (including a proper sanding), followed by the application of a high-quality primer and top coat. The mold remediation company will provide you with a specific set of remediation protocols after they have examined the area. For your information, standard remediation protocols are included at the end of this report. I then recommend having new dual-pane windows installed in the refurbished frames.

Sincerely,

Rick Bruce <sup>1234567</sup>  
Bay Area Mold Pros

1. Certified Mold Inspector (CMI #83203 Micro Training)
2. Certified Mold Remediation Contractor (CMRC #83503 Micro Training)
3. Certified Mold Inspector (Compliance Training)
4. IAQA Indoor Environmentalist Course completion (FL Course 0000070)
5. National Association of Mold Remediators and Inspectors (Member)
6. California State Contractor's license 872600
7. Owner, Bruce Construction

## 2.a. Mold Score Explanations

**What these numbers mean.** In essence, the lab personnel at EMLab are looking for two things. First, they are counting the number of mold spores found on the slides for both the outside (control) sample, and the inside (location) sample, and then comparing the numbers. In the simplest terms, **you should have fewer mold spores inside your home than outside your home**, although this is affected by the weather. During the rainy season, some of the more common mold species are washed away, and result in low numbers for the outside control sample. The lab accounts for this, and will substitute historical data for your neighborhood during rainy spells.

The second thing the lab is looking for is if the species found inside (location sample) match the species found in the control sample (outside). **If a species is detected in one of the interior samples, and it is not found in the outside control sample, this suggests that this particular mold species is being produced inside the home**, rather than being a part of the natural environment. All of the numbers listed below reflect the number of mold spores found *per cubic meter*.

When interpreting these numbers, it's important to remember that there are no national standards that establish unhealthy levels for mold. The general guideline followed by the mold inspection industry is this:

**If mold is actively growing within your home, you should both address the underlying cause of the mold, and have the mold removed. Even though there are no standards for specific levels of mold that are unhealthy, any mold can be unhealthy, and the safest approach that you can take to protect yourself and your family is to remove any mold found growing within your home, and address the issue(s) underlying why the mold is growing.**

If you have a health concern that you believe may be related to mold growth in your home, you should consult with a medical professional. It may be helpful to bring the Lab Report completed for this Mold Inspection (along with this cover letter), to any consultations so that your medical professional is aware of the specific mold spore types and mold spore counts that were present within your home at the time of this Mold Inspection.

---

**Room 2** Sample (Sample One, see page 4) Score of **300** was based primarily on the following mold spore counts: Penicillium / Aspergillus spore count was 330, versus control spore count of 0. Basidiospore spore count was 910,000, versus control spore count of 3,400. "Other spores" spore count was 290, versus control spore count of 53.

---

**Room 3** Sample (Sample Two, see page 5) Score of **146** was based primarily on the following mold spore counts: Basidiospore spore count was 1,400, versus control spore count of 3,400.

---

### Air Sample Protocol:

Per industry standards, the interior samples are taken for exactly five minutes with a Zefon Z-Lite IAQ Air Sampling Pump (2017 model) set at 15 cubic liters per minute. The exterior samples are taken for either five or ten minutes, depending on environmental factors, also at 15 cubic liters per minute. All air samples are marked at the time the samples are taken and delivered by Rick Bruce personally to EMLab P&K at 6000 Shoreline Court, suite 205, South San Francisco, Calif. 94080.

---

## 3.a. Moisture Meter Assessment

The following moisture meters were used during this inspection:

Flir MR160 Moisture Meter (Thermal Imager).  
Flir MR176 Moisture Meter (Thermal Imager).  
Tramex Moisture Encounter Plus (Electric Meter).

---

## 4.a. Additional Conclusions

Room 1 (corner room with desks and chairs). Visible water damage to original wood window frames, but no moisture detected in frames or sashes. No moisture in ¼" wall paneling. Carpets, 50 humidity. No obvious problems seen here. No samples taken here.

Room 2 (adjacent room with refrigerator). Two original wood casement windows, one of which is rotted at the bottom. This rotted portion was wet, so I pulled an air sample in this area. The results for the air sample came back exceedingly high (see above). The plaster walls were dry. A direct sample of rotted wood was collected here and came back with a high level of *Amphelomyces* spores and a medium level of *Ascomycetes* spores (see page 10 of the lab report).

Room 3 (desks, computer terminals and radios). Two original wood casement windows, one of which is rotted at the bottom. No moisture found in window frames or sashes, or in plaster walls. An air sample was also pulled in this area, and the results came back fairly low.

Room 4 (sergeant's office). Two original wood casement windows, both frames and sashes dry. Both windows water damaged. No samples taken here.

Room 5 (Chief's office). Five fixed wood windows and one (newer) casement window. No moisture in window frames or sashes. Walls had ¼" wall paneling. No problems seen here, no samples taken.

Room 6 (reception desk near front door). No windows, no issues seen, no samples taken.

Room 7 (mechanical room at bottom of stairs). Concrete slab and door leading to outside. No moisture detected, no issues seen, and no samples taken.

Room 8 (locker room). Two original wood casement windows, no moisture in either the frames or the sashes. No moisture in plaster walls.

Room 9 (toilet room with lavy). No moisture in sheet flooring. No moisture in wood casement window frame or sash.

Overall conclusions: there does not appear to be a serious mold growth problem in this building except for within room 2. The very high level of mold spores collected in room 2 are almost certainly a result of the rotted wood window, which must be producing high levels of mold spores within the rot.

Overall recommendation: I recommend having all of the original wood windows removed and replaced with modern windows. Any windows which show signs of rot or mold should be removed by a professional mold remediation company, and a thorough cleaning of the rooms from which they are removed should take place once they are removed.

I recommend that a licensed general contractor then be hired to install modern dual-pane windows in the existing frames. I recommend that the frames all be sanded, primed, and painted prior to the installation of the new windows. Standard mold remediation protocols should be followed during the sanding of these frames.

---

## 5.a. Additional Recommendations

In addition to the recommendations described above:

- **Humidity.** The humidity in the building is at the high end of the acceptable range. Regardless of any actual moisture issues present in your home, an elevated humidity will exacerbate this condition and may encourage mold growth. In terms of what "ideal humidity" is for interior spaces, there is some disagreement here, with the upper limit varying from 50 to 60 percent. In my experience, having inspected hundreds of homes, homeowners who keep their humidity at under 50 percent do not have mold problems related to their humidity. *I recommend that you run dehumidifiers within your home if your humidity measures greater than 50 percent. A very effective dehumidifier can be purchased on-line from Amazon for about \$200 (Homelabs 1500 square foot dehumidifier, removes up to 22 pints daily).*
- **Air Flow and Heat.** You can reduce the condensation on your walls and windows by increasing the air flow in your home. *You can assist the air flow in your home with portable fans.*
- **Insulation.** The original exterior walls in your home may be lacking in wall insulation. This exacerbates the tendency of exterior walls to "sweat" on the inside. This condensation can lead to mold growth on the lower portions of the walls. *Ideally, you will want to eventually insulate your exterior walls. In the interim, I recommend that all furniture and personal property be kept at least 2" from any walls to allow for maximum air flow.*
- **Bathroom Ventilation.** Your bathroom does not have an adequate ceiling fan that is vented to the outside. It is not only recommended that all bathrooms have an effective ceiling fan which is vented to the outside of the home, it has actually been required as part of the building code for many years. These fans should be controlled via a humidistat, so that the fan remains running as long as is necessary following baths and showers. *I recommend that you have a high capacity (110 cfm) ceiling fan installed in the bathroom, and ensure that it is properly vented to the outside.*



Because of the age of your building, it is likely that there are ground water and drainage issues present that may be affecting the overall humidity and moisture. There were definitely ground water problems under the Fire Department building (the oldest building).

- **Drainage.** When there is ground water present under a home, it is often necessary to divert this ground water away from the home. The most effective means of doing this is to have a French drain system installed by a drainage contractor. These drains need to be installed at the proper depth, and these systems really require that both the design and the installation are completed by contractors who specialize in this type of work. *I recommend that you consult with a drainage expert to determine the best course of action to take in regards to drainage.*
- **Sump pumps.** It is sometimes very difficult, or cost prohibitive to have French drain systems installed, and in these cases, sump pumps can also be an effective method for removing ground water from beneath a home. These also need to be designed and installed by contractors familiar with sump pump systems, and the water pumped out from under the home needs to be diverted to areas where it can no longer make its way back under the home. *I recommend that you consult with a drainage expert to determine if a sump pump would be useful in your crawl space.*
- **Vapor barriers.** Once all standing water issues have been addressed, the installation of a vapor barrier in the crawl space of a home can be very effective at preventing the moisture from the soil from making its way into the home above. These vapor barriers should be installed by contractors who are familiar with how best to install them. *I recommend that you consult with a vapor barrier installation company to determine if this product may assist with your moisture issues.*

---

## Standard Remediation Protocols

The general rule of thumb for remediation is the following: if the area to be remediated is less than 10 square feet, this can generally be cleaned by the homeowner, but if the area to be remediated is greater than 10 square feet, the remediation should be performed by a certified mold remediation company.

If you opt for a professional remediation of the mold growth in your home, the specific remediation and cleaning procedures to be employed should be determined by the certified mold remediation company chosen for this project. Standard remediation - protocol procedures, which are routinely utilized by professional remediation companies include, but are not limited to, the following:

- Complete containment of the area where remediation will occur (and demolition if needed). At least one Decon chamber should be utilized as part of the containment.
- Use of plastic covers, plastic zip walls, wall zippers, etc.
- Use of appropriate PPE by all personnel performing remediation.
- Use of negative air pressure during remediation.
- Use of dehumidifier machines when needed following any needed demolition.
- Use of HEPA-filtered vacuums to clean all surfaces in remediation areas.
- Use of air scrubber machines during and following remediation (and demolition if needed). Note that air scrubbers should be in operation a minimum of 48 hours after the completion of any remediation and cleaning.
- Use of biocides and other cleaners as required.

It is also recommended that a mold inspection company take new air samples once the demolition and remediation has taken place, to ensure that all mold issues have been addressed. Note that any air scrubbers used during the demolition should be shut down approximately 8 hours prior to the re-inspection.

## **APPENDIX J**

### **NFPA Fire Station Design Considerations**

# NFPA FIRE STATION DESIGN CONSIDERATIONS

Emergency response organizations are familiar with standards of the National Fire Protection Association (NFPA). **NFPA 1500, Standard on Fire Service Occupational Safety and Health Program**, defines a fire department facility as any building or area owned, operated, occupied, or used by a fire department on a routine basis which may include fire and rescue stations, training academies, and communication centers.

This manual applies to station design for the fire and emergency medical services. Fire and emergency medical services are sometimes referred to as emergency response organizations or departments. Likewise, firefighters and EMS personnel may be referred to as emergency response personnel.

## ***“Facility Safety” requires that department facilities:***

- Comply with all legally applicable health, safety, building, and fire code requirements.
- Provide facilities for disinfection, cleaning, and storage in accordance with NFPA 1581, Standard on Fire Department Infection Control Program. (NFPA 1581 provides guidelines that recommend against the cleaning and disinfecting of protective clothing and equipment, portable equipment, and other clothing in areas used for food preparation, the cleaning of food and cooking utensils, personal hygiene, or sleeping and living.
- Also, required for disinfection are two sinks with a sprayer attachment, a rack with a drain to the sewer, medical-type non-grasp controls on faucets, and hot and cold water.)
- Provide smoke detectors in work, sleeping, and general storage areas. Comply with NFPA 101, Life Safety Code or locally adopted requirements of the building code. Be designed with provisions for the ventilation of vehicle exhaust emissions from fire apparatus (and other vehicles) to prevent exposure to firefighters and contamination of living and sleeping areas.
- Have designated smoke-free areas including work, sleeping, kitchen, and eating areas.
- Building, and fire code requirements, and that these inspections be documented and recorded.
- Be inspected monthly to identify and correct/document any safety or health hazards.
- Have an established system to maintain facilities and to promptly correct any safety or health hazards or code violations.
- In addition, the U. S. Fire Administration strongly recommends that stations be protected with automatic sprinkler systems.

## **APPENDIX K**

### **Photos**



Apparatus Bay Entry



Recently Renovated Treads and Risers



Entry to Zfire House Kitchen



Asphalt cracking



Typical Plaster Cracking

---



Exposed wiring, faded paint

---



Exposed wiring

---



Roofing needs replacement

---



Soil contact with plaster

---



Roofing in need of repair, misc. exposed wiring.

---



New vehicle cover

---



Cell tower equipment

---



Apparatus Bay

---



Apparatus Bay

---



Generator

---



Police Station exit stairs

---



Under floor of Police Station

---



Under floor of Police Station

---



Non-compliant ADA stairs

---



Ceiling repair

---



Interior plaster cracking

---



Ceiling damage

---





Fire House Water Heater

---



Moisture damage

---



Ceiling Damage

---



Broken counter top tile

---



Water staining at threshold

---



Water damage at exterior wall

---



Portion of wallboard has been removed.

---



Moisture stains

---



Police Dept Office

---



Police Station Water Heater

---



Water Damage

---



Water Damage

---



Water Damage

---



Partial demolition

---



Partial demolition

---



Water Damage

---



Water Damage

---



Unconnected rain water leader.

---



Exposed wires and unclear pathways

---



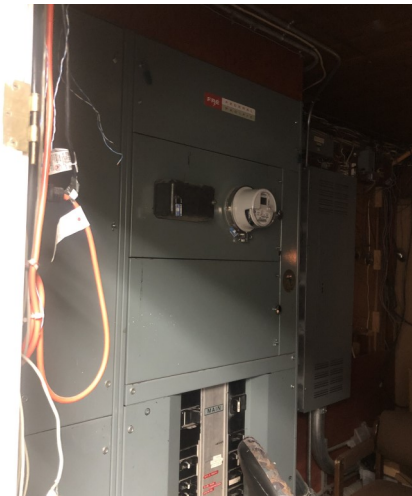
Clearance conflict

---



Exposed wires

---



Exposed wiring and less than 3'  
clearance in front of electrical panel.

---



Faded plaster paint

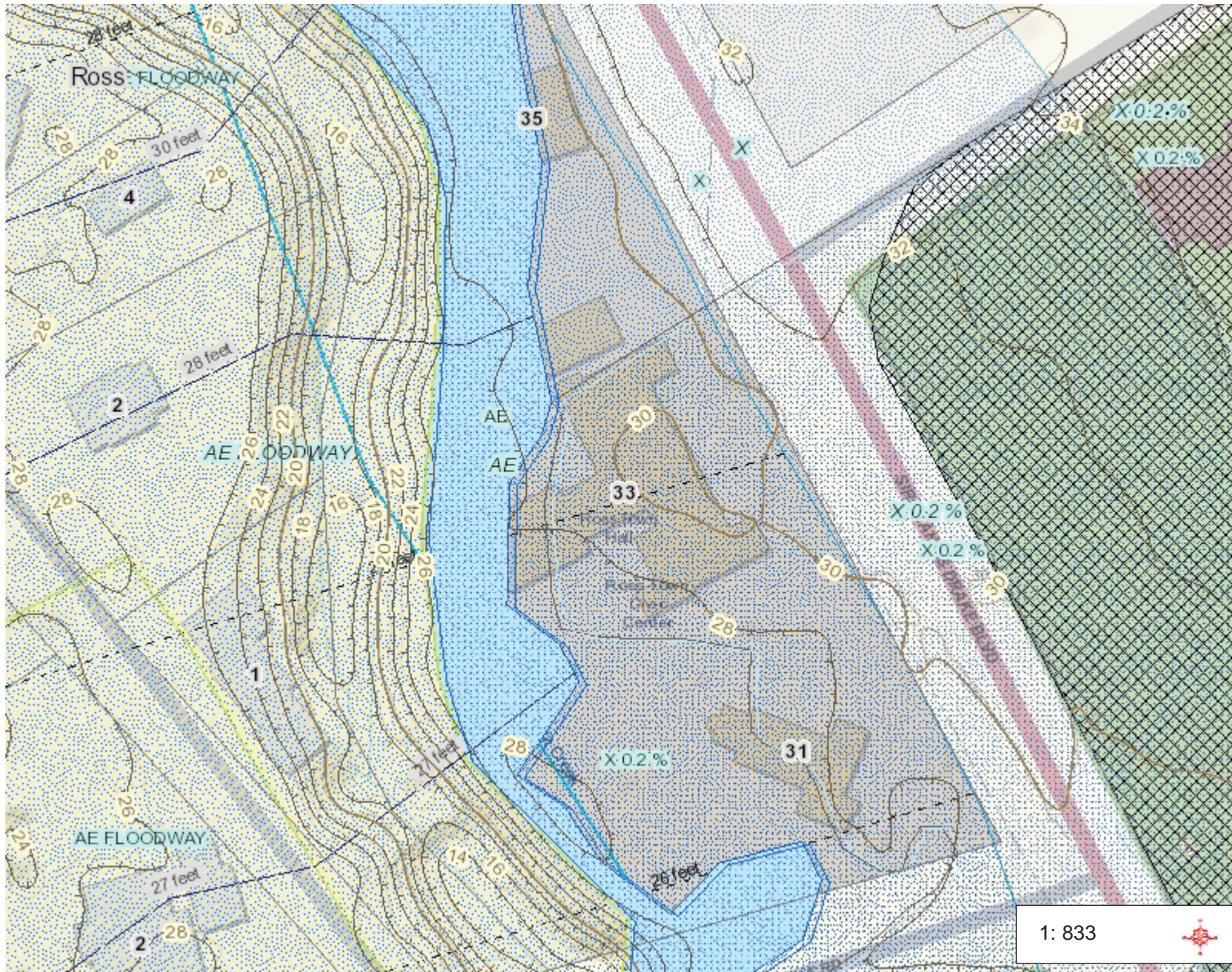
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Picture caption

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**APPENDIX L**  
**Maps and Site Plan**



**Legend**

- Parcel Note
  - easement
  - centerline
- Address
- Parcel
- Condominium Common Area
- Mobile Home Pad
- City
- Community
- Marin County Legal Boundary
- Other Bay Area County
- 2-foot Elevation NAVD88
- Interior
- Index
- Flood Hazard Zone, March 20'
  - A
  - AE
  - AE, FLOODWAY
  - AH
  - AO
  - D
  - V
  - VE
  - X
  - X, 0.2% CHANCE
  - X, REDUCED RISK DUE TO LEVE
- Base Flood Elev, 2015 Coasta Flood Hazard Zone, 2015 Coa

1: 833

138.8 0 69.40 138.8 Feet

**Notes**



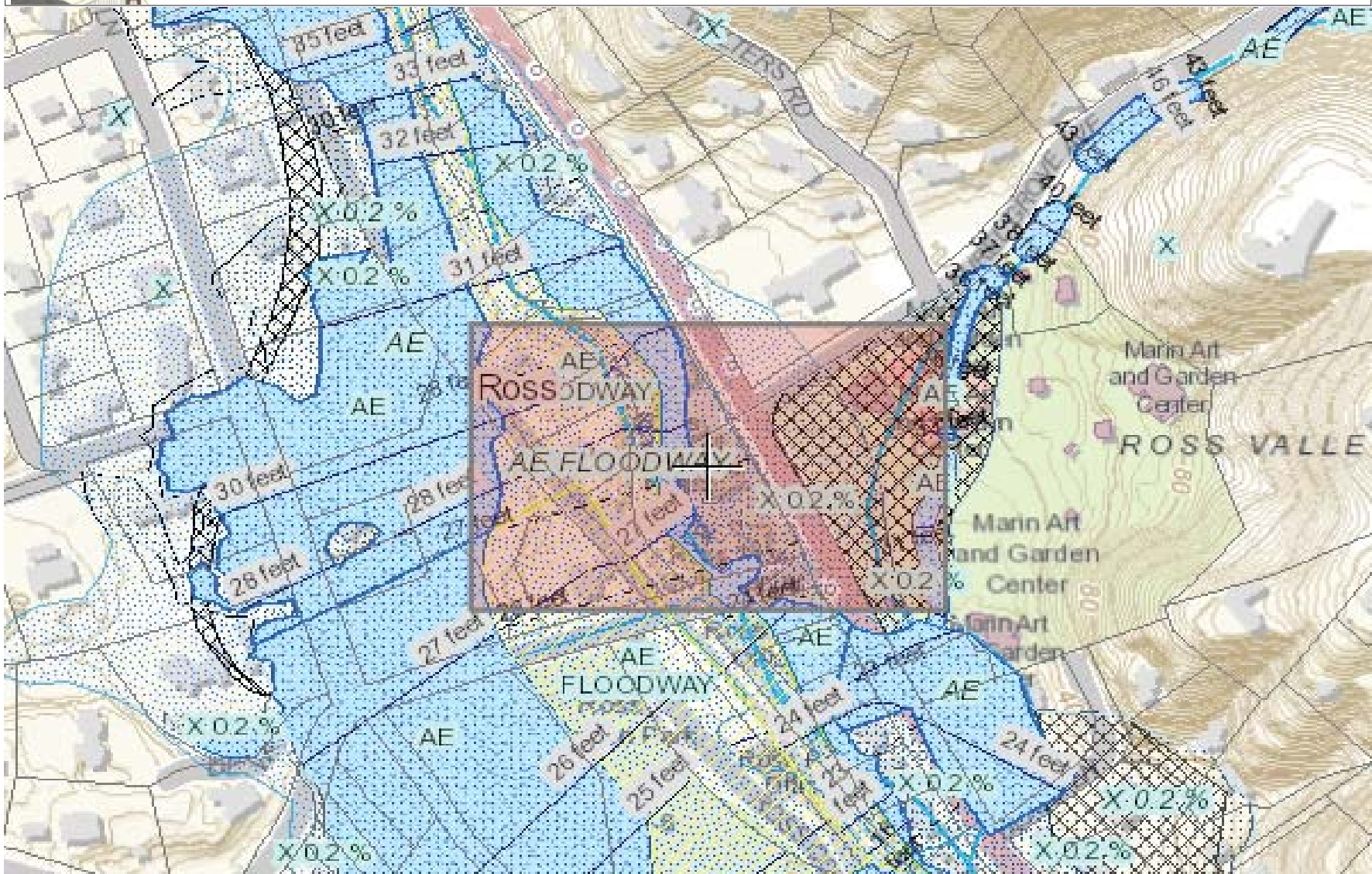
33 Sir Francis Drake Blvd  
San Anselmo, CA

Imagery ©2016 Google, Map data ©2016 Google 200 ft

## **APPENDIX M**

### **FEMA Report**





Address: 33 SIR FRANCIS DRAKE BLVD ROSS

**FEMA LETTER OF MAP CHANGE INFORMATION**

Parcel Info	
Assessor Parcel Number	073-191-16
Site Address	33 SIR FRANCIS DRAKE BLVD ROSS
Community/Jurisdiction	Ross
Deed Reference	NOREF11883
Latitude, Longitude	37.96318745 -122.55674328
DFIRM Panel	
Community Number	041C
Map Panel	06041C0458F
Effective Date	3/16/2016 12:00:00 AM
Flood Zone	AE
Flood Zone Description	Zones AE and A1-A30 are the flood insurance rate zones that correspond to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study by detailed methods of analysis. In most instances, Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.
Special Flood Hazard Area	T
Base Flood Elevation (ft)	BFE Not Determined
PRIOR Map	
Community Number	041C
Map Panel	06041C0458E
Effective Date	3/17/2014 12:00:00 AM
Flood Zone	AE
Flood Zone Description	Zones AE and A1-A30 are the flood insurance rate zones that correspond to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study by detailed methods of analysis. In most instances, Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.
Special Flood Hazard Area	T
Base Flood Elevation (ft)	BFE Not Determined
Assessor Parcel Map	<a href="#">Click Here for the Assessor Parcel Map and Recorded Maps.</a>
What is Vertical Datum? NGVD vs NAVD	<a href="#">FEMA Vertical Datum</a>

### FEMA LOMC Letter of Map Change

As a public service, MarinMap publishes FEMA (Federal Emergency Management Agency) Flood Insurance Rate Maps (FIRM) and Letters of Map Change (LOMC). These maps and documents help property owners determine if property is within a flood hazard area and is required to carry flood insurance. Letters of Map Change are documents that may remove properties, buildings, or other areas from FEMA's Special Flood Hazard Areas (SFHA). This GIS application will provide most of the data required for the LOMC application. If you believe that your property or structures on your property are above the elevation that FEMA determines to be within a flood hazard zone, you may apply for a Letter of Map Change. If you can show that your property/structures are above the flood elevation, you might be exempt from flood insurance requirements or be subject to cheaper insurance premiums.

### Floodplain Administrators for Marin Communities:

Belvedere	Eric Banvard	(415) 435-3838	buildingofficial@cityofbelvedere.org
Corte Madera	Barry Hogue	(415) 927-5057	publicworks_dept@ci.corte-madera.ca.us
Fairfax	Mark Lockaby	(415) 453-2370	building@townoffairfax.org
Larkspur	Daryl Phillips	(707) 544-9500	Daryl@PhillipsSeabrook.com
Mill Valley	Julie McClure	(415) 388-4033	jmclure@cityofmillvalley.org
Novato	Manijeh Larizadeh	(415) 899-8907	mlarizadeh@novato.org
Ross	Robert Maccario	(415) 453-1453 x163	rmaccario@townofross.org
San Anselmo	Sean Condry	(415) 258-4616	scondry@townofsananselmo.org
San Rafael	Kevin McGowan	(415) 485-3355	kevin.mcgowan@cityofsanrafael.org
Sausalito	Jonathon Goldman	(415) 289-4176	jgoldman@ci.sausalito.ca.us
Tiburon	Scott Anderson	(415) 435-7392	sanderson@ci.tiburon.ca.us
Unincorporated	Berenice Davidson	(415) 473-3770	bdavidson@marincounty.org