



Midpeninsula Regional
Open Space District

Alma College Site Cultural Landscape Rehabilitation Plan

Report for Landscape
Architecture Services

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PGAdesign^{INC}

LANDSCAPE ARCHITECTS

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MIDPENINSULA REGIONAL OPEN SPACE

Board of Commissioners

Planning Staff

COUNTY OF SANTA CLARA

Planning Office

Historical Heritage Commission

DESIGN/MASTER PLANNING TEAM:

PGAdesign inc., Landscape Architect

Knapp Architects, Historic Architect

Langan Treadwell Rollow, Geotechnical Engineer

DCI+SDE Engineers, Structural Engineer

Nozicka Consulting, Economic and Recreation Planning

Baker Preconstruction, Cost Estimator

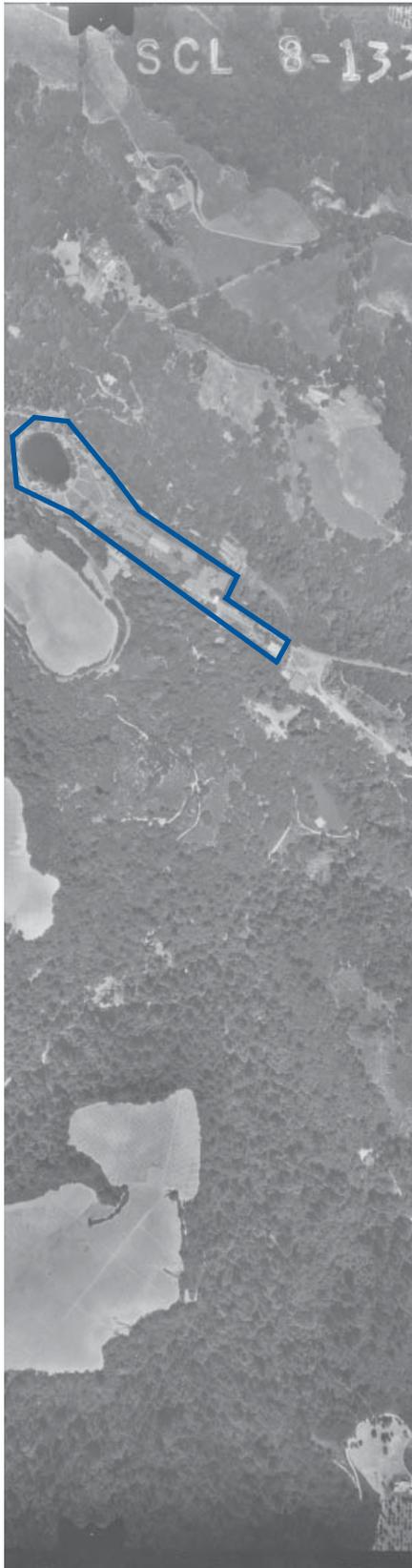


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Executive Summary

The Midpeninsula Regional Open Space District (MROSD) seeks to develop a rehabilitation plan for the Alma College site, opening this property to new users as a unique part of the Bear Creek Redwoods Open Space Preserve. Dating to 1850, the site is a significant connection to California's past; its rich history and evolution mirrors the broader events in state history. The District understands this is an important cultural landscape and is committed to its thoughtful rehabilitation.

The goal of the rehabilitation plan is to establish an achievable vision for this valuable community open space that will respect the site's history, character and cultural landscape, while telling its story to visitors in a compelling and engaging manner. Identifying options for partnership opportunities compatible with the District's mission is an important consideration, as well.

The report includes a concise synopsis of the goals and process undertaken to prepare the rehabilitation plan and parameters outlining what is appropriate and feasible for the Alma College site. It includes supporting studies that address geotechnical, structural, architectural and recreation planning issues, offers a summary of potential partnership opportunities, and provides a preliminary cost estimate to help guide the effort.

Evidence from all periods in the life of Alma College site is present on the property today, and these physical layers of history form the basis of the site's listing on the Santa Clara County Heritage Resource Inventory. Because of this historic importance, attention has been paid to regulatory constraints and considerations at the site. The Alma College Site Rehabilitation Plan complies with the Secretary's Standards for rehabilitation. A brief overview of the cultural landscape describes the history of the site, its owners and uses over a century and a half, including the buildings and structures – past and present – that have populated the site.

A summary analysis expands upon the 2010 Conditions Report that identified conditions and recommendations regarding the site, including geotechnical, structural, architectural and cultural landscape components. A recreation planning analysis explores possible public or private partnerships that could bring activity and funding to the site.

The proposed treatment, titled the Alma College Site Rehabilitation Plan, is based on the consultants' work and review by the MROSD board and staff. It recommends key steps to be taken to rehabilitate the site. This section identifies the physical features recommended for rehabilitation and in some cases removal, addresses the addition of new visitor amenities, and ensures that accessibility, safety and code issues are properly addressed. The plan also makes recommendations concerning road access and parking improvements

to accommodate increased traffic, new pedestrian paths and event/gathering areas, interpretative opportunities/approaches, low-maintenance vegetation management and improvements to landscape sequences that maximize scenic viewpoints throughout the site. As the project will likely be phased to allow for funding and the time required to identify potential partners, the report broadly outlines the action items included in each of three phases.

A proposed interpretative program suggests ways to organically integrate interpretive materials into the site. The goal is to create an authentic experience for visitors, conveying a sense of what the site was like during its various periods. Interpretive displays will also illustrate the many sustainable design features and practices that have been incorporated into the site, in an effort to help visitors better understand the practical applications of sustainable concepts.

Introduction

The Alma College site is located in the Santa Cruz Mountains within the Bear Creek Redwoods Open Space Preserve, in unincorporated Santa Clara County, approximately three miles south of the Town of Los Gatos. It is at District Gate BC04 on Bear Creek Road, in the future Bear Creek Redwoods Preserve. The extent of the Alma College site in this study includes land extending from Bear Creek Road to the northwest, through and including the area of the Roman plunge and adjacent driveway, to the southeast. Retaining walls define the limits to the north and south.

This report makes reference to the 2005 “Alma College Historic Resource Study” and the 2010 “Alma College Conditions Assessment Project”. It outlines the process undertaken in 2015 by the Midpeninsula Regional Open Space District to develop a rehabilitation plan for the property known as Alma College, within the proposed Bear Creek Redwoods Preserve.

The report includes a concise overview of the goals and process undertaken to prepare the rehabilitation plan and project parameters for what is appropriate and feasible for the site. It includes supporting studies done by team members addressing geotechnical, structural, architectural, and recreation planning issues, and provides a preliminary cost estimate of the Alma College Site Rehabilitation Plan.

Goals

The vision for the Alma College site is to implement a fiscally sustainable clean-up and rehabilitation plan that allows the site’s cultural significance to be understood and safely enjoyed by the public, while remaining within the District’s mission. This vision reflects the values of the District’s mission, “to protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education.”

The document titled “The Secretary of the Interior’s Standards for Historic Properties and the Guidelines for the Treatment of Cultural Landscapes” (Secretary’s Standards) is the national standard and primary tool for defining cultural landscapes and their treatment. As part of an Environmental Impact Report, Glory Anne Laffey of Archives and Architecture prepared a “Historical and Architectural Resource Evaluation”. This 1995 report found that the buildings on the site composed a historic district eligible for the California Register of Historical Resources (California Register) under Criterion 1 (Events).

¹ Also in 1995, the Alma College Complex was listed in the Santa Clara County Historic Resources Inventory (HRI). In 2010, the “Alma College Conditions

¹ The 1995 evaluation cited the significance of Alma College as the first Jesuit School of Theology in the West.

Assessment Project: Phase 1 Assessment of Existing Conditions” report prepared by Knapp Architects found that the Alma College site is significant as a cultural landscape under Criterion 1 of the California Register.² The PGA team worked with MROSD staff and consultants regarding the Bear Creek Redwoods Preserve Plan and associated CEQA studies. The project described in this report complies with the Secretary Standards for rehabilitation. The team conducted analyses of the geotechnical concerns, structural condition of walls and buildings to be retained, architecture, and cultural landscape context and features. The recommendations contained in the rehabilitation plan are preliminary and seek to be sensitive and pragmatic, incorporating sustainable approaches both explicitly and seamlessly into the proposed work. The plan also identifies phases for implementation.

Within MROSD guidelines and parameters, team member Nozicka Consulting identified potential partnership opportunities, both in retained structure(s) and at garden areas. Recreation planning input, balanced with MROSD values, was integrated into the plan. The resulting rehabilitation plan is intended to facilitate management decisions regarding the future of the property.

² *The 2010 report identified the site's eligibility; specifically for its historical parallels with the broader events of California history.*

The Process

This report describes the process undertaken to complete the rehabilitation plan for the Alma College site.

Working closely with MROSD, the team has performed analyses and visited the property. Based on these efforts, four broad concepts were initially identified. These concepts are reviewed below under “Rehabilitation Plan Alternatives Considered” (p. XX). Two of the broad concepts were developed into rehabilitation plan alternatives: Scheme A and Scheme B. These two schemes were reviewed with MROSD staff and the Planning and Natural Resource Committee. After further development, they were presented to the Board of Directors and staff of MROSD and underwent a public review process consisting of a CEQA scoping meeting, Board Study Session, Board Tentative Approval, EIR public comment period and Board Approval Hearing. The result was that Scheme B was selected as the preferred approach, and has been titled “Alma College Site Rehabilitation Plan.”

Cultural Landscape Overview

Alma College site is situated in an area characterized by steep terrain and dense redwood/coniferous forest. It extends from Bear Creek Road in a linear fashion along a ridge line bounded on north and south by creeks. The north and south sides of the flat-topped ridge are retained by tall retaining walls. Nearest Bear Creek Road there is the landscape feature of Upper Lake, then moving in a southeasterly direction along the ridge, a pedestrian path serving as a spine provides access to buildings or building remains in the following order starting at Upper Lake:

- Two Dormitory foundations (1935-1937)
- Classroom (1935)
- Library expansion (1950)
- Library (1934)
- Chapel (1909)
- Tevis Mansion remains (1909)
- Garage.

A number of landscape features also remain.

Amongst the features contained within the Alma College cultural landscape some of the architectural features are standing, some are in dilapidated condition and others are remnants. As described in Appendix D Architectural Analysis (p. X)

“The buildings and surviving portions of buildings that exist today on the Alma College site convey much of the 19th and 20th century developments which make it historically significant. These buildings are an integral and indispensable part of the cultural landscape.”

The history and development of the Alma College Site is described in the March 2010 “Alma College Conditions Assessment Report”. It states:

“The site is considered a cultural landscape, which is a type of district as defined by the California Register. The site reflects the pattern of settlement that evidences several layers of development with portions imperfectly erased leaving a trail of interpretive value.” (p. 52)

Each of these layers of development are described below. Rather than any one of the periods being dominant it is the multiplicity of layers; the palimpsest of the site, that evinces the cultural significance of the property. The Alma College site is significant under Criterion 1 for its historical parallel with the broader events of California history. It has a Period of Significance from 1850 to 1951. The period of significance encompasses the date of construction of all buildings and therefore the buildings are contributing unless they rise to the level of being significant. The Chapel, 1934 Library, and Classroom are identified as significant by the 2010 Conditions Report

Supplementing the Knapp study, this rehabilitation report addresses the layers of history physically evident on the ground. Periods seen on the site that retain integrity are listed below, along with extant features that characterize the individual periods.

The address listed on the Santa Clara County HRI for the Alma College Complex is 19480 Bear Creek Road, Los Gatos. As the listing for the Alma College Complex is by the County, the project will be reviewed by the Santa Clara County Historic Heritage Commission and Planning Department.

MILLING PERIOD (1850-1880S)

Logging and milling was recorded in the early 1850s when a man named Webb, attracted by dense groves of redwoods and madrones, operated a sawmill on the ridge. In the mid 1850s, James Howe developed a mill pond by damming Webb Creek to provide water for his waterwheel to power a sawmill³. Wilbur Wilcox, the superintendent of the San Jose Water Company, owned the land during this period, and the pond and Bear Creek Road date to this period, as well (see Figure 1⁴).

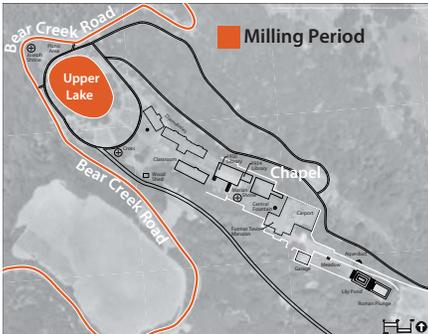


Figure 1: Milling Period elements overlaid on the existing Alma College Site Plan

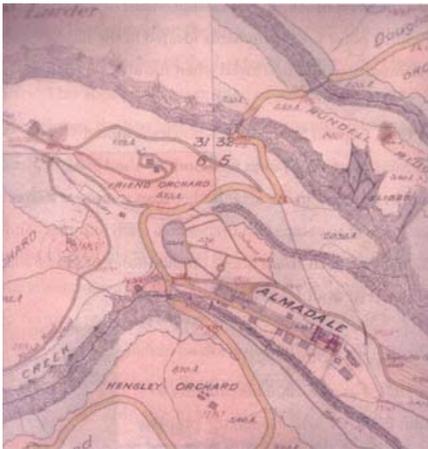


Figure 2: Site Plan of the flood estate (Page & Turnbull, page 6)

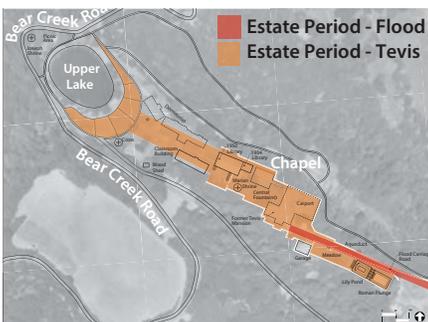


Figure 3: Estate Period elements overlaid on the existing Alma College Site Plan

3 Page & Turnbull. “Alma College Historic Resource Study (Revised Draft)”. (2005). Print. pp 4-5

4 State of California - The Resources Agency, Department of Parks and Recreation, DPR form 523. p 6



Figure 4: Tevis Mansion and North retaining wall with aqueduct



Figure 5: Almadale meadow with lily pond and Roman plunge beyond



Figure 6: Tevis-era lily pond

ESTATE PERIOD (1887-1934)

With forest depletion and a decline of the lumber business came interest in the land from wealthy men of industry, who each improved and expanded their holdings:

Captain Stillman Knowles (property owned:1887-1894), business partner of James Flood, built a 15-room mountain retreat in this location. It is not known if there are remains of the Knowles estate evident today.⁵ James Leary Flood (property owned:1894-1905) named the property Almadale. Having purchased 49 acres, Flood ultimately expanded Almadale to 800 acres and expanded the main house to 40 rooms. The property was known for game, pasture, vineyards and orchards. Flood installed a private carriage road leading from the southeast end of the ridge by the main house to what is today Route 17. This carriage road is extant. The plan of his property, seen in Figure 2, also shows a drive that enters the site from Bear Creek Road, in the approximate location of the proposed new drive from Bear Creek Road.

Henry Lloyd Tevis (property owned:1905-1934) rebuilt the mansion after Flood's house was destroyed in the 1906 earthquake (see Figures 3 and 4). He continued to call the property Almadale. Tevis was widely known in the Bay region for his horticultural knowledge and extensive gardens and grounds. To water these grounds, he developed a 6.5 million gallon water storage and distribution system, renaming Howe's mill pond "Upper Lake." This part of the distribution system was connected to Middle and Lower Lakes.⁶ Following the 1906 earthquake, Tevis built the north and south retaining walls to obtain more flat or almost flat land on the ridge. In addition to his extensive formal gardens, Tevis was known for his crops, vineyards and orchards. At the time of his death in 1931, he had expanded his land to 2,500 acres. Tevis was a key architect of much of what remains at the Alma College site; features that date to the Tevis period include the north and south retaining walls, the aqueduct through the retaining walls south of the mansion site, landscape terraces and stairs at the central portion of the site near extant and former buildings, a fountain basin near the former mansion, the Tevis library (1909, now called the Chapel), the landscape sequence that includes the meadow, lily pond and Roman plunge (see Figures 5 and 6), and the remains of the mansion.

ALMA COLLEGE PERIOD (1934-1969)

The 2010 Conditions Report identifies early and late Jesuit periods (1934-1949 and 1950-1969, respectively). In 1934, Sacred Heart Novitiate of Los Gatos, associated with the California Province of the Society of Jesus, established a seminary at the site, changing the name from Almadale to Alma College. During this period, extant buildings were put into service, with Tevis' mansion

⁵ DPR form 523, p 5

⁶ Henry Lloyd Tevis Papers (Diaries). Bancroft Library. University of California Berkeley. 1910, 1911, 1912, 1914. pp 6, 8

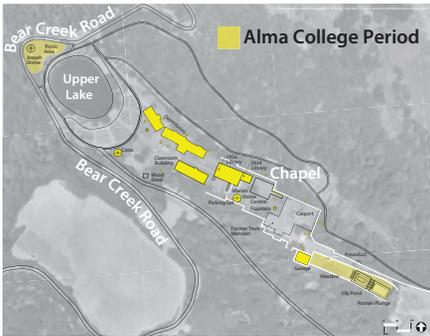


Figure 7: Alma College Site and Jesuit period elements overlaid on the existing site plan

becoming the faculty house and Tevis' library becoming the Chapel. The Jesuits built the 1934 Library, two Dormitory buildings (1934-1937), the Classroom building (1935), and the garage in the early Jesuit Alma College period, and the large 1950 Library addition in the late Jesuit period (see Figures 7 to 9). Several shrines were added to the landscape of Alma College as were introduced tree species, adding to those likely planted by Flood and Tevis. The Jesuits utilized the Tevis gardens and circulation system, expanding them when the dormitories and Classroom buildings were built (as seen in Figure 10). They also utilized the Tevis-era terraces, the Roman plunge and a number of other structures, vineyards and the orchard. Features remaining from the Jesuit period include the 1950 Library, 1934 Library, the Classroom and garage, remnants of the Dormitory basements, the Marion and St. Joseph shrines, paths, grapevines, and evidence of piping that appears to have been part of the Jesuit's local fire hydrant system.



Figure 8: Jesuit-era Alma College Site before the 1950 Library was constructed

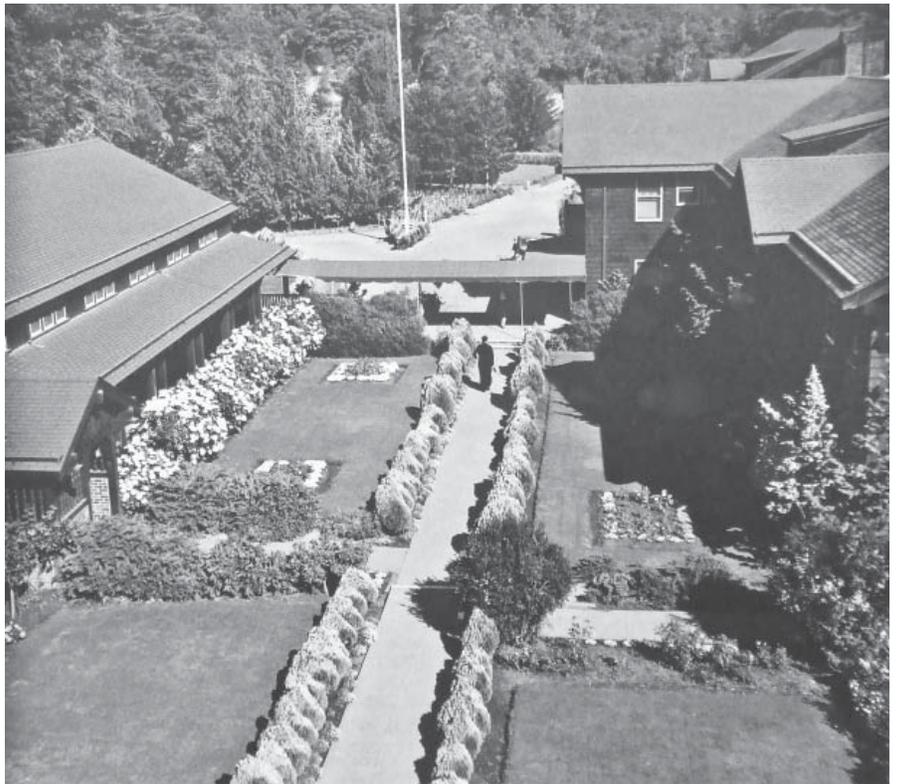


Figure 9: Jesuit Classroom (left) and dormitories (right) with gardens between



Figure 10: Upper lake and paths, gardens, and Jesuit-era buildings after 1950

POST-JESUIT PERIOD

After 1969, the property saw a series of tenants and uses. Changes to the site soon followed; the dormitories were demolished in 1969 and a 1970 Christmas Eve-fire left the mansion in ruins. In 1989, Hong Kong Metro Realty purchased the property from the Sacred Heart Novitiate. From 1984 to 1994, the site was occupied by the West Heights School, offering tuition for grades 1 through 12. No features are known to remain from this period.

MROSD PERIOD

In 1999, MROSD purchased the property. A master plan for Bear Creek Redwoods Preserve is underway. Figure 11 shows extant features and the periods from which they date.

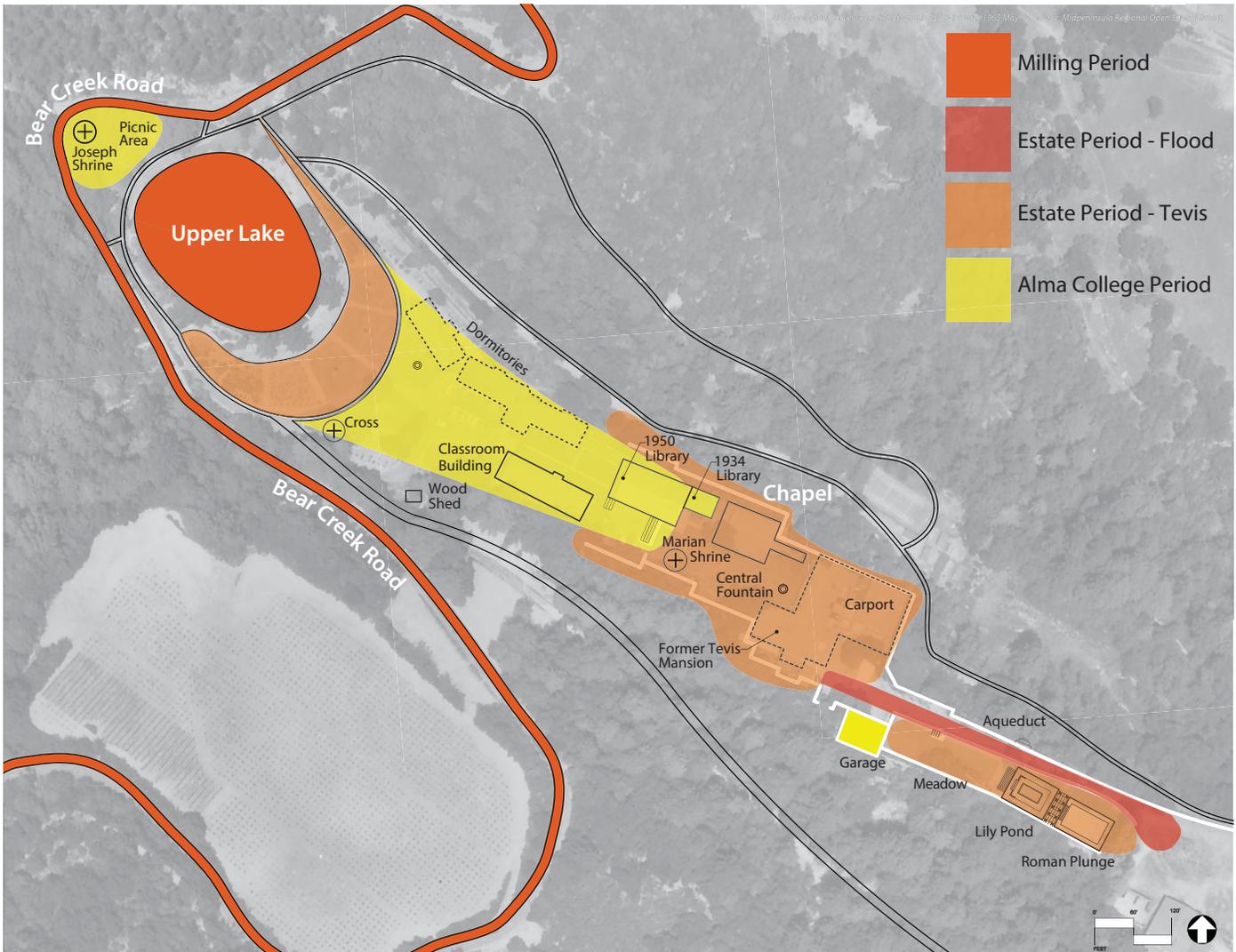


Figure 11: Accumulated periods plan overlaid on the existing Alma College Site Plan

Summary of Studies Completed to Date

A number of studies of the Alma College site have been completed since 1995. Discussion of each of these reports is addressed in the December 2015 “Former Alma College Site Historical Resource Technical Report” prepared by Page & Turnbull. Additionally, detailed discussion of each structure, the overall site and significance determinations by each study is provided in the Demolition Permit applications to be prepared by MROSD in 2017. Studies completed to date include:

- 1995 Santa Clara County Historic Resource Inventory prepared by Archive and Architecture
- 1995 “Historical and Architectural Resource Evaluation” for an Environmental Impact Report by Archive and Architecture
- 2004 Historic Resource Inventory update using the State of California Department of Parks and Recreation Primary Record (523A) and Buildings, Structures, and Objects (523B) forms prepared by Archive and Architecture
- 2005 “Alma College Historic Resource Study” prepared by Page & Turnbull for MROSD
- 2010 “Alma College Conditions Assessment Project: Phase 1: Assessment of Existing Conditions” prepared by Knapp Architects for MROSD
- 2015 “Alma College Site Cultural Landscape Rehabilitation Plan” prepared by PGAdesign for MROSD
- 2015 “Former Alma College Site Historical Resource Technical Report” prepared by Page & Turnbull for MROSD

Preservation Standards

As identified in the Cultural Landscape Overview section of this report, the governing preservation standard at the Alma College site is “The Secretary of the Interior’s Standards for Historic Properties and the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.” It defines four types of treatment for historic properties:

1. Preservation
2. Restoration
3. Rehabilitation
4. Reconstruction

Preservation focuses on sustaining the “existing form, integrity and materials of an historic property”⁷ when the property’s features are predominantly intact, convey the historic significance without extensive repair or replacement, and when it is preferred or appropriate to focus on a particular period of time. At the Alma College site, some features have been removed or lost to fire for more than 45 years, others are in poor condition and lie on or near the San Andreas fault, and still others will require extensive repair if they are to be retained. For these reasons, many of the property’s features are not predominantly intact nor is there a focus on one particular time period. Therefore, preservation is not the appropriate treatment for the Alma College site.

Restoration, as a treatment, is recommended when a “property’s design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods...”⁸ and when contemporary alterations are not planned. Restoration removes features from time periods outside of a single period of significance. In the Conditions Report, the Alma College site is defined as being significant under Criterion 1 of the California Register, because its layered history illustrates the development of the land since the 1850s in parallel to the development of the state of California. To focus restoration on one period, rather than these multitudinous layers, is counter to the site’s narrative. Therefore, restoration is not the appropriate treatment for the Alma College site.

By comparison, **rehabilitation** is suited to properties experiencing a change of use and requiring repair and replacement of deteriorated features. There is no focus on depicting one particular period of time.

⁷ United States. Department of the Interior. *The Secretary of the Interior’s Standards for the Treatment of Historic Properties: With Guidelines for the Treatment of Cultural Landscapes*. By Charles A. Birnbaum and Christine Capella Peters. Washington, D.C.: U.S. Dept. of Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Heritage Preservation Services, Historic Landscape Initiative, 1996. Print, page 18

⁸ Birnbaum and Peters, 48

The Secretary of the Interior's Standards define rehabilitation as:

"The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."⁹

Because the Alma College site has multiple time periods important to its history, it illustrates the landscape as a continuum through time. Physical evidence of these layers chronicles the usage of the site and forms the basis of its listing on the California Register. Additionally, as it is planned to become part of a larger open space preserve, no longer serving as an estate, seminary or school, its use is a new one. Rehabilitation treatment seeks to secure and emphasize continuity while acknowledging change, and is the selected treatment for the Alma College Site.

Reconstruction, as a treatment, is defined by the Secretary's Standards as "the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location"¹⁰. This treatment is applied when there is substantial physical and documentary evidence of the work during a particular time period. Whereas restoration provides guidance on restoring cultural landscape features, reconstruction speaks to recreating entire non-surviving cultural landscapes. The Alma College cultural landscape remains either intact or in a condition suitable for rehabilitation, including its location, setting, feeling, association and design, as well as its grading, north and south retaining walls, Upper Lake and many major site features. As a result of this, reconstruction is not the appropriate treatment for the Alma College site.

The 2010 Conditions Report assesses the Alma College site as a cultural landscape – evaluated as eligible to be a "district" under the California Register. Properties are eligible for the California Register if they meet one or more of the following criteria:

1. Associated with important historic events
2. Associated with important persons
3. Construction that is the work of a master or as an example of superior design
4. Sites associated with archeology

⁹ Birnbaum and Peters, p. 48

¹⁰ Birnbaum and Peters, p. 125

Project Parameters

There are two broad components that must be addressed when considering the project parameters. The first includes the physical site issues, as illustrated in the site analysis, Figure 12. The second relates to management and uses of the property. Together, these define what are sometimes referred to as “bookends,” in that they contain the full extent of the information and limitations at the site. Figures 13 through 20 illustrate existing conditions of the cultural landscape.

The site analysis identifies a series of factors affecting the rehabilitation of the property, which include:

- Site retaining walls dating to the Tevis period. The north wall is in better condition than the south; the latter wall exhibits at least two points of failure. Wall heights are shown in Appendix B Structural Assessment to aid in quantifying work associated with them (see Appendix B Figure 3 for more information).

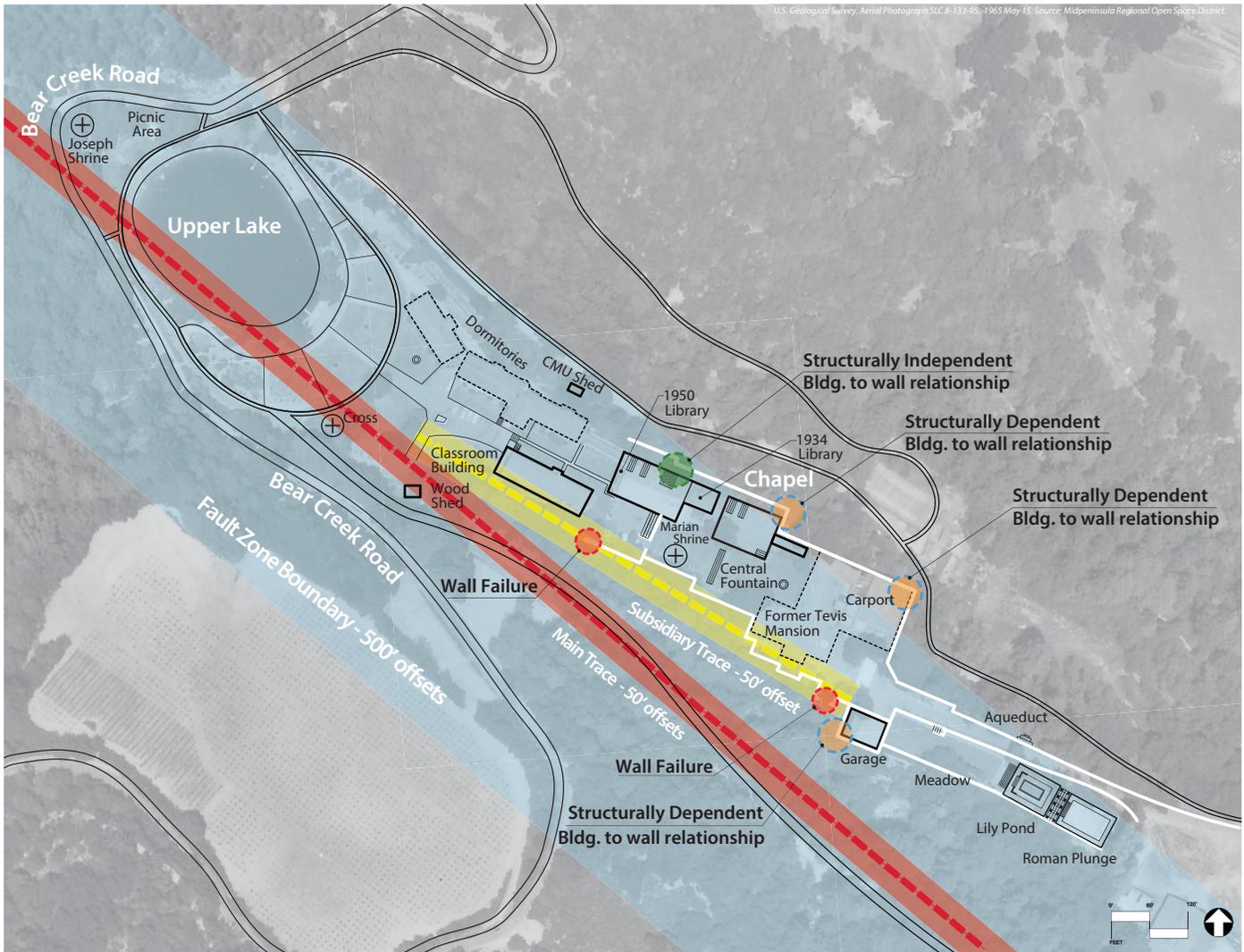


Figure 12: Alma College Site Site Analysis



Figure 13: Upper lake



Figure 14: The Chapel and adjacent terrace to the south



Figure 15: The Chapel



Figure 16: The brick and shingle 1934 Library with larger 1950 Library to the right

- In most places, there appears to be structural independence of the buildings from the retaining walls. However, as identified in Figure 12, possible loading of the retaining wall from the adjacent structure is likely at these three locations:

SW corner of the garage
NE corner of the mansion ruin
NE corner of the Chapel

- There are five extant buildings in fair to poor condition; this presents concerns for public safety and for the project budget. As noted in Appendix D Architectural Analysis (in the conclusion, last page),

“Years of disuse and vandalism, the site’s location, and geotechnical challenges have created the current condition in which none of the buildings is suitable for occupancy. Rehabilitating the buildings would be very expensive and would require grappling with a host of issues, including site circulation, accessibility, site utilities, and programmatic requirements for a new use.”

- Rehabilitation of the following buildings is likely to be a significant item:

Chapel (1909)
Library (1934)
Library (1950)
Classroom building (1935)
Garage

- The San Andreas fault runs through the south side of the Alma College ridge. Additionally, a subsidiary fault trace lies along the general alignment of the south retaining wall and other subsidiary traces may also underlie the site. As identified in Figure 12 from each side of both the fault and the trace, the Alquist Priolo Earthquake Fault Zone Act requires that a 50’ offset is measured. Within this zone, no new building can be built and extant buildings cannot be occupied by people unless further geotechnical study demonstrates it is safe.*
- A broader Fault Zone Boundary straddles the fault line with a required 500’ offset each side as shown in Figure 12. This zone has limitations that include occupying extant buildings no more than 2,000 hours per year (see Appendix A Geotechnical Analysis in for more information). A Fault Rupture Evaluation is required prior to humans occupying any building to demonstrate that there are no additional fault traces in the immediate vicinity, i.e. within 50 feet of the building.*
- At present, the Chapel is known to contain a colony of bats, and rats are also expected to be present. As hanta virus has been identified, the consultant team did not enter the buildings. Bat-friendly removal of all creatures occupying the buildings and eradication of hanta virus will be required.
- The layout and rehabilitation of features shown in the Alma College Site



Figure 17: The walkway on the north side of the Chapel and 1934 and 1950 libraries



Figure 18: The garage



Figure 19: Brick steps leading to the meadow



Figure 20: Brick and till steps at the lily pond and Roman plunge

Rehabilitation Plan accommodates these physical site parameters. See the Alma College Site Rehabilitation Plan section of this report for more detail.

There are management parameters affecting the Alma College property, as well, and these include:

- The heavy financial investment required to fulfill the Alma College Site Rehabilitation Plan in order to attract potential partners to utilize the grounds and/or Chapel building. This is counterbalanced by the attractiveness of the Alma College Site as an appealing signature site for potential partners.
- The time required to identify and recruit viable partners and associated internal approvals through both the MROSD and partner's boards and management structures such as complying with the MROSD Policy for Acquisition and Management of District Lands and Factors to Consider in the Disposition of Existing Structures. Factors such as historic and educational value, proposed and potential uses, and condition of structure. For regulatory context, please refer to the Bear Creek Redwoods Preserve Plan Environmental Impact Report (EIR) prepared by Ascent Environmental (2016).
- Once secured, staff time will be required to manage project partners to ensure their ongoing use of the property. Such a partnership is compatible with the mission of the District. Additionally, project partners will provide heritage resource protection. Managing time spent would be balanced against potential benefits to the site and income to the District.

REHABILITATION PLAN ALTERNATIVES CONSIDERED

Responding to these physical and management parameters, the consultants considered four broad-scale approaches introduced in the section of this report titled The Process. All have interpretation of the cultural landscape features at their core, including buildings, structures, and other features. The four approaches range from the least amount of change on the site in Alternative 1; to the most amount of change to the site in Alternative 4. The four alternatives are as follows:

1. Rehabilitate the Chapel and the 1934 and 1950 Libraries. Remove other buildings
2. Rehabilitate the Chapel and exterior of the 1934 Library, Stabilize 1950 Library. Remove other buildings.
3. Rehabilitate the Chapel, Retain the 1934 Library roof and superstructure. Remove other buildings.
4. Remove all buildings.

The following matrix discusses opportunities and possible constraints with each of these four alternatives.

ALTERNATIVE SCENARIO 1: REHABILITATE THE CHAPEL AND 1934 AND 1950 LIBRARIES. REMOVE OTHER BUILDINGS		
Opportunities	Constraints	District Mission & Costs
2 significant buildings and 1 contributing ¹ building are retained and available for MROSD use or for Partner program.	1 significant (Classroom) and 1 contributing (Garage) building are removed. ²	Highest cost to upgrade 3 buildings and bring up to current code. ³ High cost of providing needed site utilities.
Retaining 3 buildings would provide the largest square footage of space for programming – 11,000 SF.	Would require a Partner program to offset the cost of rehabilitating 3 buildings. The Partner would need sufficient capacity to utilize the 3 buildings. May be difficult to identify a suitable Partner to use the site. Likelihood of the Partner to generate sufficient revenue to cover all costs is low	Most comprehensive option for interpreting the cultural landscape.
Site-wide opportunities to interpret the cultural landscape features for the milling period, the estate period and the Jesuit period.	Requires keeping people away from the south retaining wall for safety.	Less well-aligned with MROSD mission to provide low intensity recreational uses.
Offers a variety of outdoor spaces for multiple uses.	Geologic study required. Occupancy limited to 2000 person-hours per year is likely. ⁴	
Pedestrian circulation would be upgraded to comply with accessibility standards and a buffer would be provided to some or all of the south retaining wall for visitor safety. ⁵	Potential for failure of the south retaining during a seismic event. ⁶	
Includes adding tiebacks on the north retaining walls to improve safety. ⁷ Broken ends of the south wall would be secured and limited tiebacks added. ⁸	Would impact to the Bear Creek Open Space Preserve by concentrating visitors at this location.	
	The significant cost to implement could delay the opening of the preserve to the public.	

1. Because the 1950 library was constructed during the period of significance and contributes to the historic significance of the site as a whole.
2. This constraint applies to all alternatives. Both the Classroom and Garage are very close to the fault trace and are in poor condition.
3. For each scenario that calls for rehabilitating one or more buildings the work must conform to Secretary's Standards. Lower level of Chapel would be altered as needed for structural work and building systems but not for programmatic uses without additional funding.
4. Limited use requirement applies to alternatives 1-3 per the Alquist-Priolo Fault Zone Act. Prior to occupying a building its proximity to the fault or trace must be determined with an Alquist- Priolo Fault Rupture Evaluation. If the building is within the 500-foot zone of the fault or trace there is a 2000 person-hour limit of occupation per year. If the building is within the 50-foot zone no human occupancy is permitted. The required detailed geologic hazard study must be done by a licensed geologist and reviewed by the County Geologist.
5. This applies to all Alternatives.
6. This constraint applies to all alternatives. Alternatives 1, 2 and 3 provide for limited stabilization of the south retaining wall (100lf) in the area of the lily pond for public safety.
7. This applies to Alternatives 1, 2 and 3.
8. This applies to Alternatives 1, 2 and 3 and partially to Alternative 4.

ALTERNATIVE SCENARIO 2: REHABILITATE THE CHAPEL AND EXTERIOR OF THE 1934 LIBRARY, STABILIZE THE 1950 LIBRARY. REMOVE OTHER BUILDINGS		
Opportunities	Constraints	District Mission & Costs
Would make available 1 building (with possible expansion to 3 buildings) for use by MROSD or Partner. 2 significant and 1 contributing buildings are retained.	Moderate to high cost of rehabilitating one (or more buildings) plus stabilizing one or more additional buildings, plus utility upgrades. Total cost depends on number of buildings upgraded.	2nd highest cost to implement.
Risks of impacts from earthquakes is reduced by strengthening north retaining wall and stabilizing limited portions of the south wall. ⁹	Potential for failure of the south retaining during a seismic event.	2nd most comprehensive option for interpreting the cultural landscape.
Strengthens the existing structures to allow observation from outside of buildings. May not require full seismic upgrade where no occupancy is desired or allowed. ¹⁰	With the 1950 Library retained it is not possible to successfully interpret the unimpeded view that existing through the site between 1850 - 1949. ¹¹	Aligns more closely with MROSD mission to provide low intensity recreation opportunities than in Alternative 1.
Interpretation of site features is more intensive, ie. includes reinstating crop trees in limited locations.		

9. This applies to Alternatives 1,2 and 3 but not 4.

10. This applies to Alternatives 1 and 3.

11. This constraint applies to Alternatives 1 and 2.

ALTERNATIVE SCENARIO 3: REHABILITATE THE CHAPEL, RETAIN THE 1934 LIBRARY ROOF AND SUPERSTRUCTURE. REMOVE OTHER BUILDINGS		
Opportunities	Constraints	District Mission & Costs
Retains the most significant building (the Chapel) and retains the roof and superstructure of the 1934 library for use by MROSD or a Partner program. Other buildings would be removed and their footprints interpreted.	Moderate cost to rehabilitate 1 building and retain the roof and portions of 1 other building. Lower utility upgrade cost than Alternative 1.	Balances the dual goals to provide low intensity recreation and to interpret the cultural landscape
Provides 1 historic building for use by a Partner program that offers potential for site-generated income compatible with the character and carrying capacity of the site.	1 significant (Classroom) and 2 contributing (1950 Library, Garage) buildings are removed. All have elements retained for interpretation, 2 are very close to the fault trace.	Balances how the buildings and other site features are utilized to interpret the cultural landscape.
Offers a variety of outdoor spaces for multiple uses in keeping with the MROSD mission.	Allows the possibility of having a Partner program but limits the potential size of the Partner program and potential revenue generating capacity.	Cost is balanced with flexible use of the property and potential to derive income.
Pedestrian circulation would be upgraded to comply with accessibility standards	Potential for failure of the south retaining during a seismic event	
Site-wide opportunities to interpret the cultural landscape features		
Simplifies the interpretation of some site features to reduce costs ie interprets the historic radial paths at the lake with radial bands of shrubs		

ALTERNATIVE SCENARIO 4: REMOVE OTHER BUILDINGS		
Opportunities	Constraints	District Mission & Costs
Seismic strengthening would not be required for the buildings, north retaining wall or structures and would greatly reduce the project improvement costs.	All historic buildings would be removed.	Lowest cost to implement and maintain.
Removal of the buildings would reduce risks and the need for building security.	The ability to interpret the cultural landscape in a meaningful way would be greatly reduced. It would be harder for the public to understand how the complex appeared historically.	This option conflicts with the District's goal to respect and interpret the heritage value of Alma College cultural landscape.
Bracing would be designed to maintain the low height portions of the existing walls which are designated to remain.	There would still be costs associated with limited stabilization of the retaining walls.	Most aligned with the goal to provide low-intensity recreation.
Site maintenance costs would be reduced.	Access to portions of the site would be limited because some areas would need to be fenced off for public safety.	

12. This includes the Milling Period: Upper Lake and Bear Creek Road. Estate Period: north and south retaining walls and aqueduct, pedestrian path system and terracing of the central spine, gardens, mansion site, 1909 library (now chapel), 1934 library superstructure and garage foundation, landscape spaces at the meadow/lily pond/Roman Plunge. Jesuit Period: gardens, St. Joseph and Marion Shrines, and retained footprints or foundations of the 1950 library, dormitories and classroom buildings.

ALTERNATIVES CONSIDERED BUT REJECTED

Rehabilitation Alternative Scenarios 2 and 3 were developed into schemes A and B described later in this report. Rehabilitation Alternative Scenarios 1 and 4 were not advanced.

Rehabilitation Alternative Scenario 1 was not advanced because, as described in the matrix, there are geotechnical limitations associated with lying within the Fault Zone Boundary that would limit the use of the 1950 and 1934 libraries and the Chapel. Also, prior to occupation of buildings, an Alquist Priolo Fault Rupture Evaluation is required to locate the fault and any additional traces. The second requirement is to map the information provided in the Fault Rupture Evaluation to identify if any buildings lie within the 500-foot zone in which case they are limited to 2000 hours of human occupancy per year, or if they lie within the 50-foot zone of the fault or trace they will be limited to uses that do not include human occupancy.¹¹ Until the data from the Fault Rupture Evaluation is available, this report assumes that the 2000-hour limit will affect the retained buildings. The limit to human occupation is currently envisioned as a requirement to be written into prospective leases with project partners for the use of the property. In this Scenario such a limitation is likely to significantly limit the potential pool of would-be project partners. As there are three buildings identified for rehabilitation, offering approximately 11,000 square feet of space, this Scenario presumes a partner with a sizable business enterprise. In this context, the 2000-hour time limit would constrain a partner's ability to occupy and make use of the buildings. The 2000-hour limit is any time spent by an individual within the building. For instance, one person for one day is 8 hours. Ten people for one day is 80 hours. According to Langan Treadwell Rollo, the team's geotechnical engineer, per the code, there is a 2000-hour allotment per building.

The 2010 Conditions Report identifies the Chapel and 1934 Library as significant features of the historic district, and the 1950 Library as a contributing feature to the district. Their location and form help visitors to understand the layout and spatial experience of the Alma College Site as a cultural landscape.

Given their condition, described in Appendix D Architectural Analysis, the rehabilitation of the 1950 and 1934 libraries and the Chapel would be an endeavor large enough to require MROSD to identify a compatible partner to assist in defraying the expense of their rehabilitation. Additionally, a partner who has the need for the amount of square footage offered by the three buildings is likely to have a greater human impact on the Alma College cultural landscape and the Bear Creek Redwoods Preserve than the mission of MROSD seeks or envisages.

¹¹ Per the 2015 "Former Alma College Site Historical Resource Technical Report," "Per California's Alquist Priolo Earthquake Fault Zone Act, buildings cannot be occupied within a 50-foot range of the fault or the trace. The Classroom building and the garage both fall within 50 feet of the trace line. Additionally, buildings within a 500-foot range of the fault and trace lines cannot be occupied for more than a specified number of hours [2000] per year" p.8.

Lastly, the rehabilitation of three buildings would result in a capital expenditure by MROSD; the magnitude of which may unbalance their overall Bear Creek Redwoods Preserve budget and potentially delay the opening of the preserve to the public.

Rehabilitation Scenario 4 was not advanced because MROSD has as one of its goals, a rehabilitation of the Alma College cultural landscape that helps the visitor to understand the layered site history. Arguably the Chapel is the most notable building on the site and even though it was changed and no longer conveys its original design or use, it does contribute to the overall site significance. It is reflective of both the Tevis and Jesuit periods. The size of the Chapel—approximately 3300 square feet —, its history and position on the site, and its potential appeal to a project partner also contribute to its value on the site. In Rehabilitation Scenario 4, the Chapel is to be removed; for this reason Rehabilitation Scenario 4 was not advanced.

Assessments and Analysis

GEOTECHNICAL ANALYSIS

The geotechnical analysis describes site conditions in relation to the San Andreas fault, reviews relevant codes including the Alquist Priolo Earthquake Fault Zoning Act and makes geologic recommendations regarding the Alma College site, buildings and retaining walls. See Appendix A FOR the full geotechnical report.

STRUCTURAL ASSESSMENT

Regarding the Chapel and 1934 Library, the structural assessment builds upon work done under the 2010 Conditions Report and provides structural recommendations. The structural assessment also makes recommendations regarding the retaining walls. See Appendix B for the full structural assessment.

CULTURAL LANDSCAPE ANALYSIS

The Alma College site is a cultural landscape containing both built and natural elements. The history, configuration and layering of features over time was assessed in the 2010 Conditions Report. Appendix C includes a table titled 'Landscape Features: Survey of Conditions' originally prepared for the 2010 Conditions Report, that has been updated to include conditions of landscape features in 2015.

ARCHITECTURAL ANALYSIS

The architectural analysis discusses extant buildings including the Chapel, 1934 Library, 1950 Library, Classroom building, garage and outbuildings. Additionally it addresses remnants of buildings including the Tevis mansion and dormitories. There is discussion of the treatment of these buildings focusing on the Secretary's Standards for rehabilitation. See Appendix D for the full architectural assessment.

RECREATION PLANNING ANALYSIS

The MROSD's mission is focused on open space; the District identifies education amongst their goals.¹² Obtaining or securing funding for cultural resources and historic buildings is a challenge. One of the objectives for the Alma College site is to rehabilitate the property in a manner that both upholds the mission of MROSD and provides for opportunities for possible project partners who will bring activity and funding to the Alma College site. Nozicka Consulting has developed a report addressing market and economic assessment partner opportunities. See Appendix E for this recreation planning analysis.

¹² *In the context of language from the MROSD 2014 Vision Plan, the mission includes "ecologically sensitive enjoyment and education."*

Rehabilitation Plan Treatment Schemes A & B

From the four broad rehabilitation alternatives described under Project Parameters, the consultant developed Schemes A and B based on Alternatives 2 and 3.

Schemes A and B share several features, although the extent to which a particular feature is developed may vary between the two.

Scheme B was selected as the preferred alternative and was titled the Alma College Site Rehabilitation Plan.¹³ A summary of the key elements of the Plan follows (add footnote to 2015 P&T report p. 8), it:

- Identifies physical features recommended for rehabilitation or removal,
- Addresses the addition of new visitor amenities,
- Addresses accessibility, safety and code issues, and
- Makes recommendations concerning:
 - Road access and parking improvements
 - New pedestrian paths
 - Event/gathering areas
 - Interpretative opportunities/approaches
 - Low-maintenance vegetation management
 - Improvements to landscape sequences that maximizes scenic viewpoints
 - No new buildings or habitable structures are proposed.

SHARED FEATURES OF THE TWO REHABILITATION SCHEMES

Both interpret the cultural landscape features and narrate the development of Alma College in parallel with the development of California. Interpretation is likely to include historic, scientific, geologic, and site water systems.

- Rehabilitate the 1909 Chapel.
- Strengthen north retaining wall, stabilize broken ends of south retaining wall.
- Remove and interpret the garage and Classroom buildings, due to their proximity to the fault
- Seek project partners for rehabilitation of buildings and gardens.
- Provide visitor amenities – visitor information, science education, vault and flush toilets.
- Rehabilitate existing pedestrian paths and add new pedestrian circulation to ensure the site is fully accessible.

¹³ Page & Turnbull. "Former Alma College Site Historical Resources Technical Report". (2015). p. 8

- Provide for site security, with a particular focus on significant level changes at retaining walls and building footprints.
- Provide a new entry from Bear Creek Road in the vicinity of the southwest side of Upper Lake. This is the same location where Flood had one of his entry drives, and it will provide a safe place for vehicles to enter and pedestrians to cross to connect to miles of trails on the west side of Bear Creek Road (see the full Bear Creek Access Master Plan). There are native American mortars in this area, as well.
- Provide parking for about 60 cars via the new entry from Bear Creek Road.
- Establish a vegetation management program– retain introduced trees and remove encroaching natives and vice versa, remove introduced plants from native forest, control weeds.
- Bring the forest up to the edge of the developed portion of the Alma College site.

SCHEME A – UNIQUE FEATURES:

(See Figures 21 to 23)

- Rehabilitate or stabilize the 1934 Library and stabilize the 1950 Library.
- Build two open-air structures, roofed or as open trellises, for picnicking and event use.
 - Provide a loop road to a new trailhead and site parking near the Roman Plunge. This uses the existing open flat area and offers ample space for parking.
 - Rehabilitate the plunge and lily pond.
 - Establish grapevines in the Dormitory buildings' footprints and orchard trees in the Classroom footprint. Vineyards and orchards were consistently recorded at the site going back to the time of Flood, and these locations offer valuable and contained interpretation of these historic site uses.

SCHEME B – UNIQUE FEATURES:

- Retain the 1934 roof structure, making it an open air pavilion accessible to visitors whenever the site is open to the public.
- Provide for picnicking throughout the site.
- Install two smaller parking areas nearer Bear Creek Road. This provides for straightforward phasing and ensures that no vehicles will travel through either the body of the Alma College site or deep into the Bear Creek Redwoods Preserve.
- Provide a lighter touch at the foundation remnants of the Dormitories and Classroom.
- Use a lighter touch at the rehabilitation of the lily pond and plunge.

See the following section titled 'Preferred Treatment' for the selected plan and perspective views.

**Midpeninsula Regional Open Space District
Alma College Site Cultural Landscape Rehabilitation Plan**



Figure 21: Alma College Site Draft Rehabilitation Plan - Scheme A

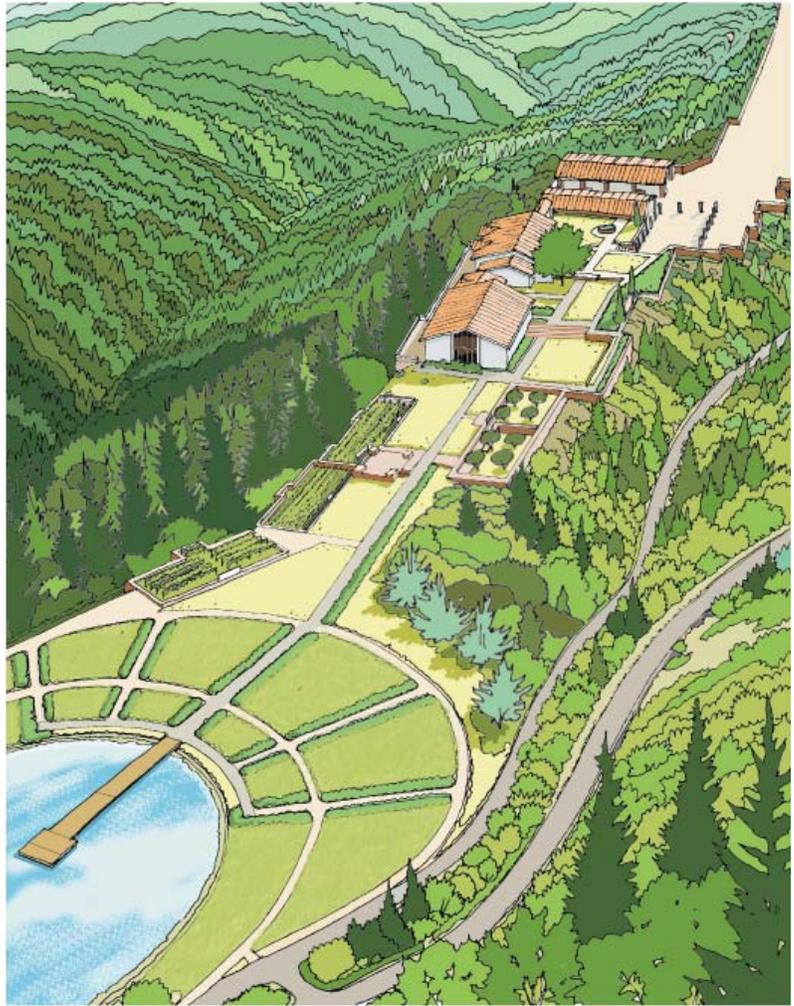


Figure 22: Aerial view of Scheme A



Figure 23: Rehabilitation of the meadow, lily pond, and Roman plunge shown in Scheme A

Preferred Treatment - The Alma College Site Rehabilitation Plan

Based on the MROSD board and staff review, as noted above, Scheme B was selected as the preferred approach. This Alma College Site Rehabilitation Plan has had a preliminary cost estimate prepared for it.

MROSD MISSION AND THE SELECTION OF THE PREFERRED TREATMENT ALTERNATIVE

Founded in 1972, and today with over 60,000 acres of land protected for public access and enjoyment, MROSD's focus has been on open space. Their mission is to:

"Acquire and preserve a regional greenbelt of open space land in perpetuity, protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education."

In 1999, MROSD adopted a Basic Policy which outlines five objectives. Amongst these is:

"Objective 2. Open Space Management: The District follows management policies that ensure proper care of the land, that provide public access appropriate to the nature of the land, and that are consistent with ecological values and public safety."

The approach to cultural resources on District land is addressed under this objective through consideration of the protection of historic structures and sites. Historic structures, and facilities such as picnic tables, are considered 'special use facilities', the presence and treatment of which are addressed on a case by case basis. Uses such as these may be allowed when they provide heritage resource protection benefits as is the case at the Alma College site.

MROSD seeks to provide low intensity recreation. Factors that are weighed when determining the timing and nature of public access to a given area include the carrying capacity of the land, geologic features, restoration efforts, parking, restrooms, and the identification and mitigation of potential safety hazards. Additionally, the availability of board and staff time, funding, and a means to plan and manage the proposed use of the land are amongst the criteria when providing public access.

Revenue-producing uses on MROSD lands is considered beneficial when it does not utilize significant areas of natural land or unduly impact natural or aesthetic resources.

In this context Alternative B was selected to become the preferred treatment; the Alma College Site Rehabilitation Plan.

This plan provides for:

- Heritage resource protection and public access to the cultural landscape while having minimal impact on the natural context, in part because the site is physically bounded by the north and south retaining walls. The cultural landscape sits on the ridge above and is physically separated from the natural slopes, forests and creeks of the preserve.
- Retention of features from each of the historic periods of the Alma College site history
- Rehabilitation of the Chapel.
- Interpretation of the mansion, dormitories, Classroom, garage, and 1950 Library through the retention of their foundations marking their placement and size.
- Potential fund-raising through the beneficial efforts of a project partner and their use of the Chapel.
- Parking scaled to the carrying capacity of the land.
- Restrooms.
- Mitigation of public safety concerns. Visitor safety is integrated in the plan, in part through limiting the places where people can gain access to the south retaining wall, which lies close to the San Andreas fault.

The selected preferred treatment, the Alma College Site Rehabilitation Plan, seeks the benefits of heritage resource protection, balanced with minimal impacts on the surrounding nature environment and feasibility of its implementation.

FEATURES OF THE ALMA COLLEGE SITE REHABILITATION PLAN

Key elements (see Figures 24 to 26)

- Interpret the myriad landscape features that tell the narrative of this site and its development in parallel with the development of California:

Historic – milling period, estates under Knowles, Flood and Tevis, the Jesuits

Scientific – natural biodiversity, hydrology, fauna

Geologic – the site as a living geomorphological text book

Water systems – Tevis water system and Upper Lake

- Rehabilitate the 1909 Chapel and retain the 1934 Library roof structure
- Strengthen the north retaining wall; minimally stabilize the south retaining wall

UPPER LAKE

Retain and stabilize Upper Lake, dating to the Milling Period, as the central organizing element of the site.

ST. JOSEPH SHRINE

Rehabilitate for visitor seating/picnicking.

HISTORIC CIRCULATION PATTERNS

Reinstate pathways around lake as ADA trails.

ALMA COLLEGE PARKING AREA

Provide capacity for 60 vehicles between two lots, vault toilets, and signage.

BUFFER PLANTING

Provide extensive areas of native evergreen shrub plantings along the south retaining wall as a barrier, to limit impacts in case of a seismic event.

KEY ELEMENTS

- Rehabilitate and interpret the features that illustrate the layers of development and use of the property.
- Reinstate or rehabilitate historic plantings using evergreen shrub plantings on the path through the middle of the site, at the shrines, and in lieu of radial paths.
- Provide interpretive materials to narrate the cultural landscape components.
- Stabilize the 1909 chapel, and the 1934 library roof structure.
- Strengthen north retaining wall, minimally stabilize south retaining wall.
- Due to their position in relation to the San Andreas fault trace, remove the classroom garage, and the 1950 library.
- Provide visitor amenities.
- Establish parking for approximately 60 cars.
- Establish a regime of vegetation management.
- Plant garden areas with unirrigated wildflower and grass mixes for improved habitat.
- Plant with native species to convey the layout of other historical plantings.
- Seek a project partner or partners for the use of the rehabilitated building and gardens.

PARTNERSHIP ELEMENTS

- Rehabilitate chapel and library superstructure for reuse.
- Provide water, septic, and power to the rehabilitated chapel.
- Rehabilitate radial gardens near Upper Lake.
- Provide enhanced visitor amenities including flush toilets

NEW ENTRY FROM BEAR CREEK ROAD

Clear vegetation to improve line of sight as needed. Provide a safe pedestrian crossing at Bear Creek Road.

DORMITORIES AND CLASSROOMS

Interpret the Jesuit period through the remaining foundations of the dormitories. Remove and interpret the classroom building, retaining its clay-tile paved porch and foundation.

PEDESTRIAN PATHS

Reinstate the central path of the former historic radial path system and the former central path through the site incorporating existing lengths of path where they remain.

1950 LIBRARY

Remove the 1950 library to reopen views along length of the site, as between the late 1800s to 1950. Retain terraces created by Tevis for use as picnic areas. Rehabilitate historic stairs.

MARIAN SHRINE

Rehabilitate Marian Shrine

CHAPEL AND 1934 LIBRARY

Stabilize the wooden Chapel for rehabilitation and use by a project partner. Close the lower floor for structural strengthening. Rehabilitate the patio on the north side for use by self-guided visitors. Retain the roof of the wooden 1934 Library, removing most or all of its walls so that it becomes a weather shelter.

FORMER TEVIS MANSION FOOTPRINT

This is a flexible-use picnic area. Interpretive paving element marks the threshold of the NW wing of the mansion. Enhance the extant remnants of the mansion foundation, flush with the pavement grade. Stabilize remnant carport columns and walls. Reinstate and interpret the location of the exterior walls, indicating the building's wings, some as sitting elements.

NORTH AND SOUTH RETAINING WALLS

Structurally stabilize the north retaining wall with tiebacks. The south retaining wall lies on the fault trace, repair the broken ends where failure has occurred. Provide modest repairs to brickwork at the parapet edge. Provide safety barriers until north wall is stabilized

GARAGE

Interpret the garage site and provide an overlook to the lower floor.

MEADOW, LILY POND, AND ROMAN PLUNGE

Clear the meadow of invasive species. Rehabilitate hardscape and interpret the lily pond and Roman Plunge suitable for picnics and gatherings. Retain and strengthen the bilaterally symmetrical view to the SE between the blue cedars.

SITE AND SAFETY CODE COMPLIANCE

Provide ADA accessible routes throughout. Provide safety barriers or vegetated buffers to prevent access near retaining walls

- Remove the Classroom and garage due to their position in close proximity to the San Andreas fault trace. Remove the 1950 Library. Seek a project partner(s) to use the rehabilitated building and gardens.
- Provide visitor amenities – flush bathrooms, visitor information, science education cart, etc.
- Establish parking for approximately 60 cars in two lots at the NW end of the site. Utilize existing graded areas for parking.
- Establish a vegetation management program.
- Define a phased implementation

Upper Lake

A small pontoon platform, located near the St. Joseph shrine on the northwest side of the lake, offers access to the water for science/school education, collection of water samples and viewing. This location provides long views down the length of the site to the view-stop at the vertical plantings that mark the position of the former mansion. Interpret the lumbering and milling period, from when this was known as James S. Howe's mill pond. Later, Tevis called it Upper Lake, one of three lakes in his water system.

Dormitories and Classrooms

Interpret the Jesuit period through the remaining foundations of the dormitories; provide viewing positions looking down into the lower level of the former buildings. Remove the upper part of the Classroom building, retaining its clay-tile paved porch from where the remaining upper and lower levels of the Classroom building can be observed.

Chapel and 1934 Library

Rehabilitate the wooden Chapel for event use with a project partner or as a visitor center by the MROSD. Stabilize this building until a project partner can be identified. The lower level will be closed to use to allow structural stabilization of the building and to eliminate or reduce its dependence on the adjacent north retaining wall. Retain and rehabilitate the patio on the north side of the building, suitable for use by self-guided visitors. Provide water, septic for bathrooms, and power to the rehabilitated building; state-of-the-art composting toilets may be an alternative to a septic system. Retain and rehabilitate the covered walkway on the north side of and connecting the Chapel and 1934 Library. Retain the roof of the 1934 Library, removing most or all of its walls so that it becomes an open-air pavilion for use as an interpretive center. See Appendix D, Architectural Analysis, for further elaboration.

1950 Library

Remove the 1950 Library to recapture views along the length of the site that existed between the late 1800s and 1949. Retain the terraces created by Tevis for use as informal picnic areas. Retain evidence of the footings of the 1950 Library flush with finished grade to indicate its location and size. Reinststate the historic, wide clay-tile paved stairs along the southeast edge of the terrace.

Pedestrian Paths

Reinststate the central path of the former historic radial path system near the lake. Reinststate the former central path alignment through the site, incorporating existing lengths of path where they remain. Where historic paths are not extant, align paths towards the north side of the available central space to maximize distance from the known fault and trace. Provide for visitor safety in placing circulation routes. Retain long views through the center of the site, from the lake to the former mansion site. Materials for paths vary from existing red-tile paver and concrete in the central part of the site to stabilized decomposed granite and gravel at the outer edges of the site.

Meadow, Lily Pond, and Roman Plunge

Rehabilitate this sequence of landscape spaces. Clear the meadow of invasive species and, with minimal level changes, rehabilitate and interpret the lily pond and Roman plunge, maximizing suitability for picnics and gatherings. Reinststate the arbor, outline the lily pond, provide low walls and a few steps to the lily pond terrace, and provide an accessible route to each of the spaces. Retain and strengthen the bilaterally symmetrical view to the southeast between the existing blue cedars to the cedars on the hillside beyond. Reinststate rows of conical coniferous shrubs on each long side of the meadow and supplement the grapevines on a restored trellis at the northwest end of the meadow.

Former Tevis Mansion Footprint

Mark the threshold of the northwest wing of the mansion with interpretive material in the paving. Enhance the extant remnants of the mansion foundation, flush with the pavement grade, to illustrate its location and size. The area is a flexible-use picnic area with integrated interpretive elements. Stabilize the remnant carport columns and walls. Reinststate and interpret the location of the exterior walls of the mansion, indicating walls of the building's wings; some may serve as seating elements. Retain views to the east from the edge of this space.

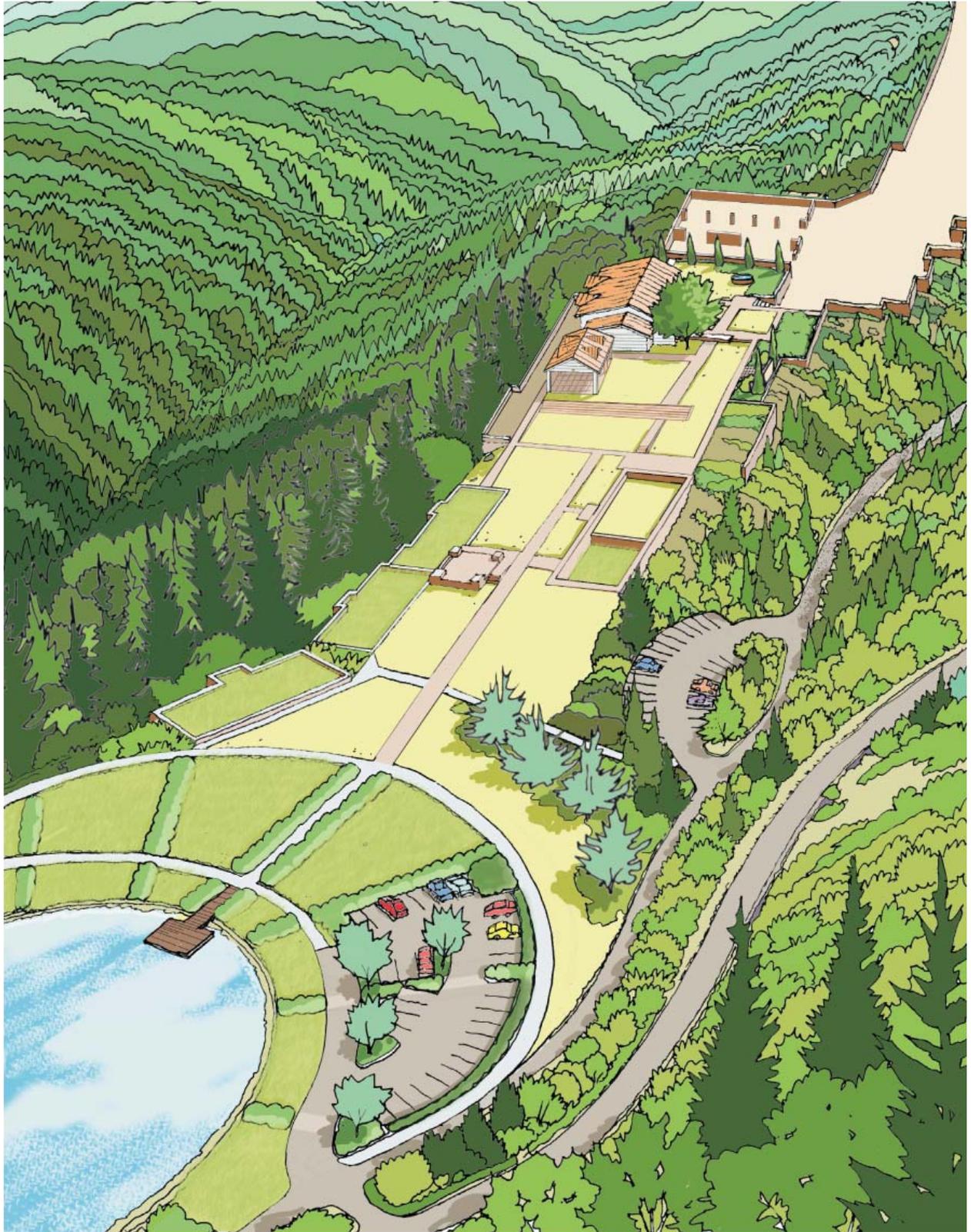


Figure 25: Aerial view of Alma College Site Rehabilitation Plan

Garage

Interpret the garage site and provide an overlook to the lower floor. The removal of the upper parts of the garage is due to its location in close proximity to the fault trace and the ongoing risk of surface rupture. Stabilize the garage walls only as needed on this very steep slope, where they are part of the south side retaining wall.

North and South Retaining Walls

Structurally stabilize the north retaining wall with tiebacks (see Appendix B Structural Assessment for further detail). The Chapel and 1934 Library appear to be independent structures that do not bear on the north retaining wall except at the east corner of the Chapel. In this location, close the lower floor of the Chapel to access and provide needed structural modifications. The south retaining wall lies in close proximity to the San Andreas fault trace and exhibits failure in at least two locations; stabilize the broken ends where failure has occurred and provide modest repairs to brickwork at the parapet edge. Structurally stabilize the south retaining wall in a limited area at the lily pond (approximately 100 linear feet) to offer protection to visitors where access is located close to the wall.

Introduced and Native Vegetation

Introduced tree species, including blue cedars, liquidambar, Canary Island palms, Italian cypress, dawn redwood and others, indicate patterns of former use. Selectively clear native species from areas of introduced vegetation. Similarly, clear introduced species that have spread from areas of native woodland. Promote growth of the native forest, or where needed prune growth up to the edges of the Alma College features to establish a firm edge of tall vertical native evergreen trees, defining the limits of the Alma College ridge.

Reinstate dominant evergreen shrub plantings to interpret the Tevis- and Jesuit-era plantings along the alignment and in lieu of the radial paths, and along the path through the middle of the site. Rehabilitate the existing plantings at the Marion and St. Joseph shrines and in the location where the cross once stood on the south side of the radial paths. Incorporate native shrub plantings along the south retaining wall to serve as a barrier to hold people back from the wall and its significant drop-offs. The radial gardens on the southeast side of the lake may be restored and maintained by a project partner such as a master gardener group or horticultural association (see Appendix E, Recreation Planning Analysis for further information). In this area, the intention is to interpret the Tevis and/or Jesuit periods. Until a partner is identified, plant these garden areas with endemic unirrigated wildflower and grass mixes for improved habitat. At the terraces between the buildings or footprints of buildings, provide unirrigated native grasses. These terraces are intended to be mown 2 to 4 times per year.

New Entry from Bear Creek Road, Parking

As part of the work associated with the Bear Creek Redwoods Preserve planning process, a new pedestrian crossing of Bear Creek Road has been identified on the west side of Upper Lake. This location will also become the vehicular entry to the Alma College site and parking area. Parking for approximately 60 cars will be located in two areas that utilize existing relatively flat land on the southeast side of the lake and near the Classroom building footprint. Improve the existing road, as needed, to access these two parking areas. A MROSD-standard vault toilet is located near a proposed parking area.

The proposed location for the new entry from Bear Creek Road requires relocation of the ring of boulders. Two of the boulders contain rock mortars. The placement of the boulders appears to be historic, rather than pre-historic as the boulders appear to have been moved to this location. Coordinate with the 1994 archeological report titled "An Assessment of Recorded Archeological Resources on the Proposed Los Gatos Country Club Project Area, Santa Clara County".

Cultural Landscape Features

Rehabilitate and interpret the features of the cultural landscape that illustrate the layers of development and use of the property. Upper Lake and Bear Creek Road date to the milling period. The majority of the site layout dates to Tevis' post-1906 reconstruction, including the north and south retaining walls, aquaduct through the ridgeline southeast of the mansion ruins, pedestrian path system and terracing of the central spine of the property, mansion site, 1909 library (now the Chapel), and the landscape sequence of spaces at the meadow, lily pond, and Roman plunge. Interpret (and, in some cases, rehabilitate) features that show the further development of the grounds by the Jesuits, including their ongoing care of the gardens, addition of the St. Joseph shrine and Marion shrine, the 1934 Library, and remaining vestiges of the 1950 Library, Dormitories, Classroom and Garage buildings.

Buffers, Site Safety and Code Compliance

The plan identifies and mitigates several potential safety hazards. These fall into two main categories; risks of impact from a seismic event and drop-offs at level changes requiring barriers. This plan intends to provide a safe environment for visitors; to limit impacts to visitors from an earthquake on or near the San Andreas fault the plan provides for generous vegetated buffers along the south retaining walls. These new plantings keep visitors approximately 20-feet from the top of the wall in many locations. If the wall were to fail in an earthquake, the soil in the affected area is likely to adopt its natural angle of repose. For instance, a 10-ft high wall adopting its conservatively-estimated angle of repose of 45-degrees would require a 10-ft buffer to provide protection. Steeper natural angles of repose would allow for smaller buffers, see Appendix A Geotechnical Analysis. In the area of the lily pond where a path runs along the upper edge



Figure 26: Rehabilitated Chapel / Tevis Library shown in Alma College Site Rehabilitation Plan

of the retaining wall a 100-ft length of structural tiebacks has been included. Additionally, where feasible new paths have been located well back from the south retaining wall to provide a buffer from this potentially vulnerable edge. Lastly, phasing offered in the Reduced Option described in the cost estimate restrict access to the tallest parts of the north retaining wall before they are stabilized with tiebacks.

There are significant drop-offs and level changes along the north and south retaining walls and where footprints of buildings are retained. Provide elegantly integrated interpretive materials into walls and railings to narrate the cultural landscape components of the site and to provide a 42-inch guardrail at these level changes. This guardrail may consist of parts of the building wall retained. In conjunction with this, approximately half the railings will be standard in their design; the other half will be customized to the existing brick parapet walls or to the features being interpreted. Where historic path alignments include flights of stairs, alternative accessible routes are provided to ensure the site is fully accessible.

Partnership Elements

The summary of elements associated with a project partner include rehabilitation of the Chapel and Library superstructure for re-use. The Chapel will be served by water, septic and power. Enhanced visitor amenities will include flush toilets. The radial gardens near Upper Lake may be rehabilitated.

ASSESSMENT OF THE ALMA COLLEGE SITE REHABILITATION PLAN UNDER THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

Spatial Organization

The Alma College site is located on a spur ridge in the Santa Cruz Mountains. Its steep side-slopes are supported by retaining walls that measure more than 20 feet high in places. The result is a relatively flat topped ridge that extends from Upper Lake in the northwest to the Roman plunge in the southeast, surrounded by thick forest.

The Alma College Site Rehabilitation Plan retains this historic macro-scaled pattern of spatial organization and enclosure, made up of the flat-topped ridge with tall, dense vegetation on all sides. When the Jesuits occupied this location, the space on the ridge-top appeared narrower because there were more buildings along each side of the flat area. The mansion at the end of the view acted as a view-stop, containing the space on the southwest. The site continued to evolve; when the Jesuits added the 1950 Library, the last building to be built, it pinched this long linear space through the center of the site, impacting views along the spatial spine.

Today, the dormitories and mansion are no longer standing. The Alma College Site Rehabilitation Plan proposes removing the Classroom building and 1950 Library and reducing the physical impact of the 1934 Library by removing some or all of the walls while retaining the roof. The removal of these structures will broaden the perceived width of the space along the ridge, impacting the pattern of spatial organization.

The proposed plan strengthens linearity of the central space by opening the view along the length of the site via the removal of the 1950 Library. Additionally, a view-stop created with vegetation immediately in front of where the mansion formerly stood helps define the south end of the central space. Lastly, clearing the ground plane of invasive shrubs and grasses, and the proposed increase in density and height (in some places) of perimeter vegetation, better defines the edges of the ridge and cements the pattern of solid to void to better reinforce the historic condition of spatial organization.

The enduring impression of this site is of its linearity with enclosure by tall elements on all sides. This macro-scaled pattern of the site's spatial organization remains intact. The rehabilitation plan impacts the smaller-scaled perception of the spatial organization of the site due to the removal of elements and the resulting increased openness of the site when experienced within the central part of the site.

The character-defining quality of spatial enclosure at the Alma College site is a key component of the Alma College Site Rehabilitation Plan. The plan's approach to the site's spatial organization complies with the Secretary's Standards for rehabilitation.

Circulation

Vehicular access during the Flood estate period was from Bear Creek Road, approximately in the location of the proposed entry drive. There was no vehicular access through the middle of the site. Flood installed the carriage road that meets the Alma College site at its southeast end, and this connection remains. Today, a pair of vehicular service routes lead from the vicinity of Upper Lake through the site, becoming one drive opposite the 1950 Library.

The proposed Alma College Site Rehabilitation Plan removes vehicular circulation from the central space, relegating it to the new entry off Bear Creek Road and two new parking areas at the northwest end of the site. At the southeast end of the site, formerly Flood's carriage road, there is no vehicular access, although the carriage road remains with little or no change.

The proposed Alma College Site Rehabilitation Plan reuses and repairs existing pedestrian paths through the middle of the site leading up to the former porch of one of the dormitories, retains the tile porch paving along the north side of the Classroom building, and integrates the site stairs at the terraces near the library and Chapel. The covered walkway on the north side of the Chapel and 1934 Library connecting them is retained and rehabilitated. The walkway on the north side of the 1950 Library is simplified and is no longer a roofed space, as it is no longer next to a building. Pedestrian paths are reinstated in the area around the south side of Upper Lake. The radial paths seen in historic pictures have not been included, though their locations are identified by radial rows of native shrubs. The paths around the north side of the lake and leading to the St. Joseph's shrine are rehabilitated. New pedestrian paths offer an accessible route through the site from the dormitories to the mansion. New pedestrian surfaces are provided in the area of the lily pond and plunge.

The vehicular circulation at the proposed parking areas is a new negative visual impact. This impact is countered by the form and location of the parking being defined by historical paths (in the case of the parking near the lake) and in an area of relatively gentle grades already compacted by vehicles (in the case of the parking near the Classroom foundation).

Existing pedestrian paths are integrated into the plan. New paths take cues from the original path layout and offer improved accessibility. Pedestrian circulation, as shown, has minimal impact on the integrity of the site. This approach complies with the Secretary's Standards for rehabilitation.

Topography

The overriding quality of the Alma College site is its perched location in a natural mountainous setting. The layout of the site is in direct response to its topography. The proposed Alma College Site Rehabilitation Plan does not impact this relationship and complies with the Secretary's Standards for rehabilitation.

Vegetation

Introduced species reflect past uses. The proposed Alma College Site Rehabilitation Plan retains living introduced species and rehabilitates them. Native forest enclosing the site is retained and supplemented, as described above under Spatial Organization. Historically, there were notable gardens, vineyards and orchards on the property. Shrubs and vines remain in a few locations, and these are integrated into the Alma College Site Rehabilitation Plan. The terraces in front of the mansion, Chapel, libraries, Classroom and dormitories have been retained. While these were historically well-tended lawn, the Alma College Site Rehabilitation Plan shows them as native grasses resulting in a similar albeit less manicured appearance.

The proposed Alma College Site Rehabilitation Plan retains the key extant features of the vegetation, which are dominated by the native forest and introduced trees. Additional native plantings are introduced on the south side of the ridge to provide a barrier to access at the steep drop-off at the south retaining wall. This approach to the site's vegetation complies with the Secretary's Standards for rehabilitation.

Buildings and Structures

Key in assessing the buildings and structures of the Alma College site under the treatment of rehabilitation, is the impact changes will have on this as a cultural landscape. Cultural landscapes are often, by their nature, large in scale and are made up of multiple features. Buildings and structures, play a role in defining space, guiding circulation, and narrating the past. Rehabilitation as a treatment, allows for alterations to a property to serve a new use. The new use in the case of the Alma College site is as a part of a public open space system and natural preserve. The repair, rehabilitation, and removal of buildings and structures facilitate the transition of this site to the new use while retaining evidence of all the layers of history on the site.

The geotechnical report in Appendix A describes treatment challenges facing the Classrooms and garage as a result of their position on a trace of the San Andreas fault and the considerable limitations to their use required by code. Both as a result of this limitation on their potential use and their poor condition, the rehabilitation plan shows the Classroom and garage as being removed.

According to the Secretary's Standards, removal of fabric negatively impacts the integrity of an overall site.

The Alma College Site Rehabilitation Plan identifies the Chapel for rehabilitation and retention of the roof and superstructure of the 1934 Library. The 1950 Library is removed but its foundation is preserved at grade so that the building's size and position can be interpreted.

The Chapel (1909) being the earliest extant structure at Alma College represents the Tevis and Jesuit periods. Per the 2015 Page and Turnbull Technical Report:

"The report (2005 Historic Resource Study) found that the Chapel appeared individually eligible for listing in the California Register for its architectural significance (Criterion 3), but that the deteriorated condition of the site resulted in a loss of integrity of the historic district" (p2)

The 1934 Library is a relatively early building dating to the Jesuit period. It is small in size and is physically connected to the Chapel by the covered walkway on its north side. This connection dates to the time of its construction. The covered walkway will be rehabilitated as part of the proposed Plan. From a practical point of view, and due to its age, physical connection with the Chapel and relatively small size, the 1934 Library is more feasible to retain than the 1950 Library.

The 1950 Library has a contrasting character compared with the other buildings of the property. Its materials are stucco and tile versus wood and shingle at the Chapel and 1934 Library etc. and is of an entirely different scale to the other buildings. It had a secondary role in the original plan for the campus and, as the last building to be built on the property, had the fewest number of years being part of the Jesuit community. The removal of the 1950 Library reopens the long views through the site that were part of the property for the first 99 years of the period of significance. The Architectural Analysis in Appendix D discusses the proposed treatment of individual buildings that are part of the Alma College cultural landscape as they are affected by the proposed Alma College Site Rehabilitation Plan.

Views and Vistas

With the removal of the 1950 Library, the proposed Alma College Site Rehabilitation Plan reinstates the views experienced at the site prior to 1950. The absence of the mansion, dormitories, Classroom and library – some lost decades ago, some removed as part of the proposed plan – alters this long view up the middle of the site, but the plan retains the essential linearity of the site.

Historically, there were views from the southeastern end of the Roman plunge between paired blue cedars to an opposite hillside, which is planted with a grove of blue cedars. As use of the terrace at the plunge is reinstated, this view is also intended to be reinstated. The proposed plan calls for removal of

vegetation obscuring views of landscape features such as the St. Joseph's shrine and the meadow north of the lily pond will reopen views that were present in the past.

The approach of the Alma College Site Rehabilitation Plan in relation to views and vistas complies with the Secretary's Standards for rehabilitation.

Constructed Water Features

Originally constructed as a mill pond, Upper Lake remains in essentially the same form as it has for over a century and a half. The Alma College Site Rehabilitation Plan provides increased access to the water through the addition of pontoons; the lake is otherwise unchanged. The lily pond and Roman Plunge were constructed water features that formed part of a landscape sequence of spaces. These no longer exist though rough terraces where the Plunge and meadow were located remain. The proposed plan rehabilitates this sequence; due to the changed use of the property, the two pools will be filled, their position marked on the ground, and sequence of landscape spaces illustrated with interpretive material.

Small-Scaled Features

Landscape elements, such as the fountain basin near the mansion, flagpole, Marion shrine and St. Joseph's shrine, are incorporated and/or rehabilitated as part of the Alma College Site Rehabilitation Plan.

Generally, small-scaled features are modestly impacted by the proposed plan. One impact occurs at the ring of boulders near the lake and Bear Creek Road. Based on observations contained in the 1994 archeological report, the provenance of these boulders in this location is historical rather than pre-historic. Follow the recommendations contained in the 1994 archeological report addressing the two rock mortars contained in the boulders. Though this is a negative impact, the significance of the ring of boulders is moderate to low. As the new use requires a safe vehicular entry for visitors into the preserve, relocation of the boulders is necessitated.

The proposed plan's overall approach to small-scaled features complies with the Secretary's Standards for rehabilitation.

CONCLUSION

The existing cultural landscape and architectural features at the Alma College site convey evidence of use over the last 165 years that make this a historically significant vernacular cultural landscape. As a result of geotechnical issues, years of disuse and vandalism, much of the site is unsafe and some features, particularly the buildings, present significant challenges to rehabilitation.

The Alma College Site Rehabilitation Plan calls for the rehabilitation of the majority of cultural landscape features in accordance with the Secretary of the Interior's Standards. While respecting features and the site's history, to make the plan a success, a key initial task is to make the property stable and safe to the public while addressing programmatic requirements of the new use.

The broad-scaled spatial organization of the property retains integrity. The ridge is supported to the north and south by substantial retaining walls. On the north side of the site, where the majority of circulation and activities occur, the retaining wall should be stabilized, to continue to support the historic flat-topped ridge. Surrounding vegetation should be retained and managed to emphasize its sense of enclosure. The extant footprint of the dormitories, remains of the mansion, carefully selected portions of the Classroom and garage, and the outline of the 1950 Library should be able to be viewed by visitors and interpreted so that their extent, character and contribution to the site's spatial organization can be understood. The Chapel is to be rehabilitated in conformance with the Secretary of the Interior's Standards for rehabilitation. Its form and that of the 1934 Library, which is retained in part, help shape the experience of the site. The historic spatial sequence at the meadow/lily pond/plunge will be reestablished through clearing of vegetation and rehabilitation of terraces, steps and the trellis.

Historic circulation patterns are reinstated in the rehabilitation plan. Additional circulation is provided to accommodate the Americans with Disabilities Act and parking. Paths will provide access to viewing and an opportunity to experience many of the features of the site.

As well as enclosing the site, vegetation provides fine-grained understanding of the historic uses of the property. Introduced trees and shrubs remain and will be rehabilitated and where appropriate will be cleaned of native vegetation at the Marion and St Josephs shrines, near the mansion, and at the meadow/lily pond/plunge. These locations are opportunities for interpretation. When project partners are identified additional areas of introduced vegetation may be established at the south side of Upper Lake following the Secretary's Standards for rehabilitation.

Appropriate clearing and pruning of vegetation will reopen historic views at the plunge. Removal of the 1950 Library will reopen long views, extant during the first century of the property.

Together the efforts addressing geotechnical, structural, architectural and the overall cultural landscape issues illustrated in the Alma College Site Rehabilitation Plan result in visitors being able to have an authentic understanding of the site and its history while meeting the Secretary of the Interior's Standards for rehabilitation.

Plan Improvement Recommendations from 2015 Historical Resource Technical Report

In December 2015, Page & Turnbull reviewed and assessed the Alma College Site Rehabilitation Plan:

“...using the established historic significance and identified character-defining features to analyze potential impacts under the Secretary of the Interior’s Standards for the Treatment of Historic Properties (the Standards) and the Guidelines for the Treatment of Cultural Landscapes. Full compliance under the Standards presumes a finding of “No Impact”. If the Plan does not fully comply with the Standards, further analysis regarding the eligibility of the resources for the California Register will be completed pursuant to the California Environmental Quality Act (CEQA), including analysis for potential specific impacts and cumulative impacts for both the Proposed Plan and the Plan Alternative.” (p1)

In their analysis of the Alma College Site Rehabilitation Plan under the Secretary’s Standards, Page & Turnbull found that all requirements of the ten Rehabilitation Standards were satisfied except Standards 5 and 9. In order to mitigate these two Rehabilitations Standards to have a ‘less-than-significant impact’, Page & Turnbull recommended the implementation of the Plan Improvement Measures prior to issuance of permits.

The Plan Improvement Measures include:

- Prior to issuance of demolition permits, the project sponsor will commission and Interpretive Plan
- Prior to issuance of approvals or building permits, the project sponsor would commission the development of a Preservation Maintenance or Monitoring Plan.
- A qualified preservation professional shall be retained in order to review design for the proposed new construction and rehabilitation of contributing features for conformance with the Secretary’s Standards. The preservation professional would also monitor compliance with the Preservation Maintenance or Monitoring Plan at the individual project level. (p. 25)

Interpretive Program

The interpretive program will be a vital component of the Alma College cultural landscape. Interpretive material will be integrated into all features of the site to amply illustrate the layers of history. The goal is to create an authentic experience that will convey a sense of what the site was like during the milling, estate and Jesuit periods, and why it was important. Equally important is the collection of layers and how they reflect the larger patterns of development of California.

The rehabilitation plan identifies specific places where interpretation of the site may occur. As the layered history lies at the core of understanding the development of the Alma College complex, it is key to ensure all layers are authentically represented and interpreted. Lying within the Bear Creek Redwoods Preserve, the Alma College site offers additional interpretive opportunities including:

- Scientific – natural biodiversity, hydrology, fauna/habitat

- Geologic – this site as a living geomorphological text book

- Water systems – Harry Tevis’ water system and Upper Lake

- Sustainable practices – efforts integrated into the rehabilitation that demonstrate practical applications of sustainable concepts

The interpretive program might include signage depicting and describing each of the features. This may be integrated into site elements, such as railings where



Figure 27: Example of interpretive panels mounted on a historic wall and providing a barrier at a significant level change

there are significant level changes at building foundations (as seen in Figure 27.) The threshold and footprint of the mansion may be marked in the paving to identify its location, while perimeter walls marking wings of the building may serve double duty, offering informal seating areas.

Interpretive elements are intended to be engaging and subtle, yet informative. App-based or internet interpretation accessed by cell phone is one method that may supplement physical interpretive efforts. Digital presentations have the dual advantage of being relatively inexpensive to launch and easy to update over time. Additionally, this approach could provide significant detail and be less vulnerable to vandalism than physical interpretive elements. Visitors should be able to relate primarily with the site and context, rather than with interpretive elements.

Sustainable Design Features

Incorporating sustainable practices into the implementation of the rehabilitation plan is both recommended and integrated into the plan. Historic features retain their embodied energy. The rehabilitation plan limits areas of new paving and manages stormwater in an effort to both encourage its controlled percolation and redirect it away from retaining walls. Introduced plant species that illustrate how the site was previously used are also especially drought-tolerant and hardy, requiring only the irrigation that nature provides after establishment. The intent of this plan is that materials and installation details for every aspect of the rehabilitation of the Alma College site incorporate sustainable practices. Educational programs and interpretive displays will illustrate these practices to help all visitors understand the sustainable concepts.

Next Steps

At a public hearing on January 25, 2017, MROSD certified the Environmental Impact Report for the Bear Creek Redwoods Preserve. Prior to seeking permits to implement the Alma College Site Rehabilitation Plan, MROSD will have a preservation professional prepare a Preservation Maintenance and Monitoring Plan that will include preparation of a survey to allow immediate retention of historically valuable items. The District will also commission an Interpretive Plan of the Alma College property.

MROSD will seek review and approval of the Alma College Site Rehabilitation Plan by the Santa Clara County Planning Department. Additionally, MROSD will begin to identify possible project partners to assist with the rehabilitation of the Chapel and plantings.

MROSD may prepare demolition permit applications for submittal to the Santa Clara County Planning Department for the removal of the Classroom building, 1950 Library and Garage. Tasks associated with next steps on the project also involve site clean-up, initiating site-wide vegetation management along with securing and protecting character-defining features that remain on the site.

In short order, the Chapel and 1934 Library will be stabilized in accordance with the proposed Plan, to protect from impacts from weather, vandals and inhabitation by fauna. In order to open the Bear Creek Redwoods Preserve to the public, MROSD has begun to prepare designs for parking, trailhead connections for hikers and a new pedestrian crossing of Bear Creek Road as laid out in the Alma College Site Rehabilitation Plan.

Cost Estimate of Alma College Site

A conceptual-level cost estimate has been prepared of the Alma College Site Rehabilitation Plan. The project is anticipated to be phased to allow for incremental project funding and the timeframe needed to identify project partners. Additionally, a 'Reduced Option' has been identified. The estimate breaks the implementation of the plan into the following three phases for the base and reduced options:

	BASE OPTION (REHABILITATED PLAN)	REDUCED OPTION
PHASE 1	Site Clean Up & Stabilization	Site Clean Up and Partial Stabilization
PHASE 2	Site Improvements	Site Improvements & Further Stabilization
PHASE 3	Rehabilitation	Rehabilitation

A description of the items included in each phase and for the reduced option are described in the Conceptual Cost Estimate that follows.

As noted in the recreation planning report in Appendix E, implementation of phases 1 and 2 will improve the appeal of the site to potential project partners for the implementation of many of the tasks identified in phase 3.

The cost estimate assumes that the project will take several years to implement. Escalation is incorporated in the summary of the estimate. Phases 1 and 2 have been projected to be completed by the end of 2017 and 2019 respectively. Escalation is not shown for phase 3 as the time frame for its completion is less predictable and because of variability in estimating contractor pricing far into the future.

BASE OPTION

CONCEPTUAL ESTIMATE PROFILE

The enclosed conceptual estimate consists of the following:

This Profile

Phasing

Summary

Conceptual Estimates:

Phase 1 Clean Up and Stabilization

Phase 2 Site Improvements

Phase 3 Rehabilitation

This preliminary estimate is based on current market conditions. We do not attempt to anticipate inflation, or other market changes that may occur before the project is undertaken. Due to the variability of the bidding process, unforeseen site conditions, changes in the market, and the unknown performance of the project team, actual construction costs may vary from the opinion represented here.

We anticipate that this is a prevailing wage project.

This conceptual estimate assumes that each phase will be built separately. If the phases are there may be resulting savings in project management and field supervision and an over-all shorter construction duration.

A 20% contingency is included in recognition of the conceptual nature of this project. This contingency is intended to address scopes of work either underestimated or missed in the preliminary estimate, and to anticipate the full detailing of the project as it currently stands. The contingency is not meant to cover increased scope or design changes.¹

This preliminary estimate is based on the following:

Alma College Landscape Rehabilitation Plan by PGA dated June 19, 2015 (1 p)

DCI Engineers structural assessment Revision 3 dated August 13, 2015

Langan Treadwell Rollo Preliminary Geotechnical and Geologic Evaluation dated July 3, 2015

Chuck Nozicka Consulting Final Report July 2015

Knapp Architects Historic Buildings Report

various emails and phone calls

site visit

Some significant exclusions are:

Architectural, Engineering, and all other design professional fees

Permit Fees

Utility Connection Fees

Hazardous Material Abatement

Hanta Virus Abatement

Performance Bonds

Testing and Special Inspections

Inflation and other increases in market costs over time

Information provided is an opinion of cost.

BASE OPTION

CONCEPTUAL ESTIMATE PHASING

Phase 1 Clean up and Stabilization

- Rodent and bat remediation
- Demolition of dormitory, garage, classroom and 1950 library buildings
- Stabilization of dormitory and garage remnants
- Fencing and security of 1934 chapel
- Stabilization of 1909 chapel
- Stabilization of north retaining wall
- Tree pruning and removal
- Grubbing and weed management

Phase 2 Site Improvements

- Entry from Bear Creek Road
- Lower parking
- Vault Toilet
- Rehabilitation of meadow, lily pond and Roman plunge
- Rehabilitation of St. Joseph and Marion shrines
- Minimal stabilization of south retaining wall
- Stabilization of 1934 library
- Benches and seating at lake and former mansion
- Partial paths: lake and upper spine pathways
- Plantings; safety screen plantings
- Interpretive elements

Phase 3 Rehabilitation

- Upper parking at lake
- Rehabilitation of 1909 chapel
- Modifications to 1934 library
- Partial paths: perimeter
- Restroom Facility and related infrastructure
- Utilities upgrade

BASE OPTION

CONCEPTUAL ESTIMATE SUMMARY

	Description	Phase 1 Clean-up and Partial Stabilization	Phase 2 Site Improvements and Further Stabilization	Phase 3 Rehabilitation	TOTAL
	General Requirements	\$ 386,100	\$ 418,860	\$ 578,340	\$ 1,383,300
	Sitework	\$ 2,145,000	\$ 1,532,000	\$ 508,000	\$ 4,185,000
	Building Rehabilitation and Interpretation	\$ -	\$ 795,000	\$ 2,705,000	\$ 3,500,000
	Subtotal	\$ 2,531,100	\$ 2,745,860	\$ 3,791,340	\$ 9,068,300
10%	Overhead and Profit	\$ 253,110	\$ 274,586	\$ 379,134	\$ 906,830
	Total	\$ 2,784,210	\$ 3,020,446	\$ 4,170,474	\$ 9,975,130
20%	Contingency	\$ 556,842	\$ 604,089.20	\$ 834,095	\$ 1,995,026
	Total	\$ 3,341,052	\$ 3,624,535	\$ 5,004,569	\$ 11,970,156
	Rounded Total	\$ 3,300,000	\$ 3,620,000	\$ 5,000,000	\$ 11,970,000
4%	Escalation per Year (rounded):				
	2016	\$ 3,430,000	\$ 3,760,000	not included	not included
	2017	\$ 3,570,000	\$ 3,910,000		
	2018		\$ 4,070,000		
	2019		\$ 4,230,000		

Midpeninsula Regional Open Space District
Alma College Site Cultural Landscape Rehabilitation Plan

BASE OPTION

CONCEPTUAL ESTIMATE PHASE PHASE 1 CLEAN UP AND STABILIZE

REDUCED OPTION											
	DESCRIPTION					QTY		COST	SUBTOTAL	TOTAL	NOTES
GENERAL REQUIREMENTS											
18%	General Requirements		1	ea	1	1	ea	\$ -	\$ -	\$ 386,100	
	Including:										
	General Contractor's Project Management										
	Field Supervision										
	Temporary Power										
	Erosion Control and Dust Abatement										
	Weather and Finish Protection										
	General Requirements Subtotals:							\$ -	\$ -	\$ 386,100	\$ 386,100
SITWORK											
Site Preparation											
Demolition of (E) Structures											
	Demolition		1	ea	1	1	ea	\$ 200,000	\$ 200,000	\$ 200,000	
	Selective Demolition: Retain sidewalls		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
	Selective Demolition: Interpretive element: walls at 42"		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
	Salvage of (E) materials for reuse		1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000	
Remediation											
	Rodent eradication and clean up		1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000	
	Bat remediation		1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000	
	Asbestos Abatement allowance		1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000	
Vegetation Management											
	Tree Pruning and Removal		1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000	
	Grubbing and Weed Management		1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000	
Security/Safety at (E) and Demo'd Structures											
	New railings/guardrails		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
	Backfill to less than 30" drop		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
	Interim drainage and structural safeguards		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
Structural Stabilization and Strengthening											
	Dormitory basement walls stabilization/bracing		1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000	
	Garage remnant stabilization		1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000	
	1950 Library remnant stabilization		1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000	
	Stabilization at North Retaining Wall: Tie Backs		480	ea	1	480	ea	\$ 2,000	\$ 960,000	\$ 960,000	
1909 Chapel Stabilization											
	Selective Demolition		1	ea	1	1	ea	\$ 20,000	\$ 20,000	\$ 20,000	
Structural Work											
	Crawl space excavation and ventilation		1	ea	1	1	ea	\$ 35,000	\$ 35,000	\$ 35,000	
	Foundation strengthening		1	ea	1	1	ea	\$ 125,000	\$ 125,000	\$ 125,000	
	Dry rot repair		1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000	
1934 Library Fencing and Security											
	Fencing and security		1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000	
	Exterior improvements and repairs		1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000	
	Sitework Subtotals:							\$ 2,145,000	\$ 2,145,000	\$ 2,145,000	
	Subtotal									\$ 2,531,100	
10%	Contractor's Overhead and Profit									\$ 253,110	
	TOTAL									\$ 2,784,210	
20%	Contingency									\$ 556,842	
	TOTAL									\$ 3,341,052	

BASE OPTION

CONCEPTUAL ESTIMATE PHASE 2 SITE IMPROVEMENTS

REDUCED OPTION															
DESCRIPTION		QTY				COST		SUBTOTAL	TOTAL	NOTES					
GENERAL REQUIREMENTS															
18%	General Requirements	1	ea	1	1	ea	\$ -	\$ -	\$ 418,860						
	Including:														
	General Contractor's Project Management														
	Field Supervision														
	Temporary Power														
	Erosion Control and Dust Abatement														
	Weather and Finish Protection														
General Requirements Subtotals:							\$ -	\$ -	\$ 418,860	\$ 418,860					
SITEWORK															
Site Preparation															
	Grubbing and Weed Management	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000						
	Mass Excavation/Grading	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000						
Lower Parking															
	Lower Parking	24,000	sf	1	24,000	sf	\$ 4	\$ 96,000	\$ 96,000						
	Parking Signage and Striping	1	ea	1	1	ea	\$ 5,000	\$ 5,000	\$ 5,000						
	Drainage	1	ea	1	1	ea	\$ 10,000	\$ 10,000	\$ 10,000						
NIC	Fire Road Improvements beyond Lower Parkir	0	ea	1	0	ea	\$ -	\$ -	\$ -						
Utilities															
	Vault Toilet (pending vendor confirmation)	1	ea	1	1	ea	\$ 42,000	\$ 42,000	\$ 42,000						
NIC	Septic System	0	ea	1	0	ea	\$ -	\$ -	\$ -						
NIC	Propane (pads and lines)	0	ea	1	0	ea	\$ -	\$ -	\$ -						
NIC	Water Distribution	0	ea	1	0	ea	\$ -	\$ -	\$ -						
NIC	New Well	0	ea	1	0	ea	\$ -	\$ -	\$ -						
NIC	Electric Service + Distrib	0	ea	1	0	ea	\$ -	\$ -	\$ -						
Landscaping and Hardscape															
Paths and Walkways															
	Restored paths at central spine	15,000	sf	1	15,000	sf	\$ 8	\$ 120,000	\$ 120,000						
	Trails	13,000	sf	1	13,000	sf	\$ 3	\$ 39,000	\$ 39,000						
	Terrace/Stair Restoration	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000						
Plantings															
	Native grasses at central spine	#####	sf	1	115,000	sf	\$ 4	\$ 460,000	\$ 460,000						
	Native plantings incl. radial shrubs	20,000	sf	1	20,000	sf	\$ 8	\$ 160,000	\$ 160,000						
	Other native plantings	50,000	sf	1	50,000	sf	\$ 5	\$ 250,000	\$ 250,000						
	Planting at site walls (safety screen)	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000						
	Planting at interpretive elements	1	ea	1	1	ea	\$ 150,000	\$ 150,000	\$ 150,000						
	Maintenance/watering during establishment	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000						
Sitework Subtotals:							\$ 1,532,000	\$ 1,532,000	\$ 1,532,000						
BUILDING REHABILITATION AND INTERPRETATION															
Other Built Features															
	Meadow, lily pond, and Roman plunge	1	ea	1	1	ea	\$ 300,000	\$ 300,000	\$ 300,000						
	Marion Shrine	1	ea	1	1	ea	\$ 5,000	\$ 5,000	\$ 5,000						
	St Joseph Shrine	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000						
Site Retaining Walls															
	Lily Pond Retaining Wall Tie-backs	25	ea	1	25	ea	\$ 2,000	\$ 50,000	\$ 50,000						
	Minimal stabilization at South Retaining	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000						

BASE OPTION

CONCEPTUAL ESTIMATE PHASE 2 SITE IMPROVEMENTS

REDUCED OPTION											
DESCRIPTION					QTY		COST		SUBTOTAL	TOTAL	NOTES
1934 Library Stabilization											
	Selective Demolition	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000		
	Exterior improvements and repairs	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
	Structural Work										
	Crawl space excavation and ventilation	1	ea	1	1	ea	\$ 10,000	\$ 10,000	\$ 10,000		
	Foundation/retaining wall strengthening	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000		
	Dry rot repair	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
	Interpretation										
	Signage	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
	Mansion Interpretive Paving Element	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
	Dormitory/Classroom Interp Foundation Elemen	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
	Building Rehabilitation and Interpretation						\$ 795,000	\$ 795,000	\$ 795,000		
	Subtotal									\$ 2,745,860	
10%	Contractor's Overhead and Profit									\$ 274,586	
	TOTAL									\$ 3,020,446	
20%	Contingency									\$ 604,089	
	TOTAL									\$ 3,624,535	

Midpeninsula Regional Open Space District
Alma College Site Cultural Landscape Rehabilitation Plan

BASE OPTION

CONCEPTUAL ESTIMATE PHASE 3 REHABILITATION

REDUCED OPTION										
	DESCRIPTION			QTY			COST	SUBTOTAL	TOTAL	NOTES
GENERAL REQUIREMENTS										
18%	General Requirements			1 ea	1	1 ea	\$ - \$ -	\$ 578,340		
	Including:									
	General Contractor's Project Management									
	Field Supervision									
	Temporary Power									
	Erosion Control and Dust Abatement									
	Weather and Finish Protection									
	General Requirements Subtotals:						\$ -	\$ 578,340	\$ 578,340	
SITework										
Entry and Upper Parking										
	Entry and Upper Parking	10,000	sf	1	10,000	sf	\$ 4 \$ 40,000	\$ 40,000		
	Parking Signage and Striping	1	ea	1	1	ea	\$ 5,000 \$ 5,000	\$ 5,000		
	Drainage	1	ea	1	1	ea	\$ 10,000 \$ 10,000	\$ 10,000		
Utilities										
	Utility Trenching	1	ea	1	1	ea	\$ 25,000 \$ 25,000	\$ 25,000		
	Septic System	1	ea	1	1	ea	\$ 150,000 \$ 150,000	\$ 150,000		
NIC	Propane (pads and lines)	0	ea	1	0	ea	\$ 15,000 \$ -	\$ -		
Water										
NIC	Water distribution from top of hill to stables	0	ea	1	0	ea	\$ 50,000 \$ -	\$ -		by District
	Tap for distribution to Chapel/Restroom	1	ea	1	1	ea	\$ 15,000 \$ 15,000	\$ 15,000		
NIC	New Well	0	ea	1	0	ea	\$ - \$ -	\$ -		by District
	Electric Service and distribution to chapel	1	ea	1	1	ea	\$ 100,000 \$ 100,000	\$ 100,000		
Fire Protection										
	Water storage at lake	0	ea	1	0	ea	\$ - \$ -	\$ -		
	Fire pump/hydrant/piping	1	ea	1	1	ea	\$ 75,000 \$ 75,000	\$ 75,000		
Landscaping and Hardscape										
	Phase 3 gravel paths and trails	26,000	sf	1	26,000	sf	\$ 3 \$ 78,000	\$ 78,000		
	Additional benches and seating	1	ea	1	1	ea	\$ 10,000 \$ 10,000	\$ 10,000		
	Sitework Subtotals:						\$ 508,000	\$ 508,000	\$ 508,000	
BUILDING REHABILITATION AND INTERPRETATION										
1909 Chapel										
	Selective Demolition	1	ea	1	1	ea	\$ 30,000 \$ 30,000	\$ 30,000		
	Foundation Drainage	1	ea	1	1	ea	\$ 20,000 \$ 20,000	\$ 20,000		
	Architectural Rehabilitation	6,000	sf	1	6,000	sf	\$ 300 \$ 1,800,000	\$ 1,800,000		
Structural Work										
	Crawl space excavation and ventilation	0	ea	1	0	ea	\$ 35,000 \$ -	\$ -		Incl in Phase 1
	Foundation strengthening	0	ea	1	0	ea	\$ 125,000 \$ -	\$ -		Incl in Phase 1
	Dry rot repair	0	ea	1	0	ea	\$ 50,000 \$ -	\$ -		Incl in Phase 1
	Roof and wall diaphragm strengthening (shear)	1	ea	1	1	ea	\$ 100,000 \$ 100,000	\$ 100,000		
	Bolting and plates at trusses	1	ea	1	1	ea	\$ 25,000 \$ 25,000	\$ 25,000		
1934 Library: Conversion to Pavillion										
	Selective Demolition	1	ea	1	1	ea	\$ 20,000 \$ 20,000	\$ 20,000		
	Foundation Drainage	1	ea	1	1	ea	\$ 10,000 \$ 10,000	\$ 10,000		
	Architectural Rehabilitation	2,000	sf	1	2,000	sf	\$ 150 \$ 300,000	\$ 300,000		
Structural Work										
	Crawl space excavation and ventilation	0	ea	1	0	ea	\$ 10,000 \$ -	\$ -		Inle in Phase 2
	Foundation/retaining wall strengthening	0	ea	1	0	ea	\$ 75,000 \$ -	\$ -		Incl in Phase 2
	Dry rot repair	0	ea	1	0	ea	\$ 25,000 \$ -	\$ -		Incl in Phase 2
	Structural Steel	1	ea	1	1	ea	\$ 100,000 \$ 100,000	\$ 100,000		
Covered Walkway										
	Rehabilitation and New Construction	1	ea	1	1	ea	\$ 50,000 \$ 50,000	\$ 50,000		
Restroom										
	New Men's and Women's Restroom	500	sf	1	500	sf	\$ 500 \$ 250,000	\$ 250,000		
	Building Rehabilitation and Interpretation						\$ 2,705,000	\$ 2,705,000	\$ 2,705,000	
	Subtotal								\$ 3,791,340	
10%	Contractor's Overhead and Profit								\$ 379,134	
	TOTAL								\$ 4,170,474	
20%	Contingency								\$ 834,095	
	TOTAL								\$ 5,004,569	

REDUCED OPTION

CONCEPTUAL ESTIMATE PROFILE

The enclosed conceptual estimate consists of the following:

This Profile
Phasing
Summary
Conceptual Estimates:
Phase 1 Clean Up and Partial Stabilization
Phase 2 Site Improvements and Further Stabilization
Phase 3 Rehabilitation

This preliminary estimate is based on current market conditions. We do not attempt to anticipate inflation, or other market changes that may occur before the project is undertaken. Due to the variability of the bidding process, unforeseen site conditions, changes in the market, and the unknown performance of the project team, actual construction costs may vary from the opinion represented here.

We anticipate that this is a prevailing wage project.

This conceptual estimate assumes that each phase will be built separately. If the phases are undertaken concurrently, there may be resulting savings in project management and field supervision and an over-all shorter construction duration.

A 20% contingency is included in recognition of the conceptual nature of this project. This contingency is intended to address scopes of work either underestimated or missed in the preliminary estimate, and to anticipate the full detailing of the project as it currently stands. The contingency is not meant to cover increased scope or design changes.

This preliminary estimate is based on the following:

Alma College Landscape Rehabilitation Plan by PGA dated June 19, 2015 (1 p)
DCI Engineers structural assessment Revision 3 dated August 13, 2015
Langan Treadwell Rollo Preliminary Geotechnical and Geologic Evaluation dated July 3, 2015
Chuck Nozicka Consulting Final Report July 2015
Knapp Architects Historic Buildings Report
various emails and phone calls
site visit

Some significant exclusions are:

Architectural, Engineering, and all other design professional fees
Permit Fees
Utility Connection Fees
Hazardous Material Abatement
Hanta Virus Abatement
Performance Bonds
Testing and Special Inspections
Inflation and other increases in market costs over time

Information provided is an opinion of cost.

REDUCED OPTION

CONCEPTUAL ESTIMATE PHASING

Phase 1 Clean up and Partial Stabilization

- Rodent and bat remediation
- Demolition of dormitory, garage, classroom and 1950 library buildings
- Stabilization of dormitory and garage remnants
- Fencing and security at 1909 chapel and 1934 library
- Partial stabilization of north retaining wall at the vicinity of the aqueduct
- Tree pruning and removal
- Grubbing and weed management

Phase 2 Site Improvements and Further Stabilization

- Entry from Bear Creek Road
- Lower parking
- Vault Toilet
- Rehabilitation of meadow, lily pond and Roman plunge
- Rehabilitation of St. Joseph and Marion shrines
- Completion of stabilization of north retaining wall
- Minimal stabilization of south retaining wall
- Stabilization of 1909 chapel
- Stabilization of 1934 library
- Benches and seating at lake and former mansion
- Partial paths: lake and upper spine pathways
- Plantings; safety screen plantings
- Interpretive elements

Phase 3 Rehabilitation

- Upper parking at lake
- Rehabilitation of 1909 chapel
- Modifications to 1934 library
- Partial paths: perimeter
- Restroom Facility and related infrastructure
- Utilities upgrade
- Interpretive elements

REDUCED OPTION

CONCEPTUAL ESTIMATE SUMMARY

	A	B	C	D	E	F
		Description	Phase 1 Clean-up and Partial Stabilization	Phase 2 Site Improvements and Further Stabilization	Phase 3 Rehabilitation	TOTAL
3						
4						
5		General Requirements	\$ 234,900	\$ 575,460	\$ 578,340	\$ 1,388,700
6						
7		Sitework	\$ 1,305,000	\$ 1,532,000	\$ 508,000	\$ 3,345,000
8						
9		Building Rehabilitation and Interpretation	\$ -	\$ 1,665,000	\$ 2,705,000	\$ 4,370,000
10						
11		Subtotal	\$ 1,539,900	\$ 3,772,460	\$ 3,791,340	\$ 9,103,700
12						
13	10%	Overhead and Profit	\$ 153,990	\$ 377,246	\$ 379,134	\$ 910,370
14						
15		Total	\$ 1,693,890	\$ 4,149,706	\$ 4,170,474	\$ 10,014,070
16						
17	20%	Contingency	\$ 338,778	\$ 829,941.20	\$ 834,095	\$ 2,002,814
18						
19		Total	\$ 2,032,668	\$ 4,979,647	\$ 5,004,569	\$ 12,016,884
20						
21		Rounded Total	\$ 2,000,000	\$ 4,980,000	\$ 5,000,000	\$ 12,020,000
22						
23						
24	4%	Escalation per Year (rounded):				
25		2016	\$ 2,080,000	\$ 5,180,000	not included	not included
26		2017	\$ 2,160,000	\$ 5,390,000		
27		2018		\$ 5,610,000		
28		2019		\$ 5,830,000		
29						

Midpeninsula Regional Open Space District
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REDUCED OPTION
CONCEPTUAL ESTIMATE PHASE 1 CLEAN UP AND PARTIAL STABILIZATION

A	B	C	D	E	F	G	H	I	J	K	L
1	REDUCED OPTION										
2											
3	DESCRIPTION					QTY	COST		SUBTOTAL	TOTAL	NOTES
4											
5	GENERAL REQUIREMENTS										
6											
7	18% General Requirements	1	ea	1	1	ea	\$ -	\$ -	\$ 234,900		
8											
9	Including:										
10	General Contractor's Project Management										
11	Field Supervision										
12	Temporary Power										
13	Erosion Control and Dust Abatement										
14	Weather and Finish Protection										
15											
16	General Requirements Subtotals:							\$ -	\$ 234,900	\$ 234,900	
17											
18											
19	SITework										
20											
21	Site Preparation										
22											
23	Demolition of (E) Structures										
24	Demolition	1	ea	1	1	ea	\$ 200,000	\$ 200,000	\$ 200,000		
25	Selective Demolition: Retain sidewalls	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
26	Selective Demolition: Interpretive element: walls at 42"	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
27	Salvage of (E) materials for reuse	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000		
28											
29	Remediation										
30	Rodent eradication and clean up	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
31	Bat remediation	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
32	Asbestos Abatement allowance	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000		
33											
34	Vegetation Management										
35	Tree Pruning and Removal	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
36	Grubbing and Weed Management	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
37											
38	Security/Safety at (E) and Demo'd Structures										
39											
40	New railings/guardrails	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
41	Backfill to less than 30" drop	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
42	Interim drainage and structural safeguards	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
43											
44	Structural Stabilization and Strengthening										
45											
46	Dormitory basement walls stabilization/bracing	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
47	Garage remnant stabilization	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000		
48	1950 Library remnant stabilization	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
49											
50	Partial Stabilization at North Retaining Wall: Tie Backs	160	ea	1	160	ea	\$ 2,000	\$ 320,000	\$ 320,000		
51											
52	1909 Chapel Fencing and Security										
53	Fencing and security	1	ea	1	1	ea	\$ 10,000	\$ 10,000	\$ 10,000		
54	Exterior improvements and repairs	1	ea	1	1	ea	\$ 20,000	\$ 20,000	\$ 20,000		
55											
56	1934 Library Fencing and Security										
57	Fencing and security	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000		
58	Exterior improvements and repairs	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
59											
60	Sitework Subtotals:							\$ 1,305,000	\$ 1,305,000	\$ 1,305,000	
61											
62											
63	Subtotal									\$ 1,539,900	
64											
65	10% Contractor's Overhead and Profit									\$ 153,990	
66											
67	TOTAL									\$ 1,693,890	
68											
69	20% Contingency									\$ 338,778	
70											
71	TOTAL									\$ 2,032,668	

Midpeninsula Regional Open Space District
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REDUCED OPTION

CONCEPTUAL ESTIMATE PHASE 2 SITE IMPROVEMENTS AND FURTHER STABILIZATION

A	B	C	D	E	F	G	H	I	J	K	L
1	REDUCED OPTION										
2											
3	DESCRIPTION				QTY		COST		SUBTOTAL	TOTAL	NOTES
4											
5	GENERAL REQUIREMENTS										
6											
7	18% General Requirements	1	ea	1	1	ea	\$ -	\$ -	\$ 575,460		
8											
9	Including:										
10	General Contractor's Project Management										
11	Field Supervision										
12	Temporary Power										
13	Erosion Control and Dust Abatement										
14	Weather and Finish Protection										
15											
16	General Requirements Subtotals:						\$ -	\$ -	\$ 575,460	\$ 575,460	
17											
18											
19	SITWORK										
20											
21	Site Preparation										
22	Grubbing and Weed Management	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
23	Mass Excavation/Grading	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
24											
25	Lower Parking										
26	Lower Parking	24,000	sf	1	24,000	sf	\$ 4	\$ 96,000	\$ 96,000		
27	Parking Signage and Striping	1	ea	1	1	ea	\$ 5,000	\$ 5,000	\$ 5,000		
28	Drainage	1	ea	1	1	ea	\$ 10,000	\$ 10,000	\$ 10,000		
29	NIC Fire Road Improvements beyond Lower Parking	0	ea	1	0	ea	\$ -	\$ -	\$ -		
30											
31	Utilities										
32	Vault Toilet (pending vendor confirmation)	1	ea	1	1	ea	\$ 42,000	\$ 42,000	\$ 42,000		
33	NIC Septic System	0	ea	1	0	ea	\$ -	\$ -	\$ -		
34	NIC Propane (pads and lines)	0	ea	1	0	ea	\$ -	\$ -	\$ -		
35	NIC Water Distribution	0	ea	1	0	ea	\$ -	\$ -	\$ -		
36	NIC New Well	0	ea	1	0	ea	\$ -	\$ -	\$ -		
37	NIC Electric Service + Distrib	0	ea	1	0	ea	\$ -	\$ -	\$ -		
38									P		
39	Landscaping and Hardscape										
40											
41	Paths and Walkways										
42	Restored paths at central spine	15,000	sf	1	15,000	sf	\$ 8	\$ 120,000	\$ 120,000		
43	Trails	13,000	sf	1	13,000	sf	\$ 3	\$ 39,000	\$ 39,000		
44	Terrace/Stair Restoration	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
45											
46	Plantings										
47	Native grasses at central spine	115,000	sf	1	115,000	sf	\$ 4	\$ 460,000	\$ 460,000		
48	Native plantings incl. radial shrubs	20,000	sf	1	20,000	sf	\$ 8	\$ 160,000	\$ 160,000		
49	Other native plantings	50,000	sf	1	50,000	sf	\$ 5	\$ 250,000	\$ 250,000		
50	Planting at site walls (safety screen)	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000		
51	Planting at interpretive elements	1	ea	1	1	ea	\$ 150,000	\$ 150,000	\$ 150,000		
52	Maintenance/watering during establishment	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
53											
54	Sitework Subtotals:						\$ 1,532,000	\$ 1,532,000	\$ 1,532,000		
55											
56											

REDUCED OPTION

CONCEPTUAL ESTIMATE PHASE 2 SITE IMPROVEMENTS AND FURTHER STABILIZATION

	A	B	C	D	E	F	G	H	I	J	K	L
1		REDUCED OPTION										
2												
3		DESCRIPTION				QTY		COST		SUBTOTAL	TOTAL	NOTES
4												
57		BUILDING REHABILITATION AND INTERPRETATION										
58												
59		Other Built Features										
60		Meadow, lily pond, and Roman plunge	1	ea	1	1	ea	\$ 300,000	\$ 300,000	\$ 300,000		
61		Marion Shrine	1	ea	1	1	ea	\$ 5,000	\$ 5,000	\$ 5,000		
62		St Joseph Shrine	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000		
63												
64		Site Retaining Walls										
65		Lily Pond Retaining Wall Tie-backs	25	ea	1	25	ea	\$ 2,000	\$ 50,000	\$ 50,000		
66		Minimal stabilization at South Retaining	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
67		Completion of Stabilization at No. Retaining Wal	320	ea	1	320	ea	\$ 2,000	\$ 640,000	\$ 640,000		
68												
69		1909 Chapel Stabilization										
70		Selective Demolition	1	ea	1	1	ea	\$ 20,000	\$ 20,000	\$ 20,000		
71		Structural Work										
72		Crawl space excavation and ventilation	1	ea	1	1	ea	\$ 35,000	\$ 35,000	\$ 35,000		
73		Foundation strengthening	1	ea	1	1	ea	\$ 125,000	\$ 125,000	\$ 125,000		
74		Dry rot repair	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
75												
76		1934 Library Stabilization										
77		Selective Demolition	1	ea	1	1	ea	\$ 15,000	\$ 15,000	\$ 15,000		
78		Exterior improvements and repairs	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
79		Structural Work										
80		Crawl space excavation and ventilation	1	ea	1	1	ea	\$ 10,000	\$ 10,000	\$ 10,000		
81		Foundation/retaining wall strengthening	1	ea	1	1	ea	\$ 75,000	\$ 75,000	\$ 75,000		
82		Dry rot repair	1	ea	1	1	ea	\$ 25,000	\$ 25,000	\$ 25,000		
83												
84		Interpretation										
85		Signage	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
86		Mansion Interpretive Paving Element	1	ea	1	1	ea	\$ 100,000	\$ 100,000	\$ 100,000		
87		Dormitory/Classroom Interp Foundation Elemen	1	ea	1	1	ea	\$ 50,000	\$ 50,000	\$ 50,000		
88												
89		Building Rehabilitation and Interpretation						\$ 1,665,000	\$ 1,665,000	\$ 1,665,000		
90												
91												
92		Subtotal									\$ 3,772,460	
93												
94	10%	Contractor's Overhead and Profit									\$ 377,246	
95												
96		TOTAL									\$ 4,149,706	
97												
98	20%	Contingency									\$ 829,941	
99												
100		TOTAL									\$ 4,979,647	
101												
102												

Midpeninsula Regional Open Space District
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REDUCED OPTION

CONCEPTUAL ESTIMATE PHASE 3 REHABILITATION

A	B	C	D	E	F	G	H	I	J	K	L
	DESCRIPTION				QTY		COST		SUBTOTAL	TOTAL	NOTES
1	REDUCED OPTION										
2											
3											
4											
5	GENERAL REQUIREMENTS										
6											
7	18% General Requirements	1 ea	1		1 ea		\$ -	\$ -	\$ 578,340		
8											
9	Including:										
10	General Contractor's Project Management										
11	Field Supervision										
12	Temporary Power										
13	Erosion Control and Dust Abatement										
14	Weather and Finish Protection										
15											
16	General Requirements Subtotals:						\$ -	\$ -	\$ 578,340	\$ 578,340	
17											
18											
19	SITework										
20											
21	Entry and Upper Parking										
22	Entry and Upper Parking	10,000 sf	1		10,000 sf		\$ 4	\$ 40,000	\$ 40,000		
23	Parking Signage and Striping	1 ea	1		1 ea		\$ 5,000	\$ 5,000	\$ 5,000		
24	Drainage	1 ea	1		1 ea		\$ 10,000	\$ 10,000	\$ 10,000		
25											
26	Utilities										
27	Utility Trenching	1 ea	1		1 ea		\$ 25,000	\$ 25,000	\$ 25,000		
28											
29	Septic System	1 ea	1		1 ea		\$ 150,000	\$ 150,000	\$ 150,000		
30											
31	NIC Propane (pads and lines)	0 ea	1		0 ea		\$ 15,000	\$ -	\$ -		
32											
33	Water										
34	NIC Water distribution from top of hill to stables	0 ea	1		0 ea		\$ 50,000	\$ -	\$ -		by District
35	Tap for distribution to Chapel/Restroom	1 ea	1		1 ea		\$ 15,000	\$ 15,000	\$ 15,000		
36	NIC New Well	0 ea	1		0 ea		\$ -	\$ -	\$ -		by District
37											
38	Electric Service and distribution to chapel	1 ea	1		1 ea		\$ 100,000	\$ 100,000	\$ 100,000		
39											
40	Fire Protection										
41	Water storage at lake	0 ea	1		0 ea		\$ -	\$ -	\$ -		
42	Fire pump/hydrant/piping	1 ea	1		1 ea		\$ 75,000	\$ 75,000	\$ 75,000		
43											
44	Landscaping and Hardscape										
45	Phase 3 gravel paths and trails	26,000 sf	1		26,000 sf		\$ 3	\$ 78,000	\$ 78,000		
46	Additional benches and seating	1 ea	1		1 ea		\$ 10,000	\$ 10,000	\$ 10,000		
47											
48	Sitework Subtotals:						\$ 508,000	\$ 508,000	\$ 508,000	\$ 508,000	
49											
50											
51	BUILDING REHABILITATION AND INTERPRETATION										
52											
53	1909 Chapel										
54	Selective Demolition	1 ea	1		1 ea		\$ 30,000	\$ 30,000	\$ 30,000		
55	Foundation Drainage	1 ea	1		1 ea		\$ 20,000	\$ 20,000	\$ 20,000		
56	Architectural Rehabilitation	6,000 sf	1		6,000 sf		\$ 300	\$ 1,800,000	\$ 1,800,000		
57	Structural Work										
58	Crawl space excavation and ventilation	0 ea	1		0 ea		\$ 35,000	\$ -	\$ -		Incl in Phase 1
59	Foundation strengthening	0 ea	1		0 ea		\$ 125,000	\$ -	\$ -		Incl in Phase 1
60	Dry rot repair	0 ea	1		0 ea		\$ 50,000	\$ -	\$ -		Incl in Phase 1
61	Roof and wall diaphragm strengthening (shear)	1 ea	1		1 ea		\$ 100,000	\$ 100,000	\$ 100,000		
62	Bolting and plates at trusses	1 ea	1		1 ea		\$ 25,000	\$ 25,000	\$ 25,000		
63											
64	1934 Library: Conversion to Pavillion										
65	Selective Demolition	1 ea	1		1 ea		\$ 20,000	\$ 20,000	\$ 20,000		
66	Foundation Drainage	1 ea	1		1 ea		\$ 10,000	\$ 10,000	\$ 10,000		
67	Architectural Rehabilitation	2,000 sf	1		2,000 sf		\$ 150	\$ 300,000	\$ 300,000		
68	Structural Work										
69	Crawl space excavation and ventilation	0 ea	1		0 ea		\$ 10,000	\$ -	\$ -		Inle in Phase 2
70	Foundation/retaining wall strengthening	0 ea	1		0 ea		\$ 75,000	\$ -	\$ -		Incl in Phase 2
71	Dry rot repair	0 ea	1		0 ea		\$ 25,000	\$ -	\$ -		Incl in Phase 2
72	Structural Steel	1 ea	1		1 ea		\$ 100,000	\$ 100,000	\$ 100,000		
73											
74	Covered Walkway										
75	Rehabilitation and New Construction	1 ea	1		1 ea		\$ 50,000	\$ 50,000	\$ 50,000		
76											
77	Restroom										
78	New Men's and Women's Restroom	500 sf	1		500 sf		\$ 500	\$ 250,000	\$ 250,000		
79											
80	Building Rehabilitation and Interpretation						\$ 2,705,000	\$ 2,705,000	\$ 2,705,000	\$ 2,705,000	
81											
82											
83	Subtotal									\$ 3,791,340	
84											
85	10% Contractor's Overhead and Profit									\$ 379,134	
86											
87	TOTAL									\$ 4,170,474	
88											
89	20% Contingency									\$ 834,095	
90											
91	TOTAL									\$ 5,004,569	
92											

Appendices

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Appendix A: Geotechnical Analysis

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Technical Excellence
Practical Experience
Client Responsiveness

3 July 2015

Ms. Cathy Garrett
PGAdesign
444 17th Street
Oakland, California 94612

**Subject: Preliminary Geotechnical and Geologic Evaluation
Alma College Site Rehabilitation Plan
Santa Clara County, California
Langan Project No.: 730498603**

Dear Ms. Garrett:

This letter presents the results of our preliminary geotechnical evaluation conducted as part of the rehabilitation evaluation for the Alma College Campus located within the Bear Creek Redwoods Open Space Preserve in unincorporated Santa Clara County California. The site is presently owned and managed by the Midpeninsula Regional Open Space District (MROSD).

Portions of the site are within an Alquist-Priolo special studies zone for the nearby San Andreas fault and the site is also located on a large, deep-seated bedrock landslide (named the Black Road Landslide). The objective of this investigation was to evaluate the site's geologic setting and provide preliminary geologic and geotechnical conclusions concerning existing structures located on a portion of the property.

1.0 PROJECT DESCRIPTION

The project is located at Alma College Road, south of Bear Creek Road, as shown on Figure 1. The property is currently closed to the public. On the basis of conversations with district representatives with the MROSD, we understand MROSD is assessing the condition of the campus for possible rehabilitation of the four main structures, surrounding landscape features, and associated ancillary structures. The central portion of the campus contains the four main structures, which include the classroom building, chapel, and two library structures (constructed in 1937 and 1950), as well as several landscape features including concrete and masonry retaining walls up to about 20 feet in height. The library was constructed in two phases and is considered two buildings, with the original portion constructed in 1934 and the addition constructed in 1950.

Key structural elements for the rehabilitation include:

- rehabilitation the chapel and retaining the 1934 library roof structure
- strengthen of the north retaining wall, minimally stabilization of the south retaining wall
- removal of the classroom and garage due to their proximity to the San Andreas fault trace and the 1950 portion of the library due to the structure's lack of character defining features.

2.0 SCOPE OF SERVICES

A previous preliminary geotechnical and geologic evaluation study was performed at the project site by Treadwell & Rollo, Inc. (T&R) and the results were presented in a letter report dated 2 October 2009. Our scope of services includes the update of the recommendations from the 2009 study for the current proposed development plans. Specifically, the geotechnical and geologic report will be revised to provide updated conclusions and recommendations regarding:

- 2013 California Building Code (CBC) seismic design criteria
- lateral earth pressures for retaining walls

3.0 PREVIOUS INVESTIGATIONS

A preliminary fault study location investigation was performed by John Coyle and Associates (JCA) in 1997 for a prior proposed golf course development at the site which was not built. The results of that investigation were presented in a report dated 16 June 1997. That investigation included reviewing pertinent published geologic maps and reports, reviewing stereo-paired aerial photographs, and excavating and logging six exploratory trenches, designated Trenches 1 through 6, in the area of the subject buildings. The trenches were excavated roughly perpendicular to the local trend of the San Andreas fault, and shadowed the widths of the three structures. Trenches 5 and 6, located on the southeast and northwest sides of the classroom building respectively, encountered a subsidiary trace of the fault trending beneath the southwest side of the structure. Trench 3, a longer trench located between the classroom and library buildings and Trench 2, a longer trench located northwest of the classroom building also encountered this feature at their southwest end. No other fault features were observed in Trench 3 in the areas of the library and chapel buildings. Trenches 1 and 4 were located northeast of the development.

Subsequent to that investigation, JCA issued a letter of clarification on 30 September 1997 to clarify what the displacement along this feature could be during a major earthquake on the San Andreas fault. They concluded that there could be up to ½-foot of cumulative displacement across the main fault and all the subsidiary traces within a zone *“a couple of hundred feet wide parallel to the main trace of the San Andreas fault.”* and that locally any trace could expect up to 3 inches of displacement.

On 31 October 1997, the County Geologist Mr. Jim Baker issued a written statement stating that *“Combined, Coyle’s reports are adequate for evaluation of faulting hazards at the former Alma College site”*. He also references recommended setbacks provided in the original JCA investigation report for any new structures proposed at the site.

On 16 April 1998, the Santa Clara Valley Water District (SCVWD) issued a letter describing concerns with the development of a golf course on a deep-seated landslide. They concluded that timber harvesting to create the golf course and irrigation from the golf course could cause the nearby creeks to flow perennially and change the water balance in the landslide. This would saturate the landslide mass earlier in the rain season, resulting in a longer period for

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excess pore pressures to develop in the landslide. They described the effects should the Black Road Landslide move, as significant to catastrophic, with the potential for a sudden release of water from the Lexington Reservoir located near the toe of the landslide. The letter also provided a number of requirements for a detailed geologic study of the landslide prior to the golf course development.

Questa Engineering Corporation issued a letter dated 21 April 1998 responding to the SCVWD letter. This letter provided specific methods for their geologic investigation of the landslide.

In 2009, T&R excavated and logged six test pits, designated TP-1 through TP-6. The approximate locations of T&R's test pits are shown on Figure 2. One test pit was excavated at each of the three main structures to evaluate the foundation of each structure, and three test pits were excavated adjacent to site retaining walls to expose the bottom of the foundation for the walls. Logs of the test pits are presented in Appendix A.

4.0 SITE CONDITIONS

The following sections provide preliminary description of the regional geology and existing site conditions.

4.1 Regional Geology

As described above, the site is located within an area identified as the deep-seated Black Road Landslide. We anticipate that the landslide consists of displaced sandstone and basalt bedrock of the Lower Miocene and Oligocene age (approximately 24 to 34 million years old) Vaqueros Formation and mudstone and shale of the Oligocene and Eocene age (approximately 29 to 55 million years old) San Lorenzo Formation as shown on Figure 3. The main trace of the San Andreas fault is about 100, 190, and 260 feet southwest of the classroom, library, and chapel buildings respectively.

4.2 Existing Site Conditions

The former Alma College campus is within the Bear Creek Redwoods Open Space Preserve near the northeastern base of the central Santa Cruz Mountains, just south of the town of Los Gatos. The site is in an area characterized by very steep topography, with a roughly southeast-northwest trending spur ridge trending through site. Four structures, the classroom building, library (1934 Building and 1950 Building), and chapel remain atop the spur ridge on a flat area. In addition, several landscape features and site retaining walls remain in close proximity to these structures. The developed area is accessed by a graded roadway leading to the ridge and along the southwest side of the buildings from Bear Creek Road.

The ground slopes steeply down to the northeast from the ridge to a graded road and to the southwest into a natural drainage feature. Site drainage is characterized as sheet flow down

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these slopes, with some of the structures having roof-gutters and downspouts that are connected to buried tight-lines¹ that daylight downslope. Most of these drainage provisions are in poor condition and do not appear to be functioning as designed.

4.2.1 Classroom Building

The classroom building is a one- and two-story, wood-framed structure constructed in 1935. The structure is supported on a brick and concrete foundation and is at the western end of the ridge, as shown on Figure 2. Test pit TP-4 was excavated adjacent to the foundation on the southwest side of the building. Based on observations in the test pit, it appears that the structure is founded on a continuous, concrete, perimeter spread footing embedded 18 inches below the ground surface, gaining support in the underlying sandstone bedrock (see Figure A-4).

4.2.2 Libraries (1934 Building and 1950 Building)

The library building, located east of the classroom building, was originally constructed in 1934 as a brick two-story structure. In 1949/1950, a large, two-story concrete library addition was constructed at the northwest end the existing 1934 library building. Test Pit TP-3 was excavated near the north-west corner of the 1950 library structure to a depth of about 5 feet. The pit revealed the corner of the building to be supported by a deepened footing or concrete caisson extending below the depth of the pit. The bottom of the pit exposed concrete that may be a remnant from a foundation of a prior structure at the site (see Figure A-3). The library buildings appear to be in relatively good shape, however a wooden covered walkway on the northeast side of the 1950 building is severely distressed and leaning downslope.

4.2.3 Chapel

The chapel structure was originally constructed in 1909 as a library building as part of the prior Tevis estate that occupied the site prior to the college. The structure is a single-story wooden building, with a deep gable roof. In 1934, the Jesuits, who ran Alma College, constructed two side chapels to the building. Test pit TP-1 was excavated along the northeast side of the structure; the structure was observed to be supported on an unreinforced brick foundation bearing in the underlying sandstone bedrock (see Figure A-1). Masonry stairs and flatwork along the eastern corner of the structure appear to be supported by soil or fill, and have been displaced downslope and severely distressed.

4.2.4 Site Retaining Walls

Several large concrete and brick retaining walls are located along the southwest and northeast sides of the ridge (designated as the north retaining wall and south retaining wall, respectively); the walls retain fill placed to widen the building site atop the ridge during prior site development. A concrete wall, up to about 8½ feet tall is located along the southwest side of the graded roadway southwest of the 1950 library building. Test pit TP-5 which was excavated

¹ Tight-line drains are typically a continuous length of pipe used to convey flows down a steep or sensitive slope with appropriate energy dissipation at the discharge end.

along the back of the wall indicates this wall is trapezoidal in shape, with a base width of about 2 feet, and a 1½-foot tall brick parapet atop the wall. The wall is supported on a 5 foot wide by an approximately 2¾-foot-thick footing embedded in the underlying sandstone bedrock (see Figure A-5). Exposures near the eastern end of the wall where the wall crosses the graded roadway reveal large square rebar within the concrete.

A similar concrete retaining wall with a brick parapet is on the northeast side of the library building. This wall varies from about 14 feet to 20 feet tall plus the parapet. Test pit TP-2 indicates the wall is supported by a 4½ foot wide by 1 foot thick footing also embedded in the underlying sandstone bedrock (see Figure A-2). The eastern end of this wall was structurally connected to a brick retaining wall located northwest of the old portion of the library building. Large cracks have developed at this location with a separation of several inches between the two walls.

A third large retaining wall, L-shaped and constructed entirely of concrete is located southeast of the chapel uphill of the graded roadway. A shallow test pit, designated TP-6 was excavated on the front of this wall to evaluate whether the site wall foundations extended beyond the front of the wall. The pit exposed no toe on the footing, with the wall embedded about 1 foot below the adjacent ground surface, bearing in sandstone bedrock. This wall is severely cracked and distressed at its corner, and no reinforcing steel was observed in the crack (see Figure A-6).

The walls support fill consisting of stiff, brown to dark brown sandy clay, containing brick, concrete, and glass fragments throughout. No backdrain system was observed behind the walls in the test pits.

4.3 Groundwater

Groundwater was not observed in the test pits. However, it should be noted that fluctuations in the level of subsurface water could occur due to variations in rainfall, temperature, and other factors not evident at the time these observations were made.

5.0 REGIONAL SEISMICITY

The greater San Francisco Bay Area is recognized by geologists and seismologists as one of the most active seismic regions in the United States. The three major faults that pass through the Bay Area in a northwest direction have produced approximately 12 earthquakes per century strong enough to cause structural damage. The faults causing such earthquakes are part of the San Andreas fault system, a major rift in the earth's crust that extends for at least 700 miles along the California Coast, which includes the San Andreas, Hayward, and Calaveras fault zones. These and other faults of the region are shown on Figure 4. For each of the active faults

within 50 kilometers, the distance from the site and estimated mean characteristic Moment magnitude² [2007 Working Group on California Earthquake Probabilities (WGCEP) (2008) and Cao et al. (2003)] are summarized in Table 1.

TABLE 1
Regional Faults and Seismicity

Fault Name	Distance (km)	Direction from Site	Mean Characteristic or Maximum Moment Magnitude
San Andreas – 1906 Rupture	0.1	Southwest	8.05
San Andreas – Peninsula	0.1	Southwest	7.23
San Andreas – Santa Cruz.	0.7	South	7.12
Monte Vista-Shannon	7.8	Northeast	6.50
Zayante-Vergeles	11	South	7.00
San Gregorio Connected	27	West	7.50
Total Calaveras	31	East	7.03
Monterey Bay-Tularcitos	31	Southwest	7.30
Total Hayward	33	Northeast	7.00
Total Hayward-Rodgers Creek	33	Northeast	7.33

Figure 4 also shows the earthquake epicenters for events with magnitude greater than 5.0 from January 1800 through August 2014. Since 1800, four major earthquakes have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) scale (Figure 5) occurred east of Monterey Bay on the San Andreas Fault (Topozada and Borchardt 1998). The estimated Moment magnitude, M_w , for this earthquake is about 6.25. In 1838, an earthquake occurred with an estimated intensity of about VIII-IX (MM), corresponding to an M_w of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas Fault from Shelter Cove to San Juan Bautista approximately 430 kilometers in length. It had a maximum intensity of XI (MM), a M_w of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The most recent earthquake to affect the Bay Area was the Loma Prieta Earthquake of 17 October 1989 with an M_w of 6.9. The epicenter of the earthquake was in the Santa Cruz Mountains approximately 19 km from the site.

² Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated Mw for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably an Mw of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake (Mw = 6.2).

The 2007 WGCEP at the U.S. Geologic Survey (USGS) predicted a 63 percent chance of a magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Area in 30 years. More specific estimates of the probabilities for different faults in the Bay Area are presented in Table 2.

TABLE 2
WGCEP (2008) Estimates of 30-Year Probability
of a Magnitude 6.7 or Greater Earthquake

Fault	Probability (percent)
Hayward-Rodgers Creek	31
N. San Andreas	21
Calaveras	7
San Gregorio	6

5.1 Alquist Priolo Earthquake Fault Zoning Act

Geologic maps by the California Geological Survey (CGS) and the USGS indicate that traces of the active San Andreas Fault cross the site and large portions of the property area are within an Alquist-Priolo Special Studies fault rupture hazard zone. The main trace of the San Andreas fault is located between about 100 and 260 feet southwest of the subject buildings, as shown on Figure 2. A subsidiary fault trace identified in the JCA report is located about 45 feet from the two library buildings and crosses beneath the southwestern side of the classroom building as shown on Figure 2.

The Alquist-Priolo Earthquake Fault Zoning Act (formerly known as the Alquist-Priolo Special Studies Zone Act) was signed into law in California in 1972 to address the potential for geologic hazards associated with fault rupture in the vicinity of new and existing structures. In accordance with this act, earthquake fault zones have been established by the CGS, formerly the California Division of Mines and Geology (CDMG), along known active faults in California.

The zones encompass all active³ or potentially active⁴ mapped traces that constitute a potential hazard to structures from surface faulting or fault creep. Based on the proximity of the San Andreas fault to the structures, this area is located within an Alquist-Priolo Special Studies fault rupture hazard zone as shown on Figure 6.

Work that is governed by the Alquist-Priolo Earthquake Fault Zoning Act include any subdivision of land which contemplates the eventual construction of structures for human occupancy, with the exception of a single-family wood-frame or steel-frame dwelling not exceeding two stories when that dwelling is not part of a development of four or more dwellings. "Structure for human occupancy" is any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year.

For work within the Alquist-Priolo Earthquake Fault Zone, the Zoning Act requires investigative studies be performed for any new development intended for human occupancy in this area. The Zoning Act states that "...Furthermore, as the area within fifty (50) feet of such active faults shall be presumed to be underlain by active branches of that fault unless proven otherwise by an appropriate geologic investigation...no such structures shall be permitted in this area." For the project site, a fault study will be required before structures are permitted.

In addition, the *Map Showing Recently Active Breaks Along the San Andreas Fault Between the Central Santa Cruz Mountains and the Northern Gabilan Range* (Sarna-Wojcicki, Pampeyan, and Hall, 1975) indicates that in 1909 a right-lateral displacement of 0.1 to 0.5 inches was observed along with a right-lateral rotation of a concrete retaining wall in the southeastern portion of the site. This movement may have been related to sympathetic movement on the subsidiary fault during the 1906 earthquake. Furthermore, geomorphic evidence of a faint swale in the northwest portion of the site suggests a trace of the San Andreas Fault crosses the site beneath the existing pond.

6.0 PRELIMINARY GEOLOGIC CONCLUSIONS

On the basis of the results of this investigation, we conclude that the proposed rehabilitation of portions of the site is feasible from a geologic and geotechnical standpoint. In our opinion, the primary geologic hazards affecting the site is the potential for fault rupture and strong to very strong seismic shaking, as well as the potential for new shallow landslides to develop on the flanks of the ridge. These and other issues are discussed in the following sub-sections.

³ Active faults are defined as those exhibiting either surface ruptures, topographic features created by faulting, surface displacements of geologically Recent (younger than about 11,000 years old) deposits, tectonic creep along fault lines, and/or close proximity to linear concentrations or trends of earthquake epicenters

⁴ Potentially active faults are those that have evidence of displacement of deposits of Quaternary age (the last 2 million years).

6.1 Fault Rupture

As described above in Section 5.1, the site is within an Alquist-Priolo Special Studies Zone for the San Andreas fault, and a subsidiary trace of the San Andreas fault has been identified as crossing beneath the classroom building, as shown on Figure 2. Based on the site's setting and proximity to this trace and the main trace of the San Andreas fault, we conclude the potential for earthquake-induced ground rupture at the site is high where this trace has been identified, but moderate to low in the areas of the library structures and chapel. Should new structures be proposed at the site, fault trenches should be excavated to show that these potential building sites are free from active or potentially active faulting. Because of the potential for fault rupture beneath the classroom and garage buildings, we conclude that these structures should not be reopened for occupancy; however it could be used as a storage facility.

6.2 Strong Ground Shaking

During a major earthquake on one of the active faults in the general region, the site will experience strong to violent ground shaking. The intensity of the earthquake ground motion at the site will depend upon the characteristics of the generating fault, distance to the earthquake epicenter, magnitude and duration of the earthquake, and specific site geologic conditions. During its history, the site has been subjected to strong ground shaking from moderate to large earthquakes on the Hayward, Calaveras, San Andreas, and other nearby potentially active faults, and future very strong ground shaking should be expected during a major earthquake on these faults.

6.3 Earthquake Induced Landslides

The California Geologic Survey (CGS) has prepared maps titled State of California Seismic Hazard Zones, Los Gatos Quadrangle, dated 23 September 2002 and State of California Seismic Hazard Zones, Castle Rock Ridge Quadrangle, dated 11 August 2005. These maps were prepared in accordance with the Seismic Hazards Mapping Act of 1990. According to the maps, the site is within a zone described as being prone to earthquake-induced landsliding. Consequently, CGS requires that geotechnical investigation reports within seismic hazard zones comply with the requirements of Special Publication 117 titled Guidelines for Evaluating and Mitigating Seismic Hazard Zones in California, dated 13 March 1997.

Should new structures be proposed for the site, project-specific design level geotechnical investigations should be performed which include detailed subsurface investigations, laboratory testing, and quantitative slope stability analyses to address stability issues in accordance with State Publication SP117.

As described in Sections 3.0 and 4.1, the site is on the large, deep-seated Black Road Landslide. This landslide is one of many similar large-scale, deep-seated landslides located along this portion of the San Andreas fault. These landslides are typically greater than 100 feet deep, and extend downslope to the northeast into Lexington Reservoir or into the Los Gatos Creek Ravine. It is believed that minor displacements occurred on some of these landslides

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during the 1989 Loma Prieta Earthquake. Generally, movements of these landslides does not manifest in distress at the ground surface, unless structures or hardscape features cross slide-boundaries. We conclude that distress to the site from renewed movement of this landslide during an earthquake would be negligible.

6.4 Cyclic Densification

During a major earthquake on a segment of one of the nearby faults, strong to violent shaking is expected to occur at the project site. Strong shaking during an earthquake can result cyclic densification⁵.

Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is densified by earthquake vibrations, causing settlement. Where bedrock is shallow or exposed at the ground surface, we judge the potential for cyclic densification is low. However, a moderate to high potential for cyclic densification exists within the existing retaining wall backfill, which could distress existing or new structural elements supported in these materials. This should be evaluated as part of future studies for any improvements.

6.5 Non-Seismic Ground Failures

Potential geologic hazards associated with ground failure not caused by earthquakes such as shallow landsliding, expansive soil and collapsible soil, were evaluated and are discussed in this section.

6.5.1 Shallow Landsliding

Based on our investigation, a shallow small landslide may exist near the northeast corner of the chapel. On the basis of our observations, it appears this slide is shallow and confined to the surficial soils supporting on the slope. The slide may extend uphill beneath the existing stairs located at this end of the building, and appears to be the cause of the distress to these stairs and walkway.

In addition, because of the steep slopes and the soil that blankets the slopes surrounding the developed area, the occurrence of a new shallow landslide within or adjacent to the subject buildings cannot be excluded. A new shallow landslide in this area could be triggered by excessive precipitation. We conclude that a landslide of this nature should not constitute an immediate threat to the integrity of the buildings since they are founded below these materials in the underlying sandstone bedrock. However, new flatwork, walkways or patios founded downslope of the buildings on these soils may be subject to distress from this type of landsliding, and should be evaluated on a case by case basis during a design level geotechnical study for any improvements.

⁵ Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is densified by earthquake vibrations, resulting in ground surface settlement.

6.5.2 Expansive Soil

Expansive soil shrinks and swells with changes in moisture content. The clay content, mineralogy, and porosity of the soil also influence the change in volume. The shrinking and swelling caused by expansive clay-rich soil often results in damage to overlying structures. Based on the consistency of the materials encountered in the test pits, we conclude that a low to moderate risk of expansive soil distress exists for structural elements founded on the existing fill. If new concrete flatwork or other structural elements are planned for areas of existing fill, appropriate mitigation measures should be implemented.

The mitigation measures should be determined during the design level geotechnical investigation, but in general may require: 1) the excavation and removal of the expansive soil materials and replacement with non-expansive fill, 2) the placement of a layer of non-expansive fill, which may vary in thickness from 12- to 24- inches, above the expansive soil in areas where concrete flatwork or foundations will be constructed, 3) moisture conditioning the expansive soil several percent above the optimum moisture content or lime treating the expansive soil, 4) constructing foundations below the zone of seasonal moisture change or capable of withstanding or not being adversely effected by seasonal shrink-swell, and 5) specific control of surface runoff and installation of sub-surface drainage elements, 6) the use of low water demand landscaping, and 7) a combination of any of the above measures.

6.5.3 Collapsible Soil

Soil collapse is the densification of sediments resulting from significant increases in their moisture content. This process typically results from moisture infiltration into the subsurface caused by poor surface drainage, irrigation water or leaking pipes. This phenomenon is more prevalent in low-density, silty, sandy soil deposited in semi-arid and arid climates where the soil has not been subjected to saturation. Based on the relatively shallow depth to bedrock observed over most of the site, and the relative density of the surficial soils observed during our study, we judge the potential for soil collapse at the site to be low.

7.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

We have developed preliminary geotechnical recommendations to aid in the evaluation of the existing building foundations and site retaining walls. However, a final geotechnical investigation including additional field exploration should be performed to develop design level recommendations.

7.1 Foundation Parameters

The buildings and retaining walls were observed to bear in the underlying sandstone bedrock. For preliminary design purposes, footings bottomed in the sandstone may be evaluated using an allowable bearing pressure of 8,000 pounds per square foot (psf) for dead plus live loads, with a one-third increase for total loads, including wind and/or seismic loads. Footings that may be bottomed in soil or fill may be designed for an allowable bearing pressure 2,000 psf for dead plus live loads, with a one-third increase for total loads, including wind and/or seismic loads.

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This may be a condition that is present at the northeast corner of the 1934 library structure. Additional investigation may be required in this area to determine if the footings bear on soil or rock.

Lateral load resistance of the footings can be calculated using a combination of passive resistance acting against the vertical faces of the footings and friction along the bases of the footings. Passive resistance may be calculated using lateral pressures corresponding to a uniform pressure of 2,000 pounds per square foot (psf) in the rock. Where soil is present an equivalent fluid weight of 250 pounds per cubic foot (pcf) should be used; the upper foot of rock or soil should be ignored unless confined by a concrete slab or pavement. Frictional resistance for footing bearing on rock should be computed using a base friction coefficient of 0.45. The passive resistance and base friction values include a factor of safety of about 1.5 and may be used in combination without reduction. To utilize the full passive resistance values given above, the bottom edge of footings should be at least seven feet from the face of any slope.

7.2 Retaining Wall Design Parameters

Because the site is in a seismically active area, the design should also be checked for seismic conditions. Under seismic loading conditions, there will be an added seismic increment that should be added to active earth pressures⁶. We used the procedures outlined in Sitar et al. (2012) and the peak ground acceleration based on the MCE ground motion level to compute the seismic pressure increment. We recommend the walls be designed for the more critical of at-rest pressures or total pressure (active plus seismic pressure increment). Cantilever retaining walls should be designed for the equivalent fluid weights and pressures presented in Table 3.

⁶ Sitar, N., E.G. Cahill and J.R. Cahill (2012). "Seismically Induced Lateral Earth Pressures on Retaining Structures and Basement Walls."

TABLE 3
Cantilever Retaining Wall Design Earth Pressures
(Drained Conditions Above Design Groundwater Level)

	Static Conditions		Seismic Conditions ¹
	Unrestrained Walls – Active (pcf) ²	Restrained Walls – At-rest (pcf)	Total Pressure – Active Plus Seismic Pressure Increment (pcf)
Drained Condition ²	35	55	65
Undrained Condition	80	90	95

Notes:

1. The more critical condition of either at-rest pressure for static conditions or active pressure plus a seismic pressure increment for seismic conditions should be checked.
2. Applicable to walls that are backdrained to prevent the buildup of hydrostatic pressure.
3. pcf = pounds per cubic foot

The lateral earth pressures recommended for the drained condition are applicable to walls that are backdrained to prevent the buildup of hydrostatic pressure. No backdrains were observed behind the existing walls; therefore, the existing walls may be subject to hydrostatic pressure and should be designed for the undrained condition.

If surcharge loads occur above an imaginary 45-degree line projected up from the bottom of a retaining wall, a surcharge pressure should be included in the wall design. If this condition exists, we should be consulted to estimate the added pressure on a case-by-case basis. Where truck traffic will pass within 10 feet of retaining walls, temporary traffic loads should be considered in the design of the walls. Traffic loads may be modeled by a uniform pressure of 100 pounds per square foot applied in the upper 10 feet of the walls.

For any new walls or if backdrains are added to existing walls, one acceptable method for backdraining the walls is to place a prefabricated drainage panel against the back side of the wall. The drainage panel should extend down to the base of the wall to a perforated PVC 20 collector pipe. The pipe should be surrounded on all sides by at least four inches of Caltrans Class 2 permeable material (Caltrans Standard Specifications Section 68-1.025). We should check the manufacturer's specifications regarding the proposed prefabricated drainage panel material to verify that it is appropriate for the intended use. An acceptable alternative is to backdrain the wall with Caltrans Class 2 material at least one foot wide, extending down to the base of the wall. A perforated PVC pipe should be placed at the bottom of the gravel, as

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described for the first alternative. The pipe in either alternative should be sloped to drain into an appropriate outlet. We should check the manufacturer's specifications for the proposed drainage panel material to verify it is appropriate for its intended use.

7.3 Tiebacks

Permanent tiebacks may be used to restrain the existing retaining walls. The vertical load from the tiebacks should be accounted for in the design.

Tiebacks should derive their load-carrying capacity from the soil behind an imaginary line sloping upward from a point $H/5$ feet away from the bottom of the excavation and sloping upwards at 60 degrees from the horizontal, where H is the wall height in feet. Tiebacks should have a minimum unbonded length of 15 feet. All tiebacks should have a minimum bonded length of 15 feet and spaced at least four feet on center. The first row of tiebacks should have a minimum of seven feet of overburden.

Tieback allowable capacity will depend upon the drilling method, hole diameter, grout pressure, and workmanship. The existing onsite fill will likely cave, therefore, solid flight augers should not be used for tieback installation. We recommend a smooth cased tieback installation method (such as a Klemm type rig) be used. For estimating purposes, we recommend using the skin friction value of 1,000 psf. These values include a factor of safety of about 2. Higher skin friction values may be used if confirmed with pre-production performance tests.

The contractor should be responsible for determining the actual length of tiebacks required to resist the lateral earth and water pressures imposed on the temporary retaining systems. Determination of the tieback length should be based on the contractor's familiarity with his installation method. The computed bond length should be confirmed by a performance- and proof-testing program under the observation of an engineer experienced in this type of work. Replacement tiebacks should be installed for tiebacks that fail the load test.

7.4 2013 California Building Code Mapped Values

We have assumed less than 10 feet of soil at the site and have classified the site as a Site Class B. This should be confirmed as part of a final geotechnical investigation report. For seismic design in accordance with the provisions of 2013 CBC/ASCE 7-10, we recommend the following:

- Risk Targeted Maximum Considered Earthquake (MCE_R) S_s and S_1 of 2.575g and 1.237g, respectively.
- Site Class B
- Site Coefficients F_A and F_V of 1.0 and 1.0
- MCE_R spectral response acceleration parameters at short periods, S_{MS} , and at one-second period, S_{M1} , of 2.575g and 1.237g, respectively.

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- Design Earthquake (DE) spectral response acceleration parameters at short period, S_{DS} , and at one-second period, S_{D1} , of 1.717g and 0.825g, respectively.
- Peak ground acceleration, PGA_M of 0.988g

7.5 Surface Drainage

Control of surface drainage is critical to the successful rehabilitation of the site. The results of improperly controlled runoff may include foundation heave and/or settlement, erosion, gully, ponding, and potential shallow slope instability. The design level geotechnical investigation for rehabilitation of existing structures should provide appropriate recommendations to prevent water from ponding in pavement areas and adjacent to the foundation of the structures by sloping the ground surface away from them or by providing area drains. In addition, recommendations should be provided for restoring the roof-gutter systems and for the collection and discharge of collected roof-gutter downspouts, retaining wall backdrain outfalls, and area drain outfalls to prevent water from being allowed to discharge freely onto the ground surface adjacent to the buildings or site retaining walls, or to be allowed to flow over the top of any artificial slope.

In our opinion, the collected water from the structures may be discharged on site utilizing properly designed energy dissipaters located downslope of the structures and/or improvements in areas to be determined by the project geotechnical engineer. We conclude that if the drainage systems are properly designed, they should effectively mitigate future development of springs, seeps, or shallow surface landsliding of the soil mantling the slopes in the immediate vicinity of the structures.

8.0 LIMITATIONS

The findings and preliminary conclusions and recommendations presented in this letter report apply only to the portion of the Alma College property as described, and are the result of limited geologic and engineering studies and our interpretations of the existing geological and geotechnical conditions. The conclusions and recommendations contained in this letter are preliminary and should be used to evaluate the viability of reoccupying the site. A fault study, as well as a detailed geologic study and geotechnical investigation should be performed to develop design recommendations and design plans for any specific mitigation measures or foundation improvements. We have prepared this report for the exclusive use of our client in substantial accordance with the generally accepted geological/geotechnical engineering practice as it exists in the area at the time of our study. No warranty is expressed or implied.

LANGAN TREADWELL ROLLO

Preliminary Geotechnical and Geologic Evaluation
Alma College Site Rehabilitation Plan
Santa Clara County, California
Langan Project No.: 730498603

3 July 2015
Page 16 of 16

We trust this letter provides the information you require at this time. We appreciate the opportunity to work be of continued service to you on this project.

Sincerely,

Langan Treadwell Rollo



Serena T. Jang, GE
Associate



John Gouchon, GE
Principal

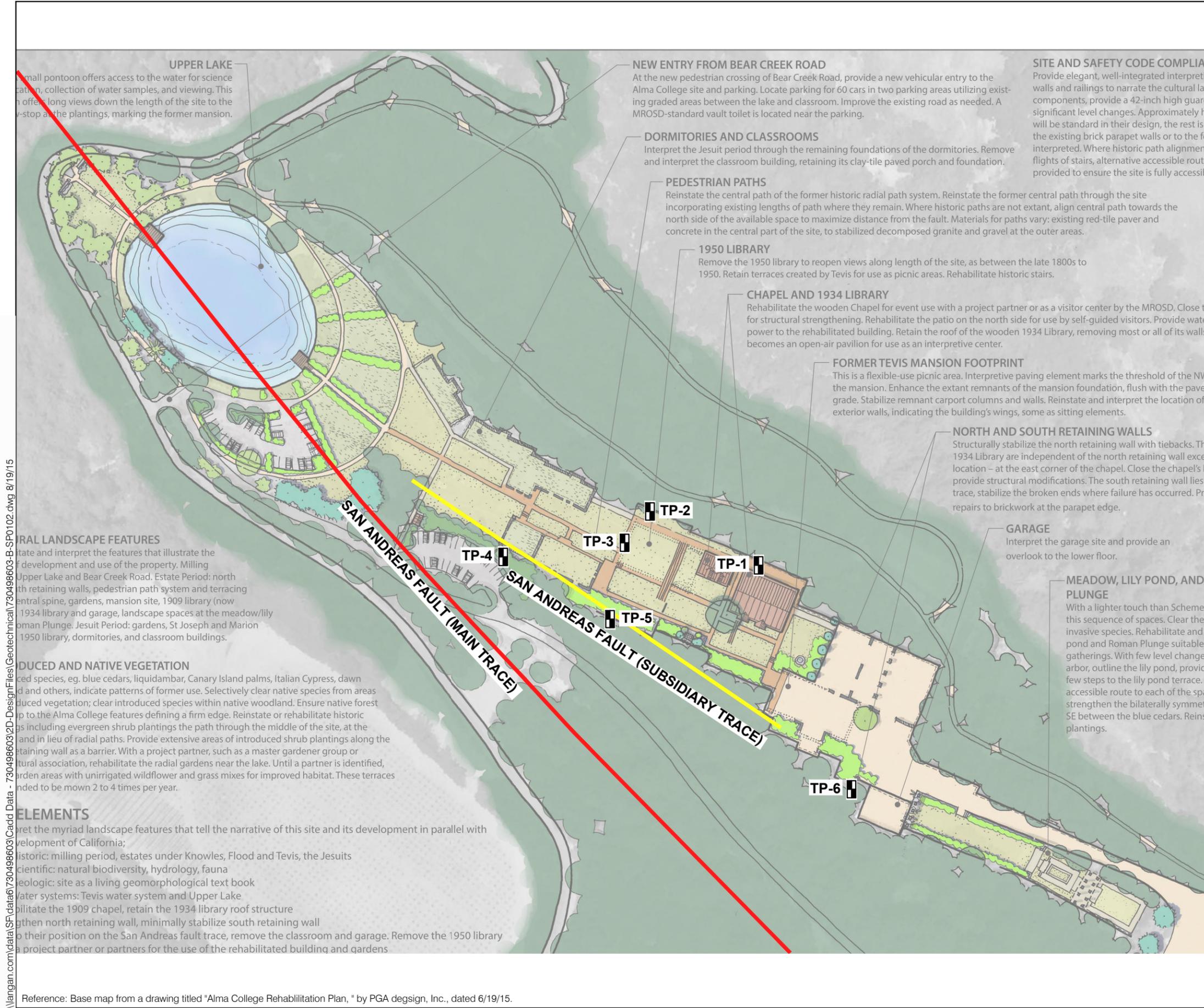


730498603.01_STJ_Updated Report_Alma College Rehab

Attachments: Figures 1 through 6
Appendix A

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FIGURES



UPPER LAKE
A small pontoon offers access to the water for science collection, collection of water samples, and viewing. This offers long views down the length of the site to the west stop at the plantings, marking the former mansion.

NEW ENTRY FROM BEAR CREEK ROAD
At the new pedestrian crossing of Bear Creek Road, provide a new vehicular entry to the Alma College site and parking. Locate parking for 60 cars in two parking areas utilizing existing graded areas between the lake and classroom. Improve the existing road as needed. A MROSD-standard vault toilet is located near the parking.

DORMITORIES AND CLASSROOMS
Interpret the Jesuit period through the remaining foundations of the dormitories. Remove and interpret the classroom building, retaining its clay-tile paved porch and foundation.

PEDESTRIAN PATHS
Reinstate the central path of the former historic radial path system. Reinstate the former central path through the site incorporating existing lengths of path where they remain. Where historic paths are not extant, align central path towards the north side of the available space to maximize distance from the fault. Materials for paths vary: existing red-tile paver and concrete in the central part of the site, to stabilized decomposed granite and gravel at the outer areas.

1950 LIBRARY
Remove the 1950 library to reopen views along length of the site, as between the late 1800s to 1950. Retain terraces created by Tevis for use as picnic areas. Rehabilitate historic stairs.

CHAPEL AND 1934 LIBRARY
Rehabilitate the wooden Chapel for event use with a project partner or as a visitor center by the MROSD. Close the chapel for structural strengthening. Rehabilitate the patio on the north side for use by self-guided visitors. Provide water, power to the rehabilitated building. Retain the roof of the wooden 1934 Library, removing most or all of its walls so it becomes an open-air pavilion for use as an interpretive center.

FORMER TEVIS MANSION FOOTPRINT
This is a flexible-use picnic area. Interpretive paving element marks the threshold of the NW corner of the mansion. Enhance the extant remnants of the mansion foundation, flush with the paver grade. Stabilize remnant carport columns and walls. Reinstate and interpret the location of the exterior walls, indicating the building's wings, some as sitting elements.

NORTH AND SOUTH RETAINING WALLS
Structurally stabilize the north retaining wall with tiebacks. The 1934 Library are independent of the north retaining wall except at the east corner of the chapel. Close the chapel's lot line to provide structural modifications. The south retaining wall lies on the east side of the site. Stabilize the broken ends where failure has occurred. Provide repairs to brickwork at the parapet edge.

GARAGE
Interpret the garage site and provide an overlook to the lower floor.

MEADOW, LILY POND, AND ROMAN PLUNGE
With a lighter touch than Scheme A, provide a sequence of spaces. Clear the meadow of invasive species. Rehabilitate and interpret the lily pond and Roman Plunge suitable for gatherings. With few level changes, provide an arbor, outline the lily pond, provide a few steps to the lily pond terrace. Provide an accessible route to each of the spaces. Strengthen the bilaterally symmetrical axis SE between the blue cedars. Reinstate plantings.

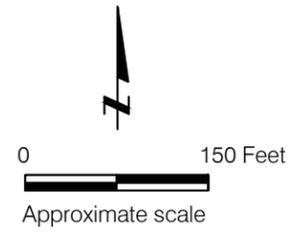
SITE AND SAFETY CODE COMPLIANCE
Provide elegant, well-integrated interpretive walls and railings to narrate the cultural landscape components, provide a 42-inch high guard rail for significant level changes. Approximately half of the site will be standard in their design, the rest is consistent with the existing brick parapet walls or to the features to be interpreted. Where historic path alignments are not extant, provide flights of stairs, alternative accessible routes and ramps provided to ensure the site is fully accessible.

LANDSCAPE FEATURES
Interpret and interpret the features that illustrate the development and use of the property. Milling period: Upper Lake and Bear Creek Road. Estate Period: north retaining walls, pedestrian path system and terracing central spine, gardens, mansion site, 1909 library (now 1934 library and garage, landscape spaces at the meadow/lily pond and Roman Plunge. Jesuit Period: gardens, St Joseph and Marion 1950 library, dormitories, and classroom buildings.

PLANTED AND NATIVE VEGETATION
Planted species, eg. blue cedars, liquidambar, Canary Island palms, Italian Cypress, dawn redwood and others, indicate patterns of former use. Selectively clear native species from areas of introduced vegetation; clear introduced species within native woodland. Ensure native forest edge to the Alma College features defining a firm edge. Reinstate or rehabilitate historic paths including evergreen shrub plantings the path through the middle of the site, at the meadow and in lieu of radial paths. Provide extensive areas of introduced shrub plantings along the retaining wall as a barrier. With a project partner, such as a master gardener group or horticultural association, rehabilitate the radial gardens near the lake. Until a partner is identified, garden areas with unirrigated wildflower and grass mixes for improved habitat. These terraces are intended to be mown 2 to 4 times per year.

RECOMMENDED ELEMENTS
Interpret the myriad landscape features that tell the narrative of this site and its development in parallel with the development of California; historic: milling period, estates under Knowles, Flood and Tevis, the Jesuits; scientific: natural biodiversity, hydrology, fauna; geologic: site as a living geomorphological text book; later systems: Tevis water system and Upper Lake; rehabilitate the 1909 chapel, retain the 1934 library roof structure; strengthen north retaining wall, minimally stabilize south retaining wall; restore their position on the San Andreas fault trace, remove the classroom and garage. Remove the 1950 library; provide a project partner or partners for the use of the rehabilitated building and gardens.

EXPLANATION
TP-1 [Symbol] Approximate location of test pit by Treadwell & Rollo, Inc., 2009



ALMA COLLEGE SITE REHABILITATION PLAN
Santa Clara County, California

SITE PLAN

Date 08/18/15 | Project No. 730498603 | Figure 2

LANGAN TREADWELL ROLLO

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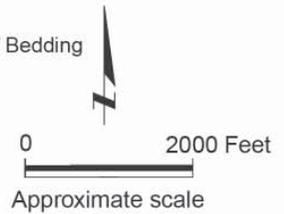
Reference: Base map from a drawing titled "Alma College Rehabilitation Plan," by PGA design, Inc., dated 6/19/15.



EXPLANATION

- Qal – Alluvium
 - Qls – Landslide Deposits
 - Tv and Tvq – Vaqueros Formation sandstone
 - Tsl – San Lorenzo Formation shale and mudstone
 - Tst – Twobard Shale member of the San Lorenzo Formation
 - Tb – Butano Formation Sandstone
- Geologic contact
 - Fault (dashed where approximate, dotted where concealed)
 - Landslide (arrows indicate primary direction of movement)
 - Syncline
 - Anticline
 - Strike and Dip of Bedding

Reference:
 BRABB, E. E. and T. W. DIBBLE, Jr., 1979, Preliminary Geologic Map of Castle Rock Ridge Quadrangle, Santa Cruz and Santa Clara Counties, California, U.S. Geological Survey, Open File Report 79-659, 1:24,000.
 McLAUGHLIN, R. J., J. C. CLARK, E. E. BRABB, AND E. J. HELLEY, 1991, Geologic Map and Structure Sections of the Los Gatos 7 7/8 Minute Quadrangle, Santa Clara and Santa Cruz Counties, California, U. S. Geological Survey, Open-File Map 91-593, 1:24,000.

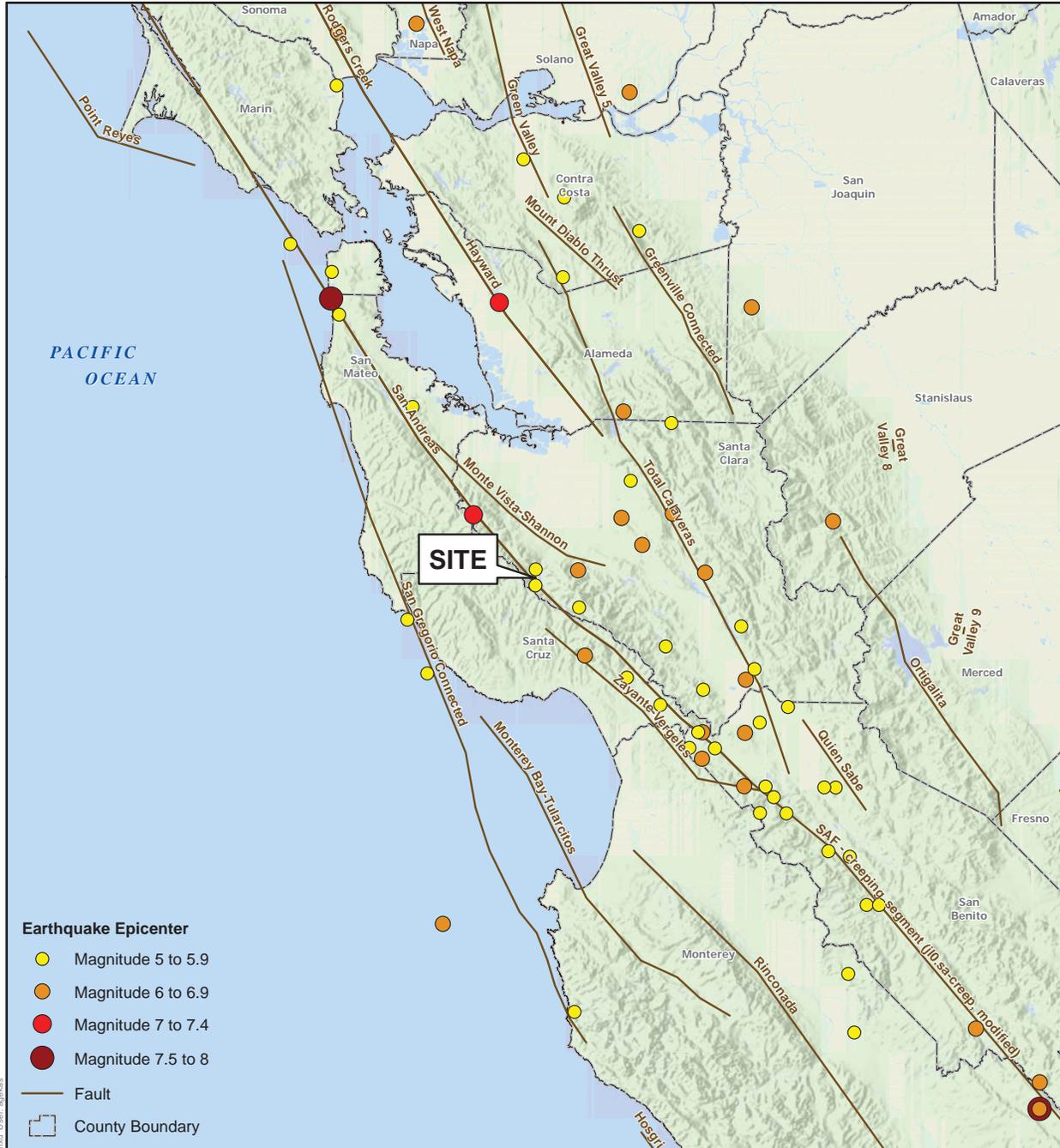


ALMA COLLEGE SITE REHABILITATION PLAN
 Santa Clara County, California

REGIONAL GEOLOGIC MAP

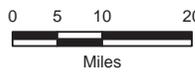
LANGAN TREADWELL ROLLO

Date 08/18/15 | Project No. 730498603 | Figure 3



- Earthquake Epicenter**
- Magnitude 5 to 5.9
 - Magnitude 6 to 6.9
 - Magnitude 7 to 7.4
 - Magnitude 7.5 to 8
- Fault
- County Boundary

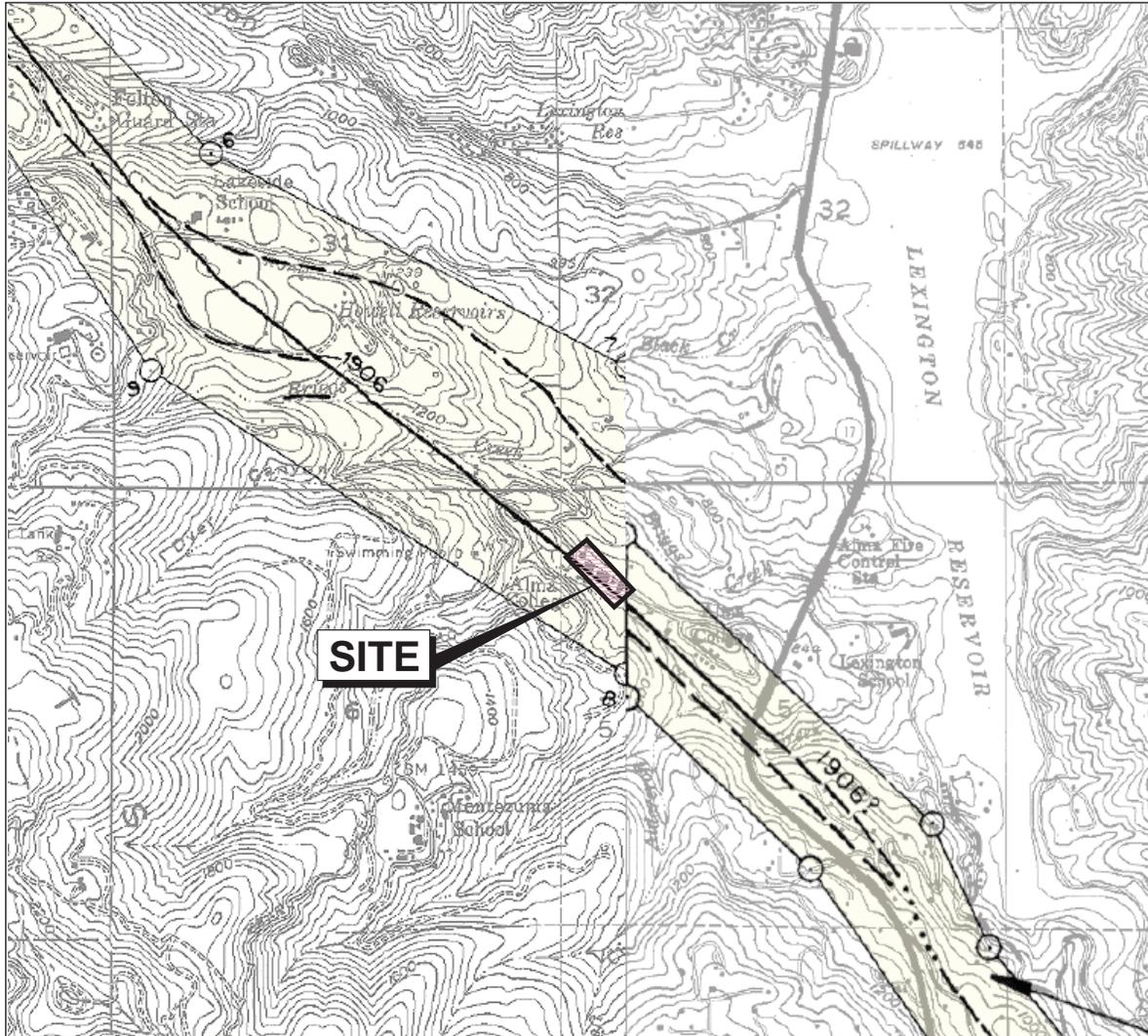
- Notes:**
1. Quaternary fault data displayed are based on a generalized version of U.S Geological Survey (USGS) Quaternary Fault and fold database, 2010. For cartographic purposes only.
 2. The Earthquake Epicenter (Magnitude) data is provided by the USGS and is current through 08/26/2014.
 3. Basemap hillshade and County boundaries provided by USGS and California Department of Transportation.
 4. Map displayed in California State Coordinate System, California (Teale) Albers, North American Datum of 1983 (NAD83), Meters.



<p>ALMA COLLEGE SITE REHABILITATION PLAN Santa Clara County, California</p>	<p>MAP OF MAJOR FAULTS AND EARTHQUAKE EPICENTERS IN THE SAN FRANCISCO BAY AREA</p>		
<p>LANGAN TREADWELL ROLLO</p>	<p>Date 8/19/2015</p>	<p>Project No. 730498603</p>	<p>Figure 4</p>

- I Not felt by people, except under especially favorable circumstances. However, dizziness or nausea may be experienced.**
 Sometimes birds and animals are uneasy or disturbed. Trees, structures, liquids, bodies of water may sway gently, and doors may swing very slowly.
- II Felt indoors by a few people, especially on upper floors of multi-story buildings, and by sensitive or nervous persons.**
 As in Grade I, birds and animals are disturbed, and trees, structures, liquids and bodies of water may sway. Hanging objects swing, especially if they are delicately suspended.
- III Felt indoors by several people, usually as a rapid vibration that may not be recognized as an earthquake at first. Vibration is similar to that of a light, or lightly loaded trucks, or heavy trucks some distance away. Duration may be estimated in some cases.**
 Movements may be appreciable on upper levels of tall structures. Standing motor cars may rock slightly.
- IV Felt indoors by many, outdoors by a few. Awakens a few individuals, particularly light sleepers, but frightens no one except those apprehensive from previous experience. Vibration like that due to passing of heavy, or heavily loaded trucks. Sensation like a heavy body striking building, or the falling of heavy objects inside.**
 Dishes, windows and doors rattle; glassware and crockery clink and clash. Walls and house frames creak, especially if intensity is in the upper range of this grade. Hanging objects often swing. Liquids in open vessels are disturbed slightly. Stationary automobiles rock noticeably.
- V Felt indoors by practically everyone, outdoors by most people. Direction can often be estimated by those outdoors. Awakens many, or most sleepers. Frightens a few people, with slight excitement; some persons run outdoors.**
 Buildings tremble throughout. Dishes and glassware break to some extent. Windows crack in some cases, but not generally. Vases and small or unstable objects overturn in many instances, and a few fall. Hanging objects and doors swing generally or considerably. Pictures knock against walls, or swing out of place. Doors and shutters open or close abruptly. Pendulum clocks stop, or run fast or slow. Small objects move, and furnishings may shift to a slight extent. Small amounts of liquids spill from well-filled open containers. Trees and bushes shake slightly.
- VI Felt by everyone, indoors and outdoors. Awakens all sleepers. Frightens many people; general excitement, and some persons run outdoors.**
 Persons move unsteadily. Trees and bushes shake slightly to moderately. Liquids are set in strong motion. Small bells in churches and schools ring. Poorly built buildings may be damaged. Plaster falls in small amounts. Other plaster cracks somewhat. Many dishes and glasses, and a few windows break. Knickknacks, books and pictures fall. Furniture overturns in many instances. Heavy furnishings move.
- VII Frightens everyone. General alarm, and everyone runs outdoors.**
 People find it difficult to stand. Persons driving cars notice shaking. Trees and bushes shake moderately to strongly. Waves form on ponds, lakes and streams. Water is muddied. Gravel or sand stream banks cave in. Large church bells ring. Suspended objects quiver. Damage is negligible in buildings of good design and construction; slight to moderate in well-built ordinary buildings; considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires, etc. Plaster and some stucco fall. Many windows and some furniture break. Loosened brickwork and tiles shake down. Weak chimneys break at the roofline. Cornices fall from towers and high buildings. Bricks and stones are dislodged. Heavy furniture overturns. Concrete irrigation ditches are considerably damaged.
- VIII General fright, and alarm approaches panic.**
 Persons driving cars are disturbed. Trees shake strongly, and branches and trunks break off (especially palm trees). Sand and mud erupts in small amounts. Flow of springs and wells is temporarily and sometimes permanently changed. Dry wells renew flow. Temperatures of spring and well waters varies. Damage slight in brick structures built especially to withstand earthquakes; considerable in ordinary substantial buildings, with some partial collapse; heavy in some wooden houses, with some tumbling down. Panel walls break away in frame structures. Decayed pilings break off. Walls fall. Solid stone walls crack and break seriously. Wet grounds and steep slopes crack to some extent. Chimneys, columns, monuments and factory stacks and towers twist and fall. Very heavy furniture moves conspicuously or overturns.
- IX Panic is general.**
 Ground cracks conspicuously. Damage is considerable in masonry structures built especially to withstand earthquakes; great in other masonry buildings - some collapse in large part. Some wood frame houses built especially to withstand earthquakes are thrown out of plumb, others are shifted wholly off foundations. Reservoirs are seriously damaged and underground pipes sometimes break.
- X Panic is general.**
 Ground, especially when loose and wet, cracks up to widths of several inches; fissures up to a yard in width run parallel to canal and stream banks. Landsliding is considerable from river banks and steep coasts. Sand and mud shifts horizontally on beaches and flat land. Water level changes in wells. Water is thrown on banks of canals, lakes, rivers, etc. Dams, dikes, embankments are seriously damaged. Well-built wooden structures and bridges are severely damaged, and some collapse. Dangerous cracks develop in excellent brick walls. Most masonry and frame structures, and their foundations are destroyed. Railroad rails bend slightly. Pipe lines buried in earth tear apart or are crushed endwise. Open cracks and broad wavy folds open in cement pavements and asphalt road surfaces.
- XI Panic is general.**
 Disturbances in ground are many and widespread, varying with the ground material. Broad fissures, earth slumps, and land slips develop in soft, wet ground. Water charged with sand and mud is ejected in large amounts. Sea waves of significant magnitude may develop. Damage is severe to wood frame structures, especially near shock centers, great to dams, dikes and embankments, even at long distances. Few if any masonry structures remain standing. Supporting piers or pillars of large, well-built bridges are wrecked. Wooden bridges that "give" are less affected. Railroad rails bend greatly and some thrust endwise. Pipe lines buried in earth are put completely out of service.
- XII Panic is general.**
 Damage is total, and practically all works of construction are damaged greatly or destroyed. Disturbances in the ground are great and varied, and numerous shearing cracks develop. Landslides, rock falls, and slumps in river banks are numerous and extensive. Large rock masses are wrenched loose and torn off. Fault slips develop in firm rock, and horizontal and vertical offset displacements are notable. Water channels, both surface and underground, are disturbed and modified greatly. Lakes are dammed, new waterfalls are produced, rivers are deflected, etc. Surface waves are seen on ground surfaces. Lines of sight and level are distorted. Objects are thrown upward into the air.

ALMA COLLEGE SITE REHABILITATION PLAN Santa Clara County, California	MODIFIED MERCALLI INTENSITY SCALE		
LANGAN TREADWELL ROLLO	Date 08/19/15	Project No. 730496803	Figure 5



EXPLANATION

Potentially Active Faults

Faults considered to have been active during Quaternary time; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by creep or possible creep.

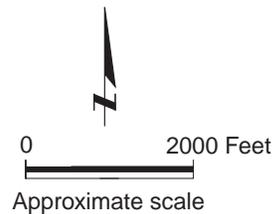
Aerial photo lineaments (not field checked); based on youthful geomorphic and other features believed to be the results of Quaternary faulting.

Special Studies Zone Boundaries

These are delineated as straight-line segments that connect consecutively numbered turning points so as to define one or more special studies zone segments.

Seaward projection of zone boundary.

Reference:
 State of California Special Studies Zones for Los Gatos and
 Castlerock Ridge Quadrangles, 1991 and 1974 respectively.



ALMA COLLEGE SITE REHABILITATION PLAN
 Santa Clara County, California

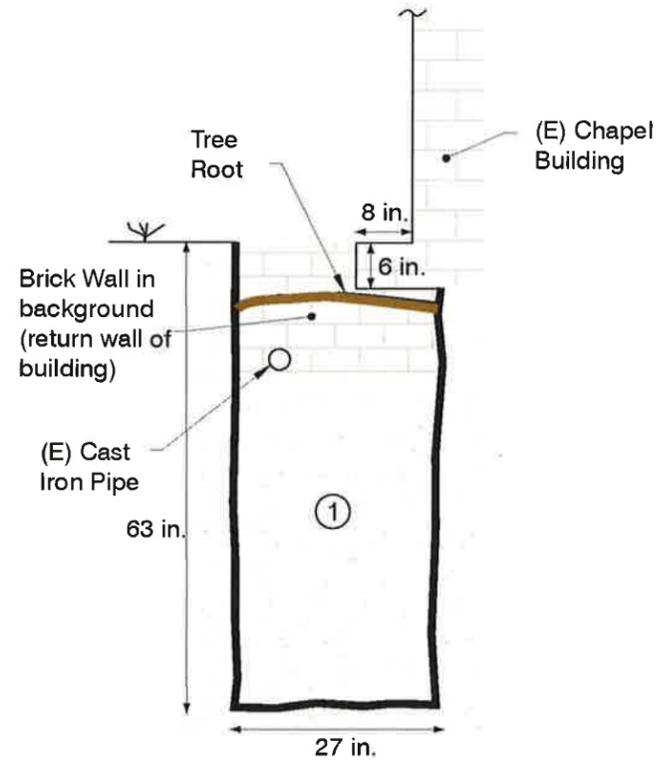
REGIONAL ALQUIST-PRIOLO MAP

LANGAN TREADWELL ROLLO

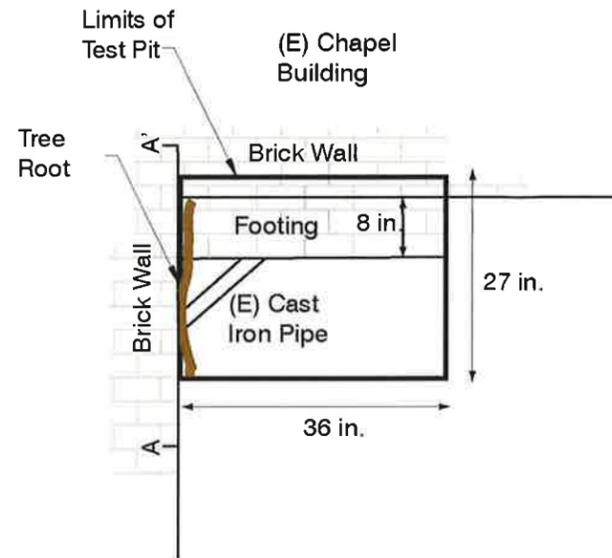
Date 08/18/15 | Project No. 730498603 | Figure 6

APPENDIX GEOTECH – A

SECTION A-A'



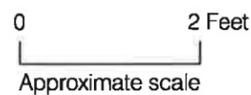
PLAN VIEW



PHOTO



- ① SANDSTONE
yellowish brown (10YR 5/6) and
grayish brown (10YR 5/2),
homogeneous, dense, friable,
well-sorted, fine- to very fine-
grained, subrounded, slightly
moist
[BEDROCK]



DRAFT

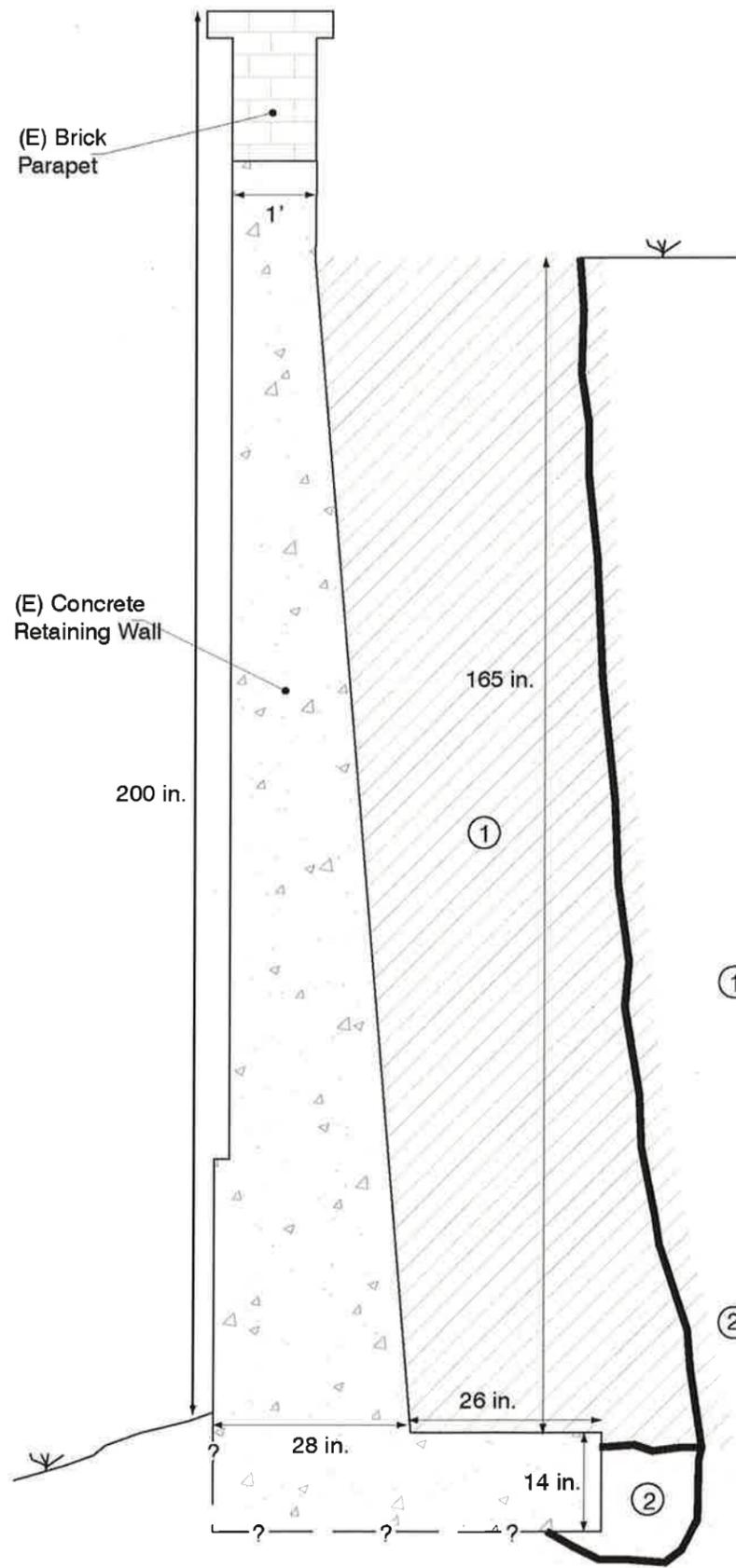
ALMA COLLEGE CONDITIONS ASSESMENT
Santa Clara County, California

LOG OF TEST PIT
TP-1

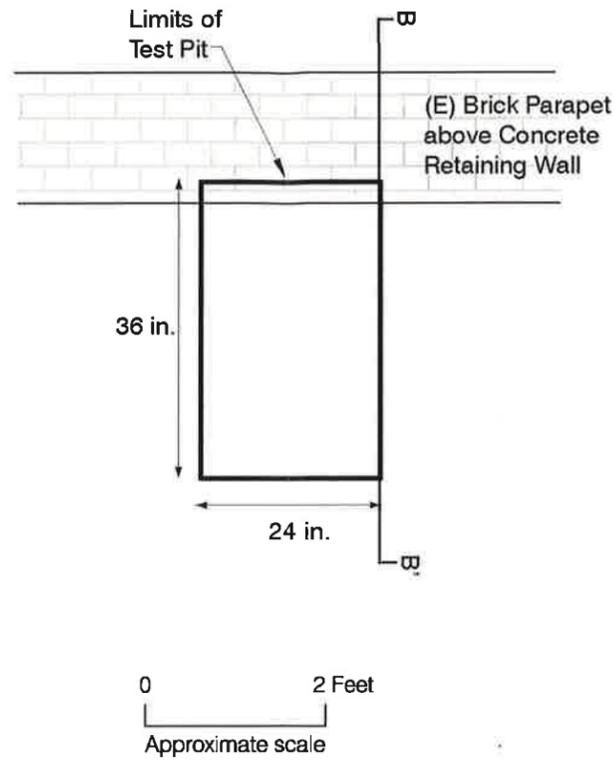
Date 08/19/09 | Project No. 4986.01 | Figure 3

Treadwell&Rollo

SECTION B-B'



PLAN VIEW



PHOTOS



- ① SANDY CLAY (CL)
brown (10YR 4/3) to dark brown (10YR 3/3), stiff, slightly moist, low to moderately plastic, heterogeneous with brick, concrete, and glass fragments scattered throughout, 10-20% fine- to medium-grained sand and 5-10% gravel [RETAINING WALL BACKFILL]
- ② SANDSTONE
yellowish brown (10YR 5/6) and grayish brown (10YR 5/2), homogeneous, dense, friable, well-sorted, fine- to very fine-grained, subrounded, slightly moist [BEDROCK]

DRAFT

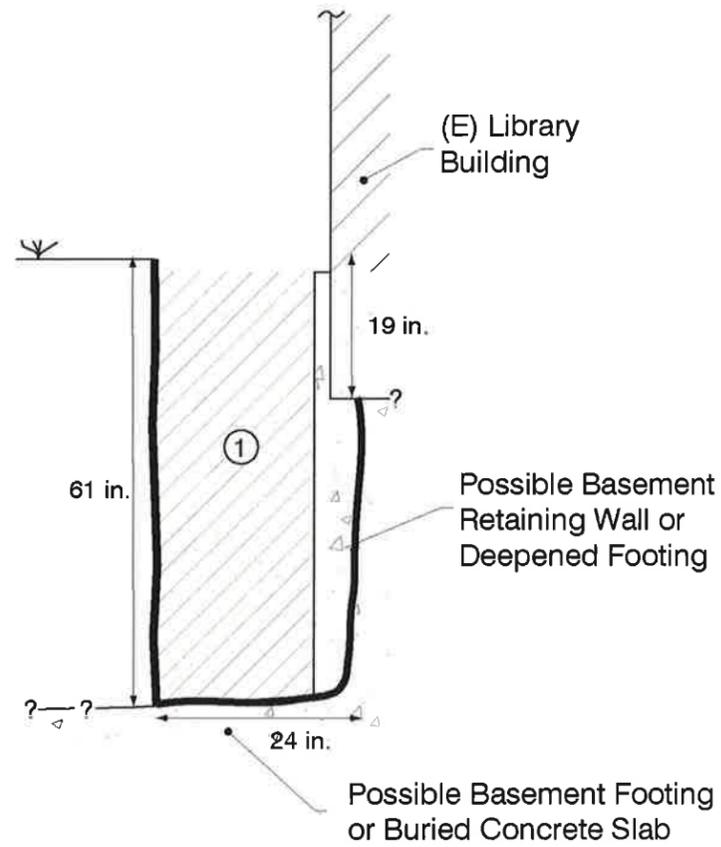
ALMA COLLEGE CONDITIONS ASSESMENT
Santa Clara County, California

LOG OF TEST PIT
TP-2

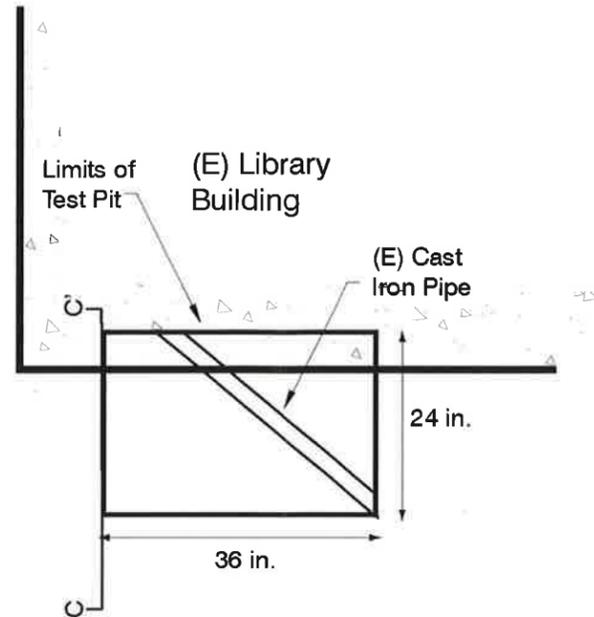
Date 08/19/09 | Project No. 4986.01 | Figure 4

Treadwell & Rollo

SECTION C-C'



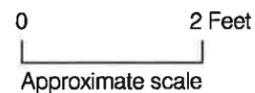
PLAN VIEW



PHOTOS



- ① SILTY SAND (SM) to CLAYEY SAND (SC) very dark grayish brown (10YR 3/2) with variegated colored sand and rock fragments, medium dense, poorly sorted, very fine- to coarse-grained, scattered brick and concrete fragments, moist, low plasticity, abundant roots and rootlets
[FILL]



DRAFT

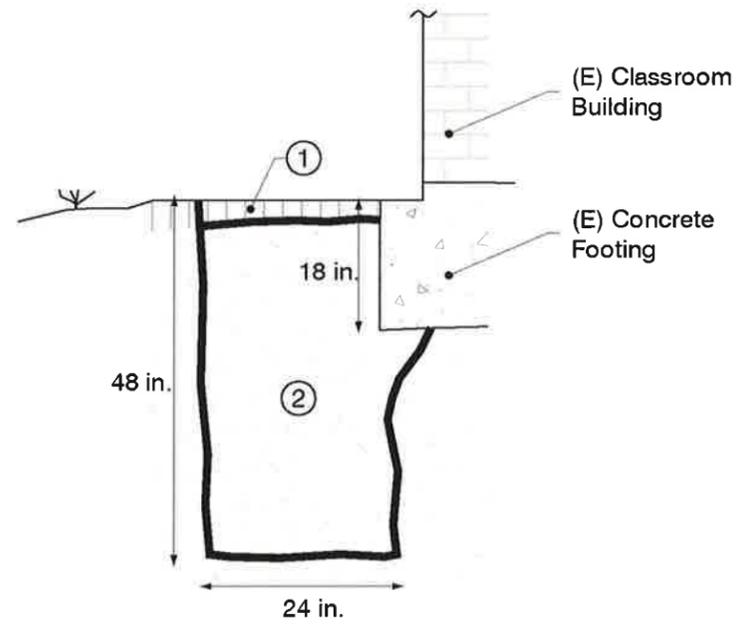
ALMA COLLEGE CONDITIONS ASSESMENT
Santa Clara County, California

LOG OF TEST PIT
TP-3

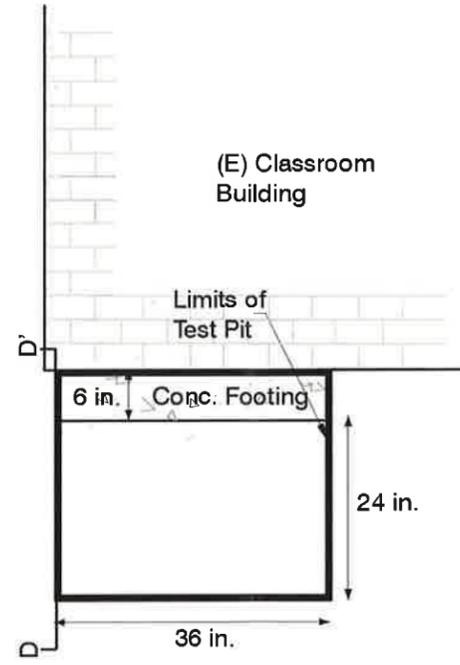
Date 08/19/09 Project No. 4986.01 Figure 5

Treadwell&Rollo

SECTION D-D'



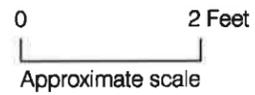
PLAN VIEW



PHOTO



- ① SANDY SILT (ML)
dark grayish brown (10YR 4/2),
stiff, homogeneous, dry, poorly
sorted, fine- to coarse grained,
dry, abundant roots and organics
[TOPSOIL]
- ② SANDSTONE
yellowish brown (10YR 5/6) to
grayish brown (10YR 5/2),
very dense, homogeneous, well-
sorted, very fine- to fine-grained,
subrounded to subangular,
slightly moist
[BEDROCK]



DRAFT

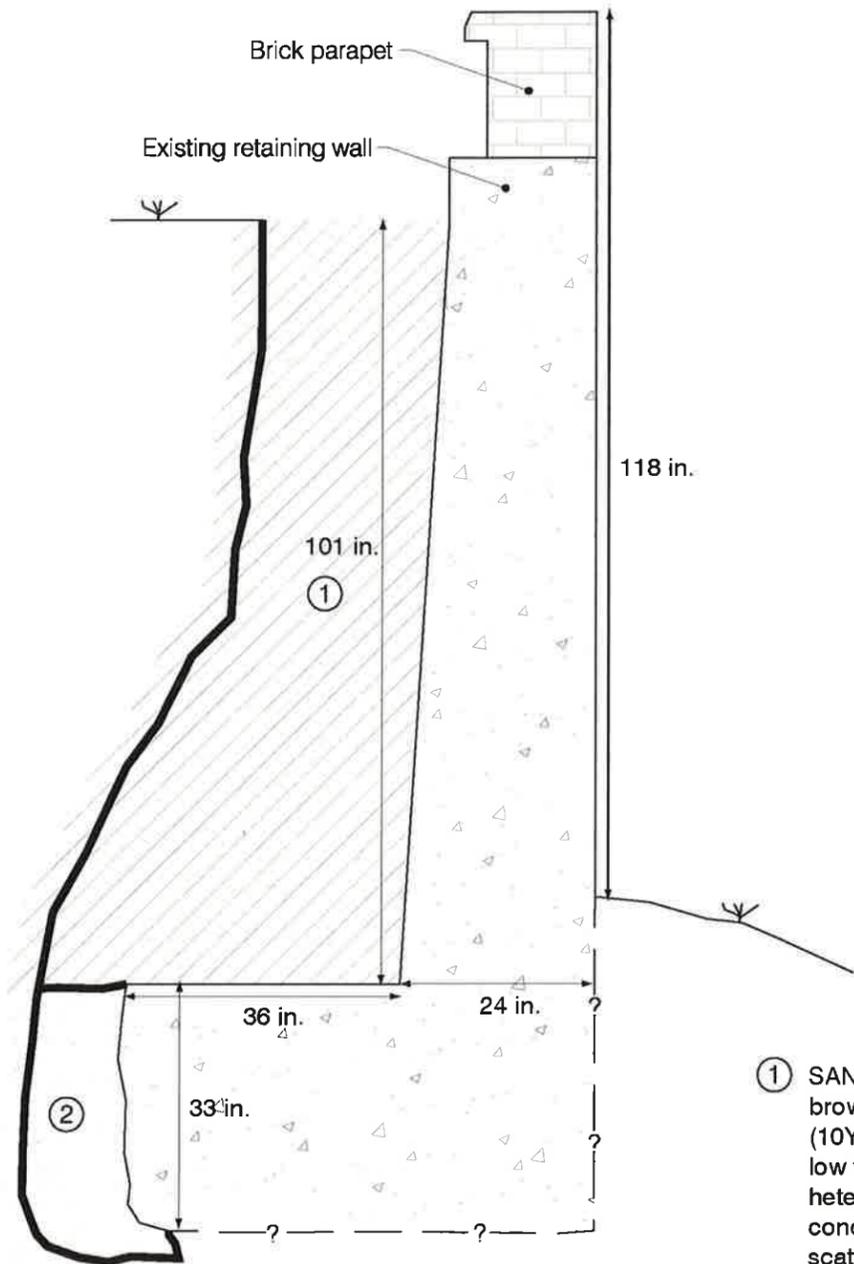
ALMA COLLEGE CONDITIONS ASSESMENT
Santa Clara County, California

LOG OF TEST PIT
TP-4

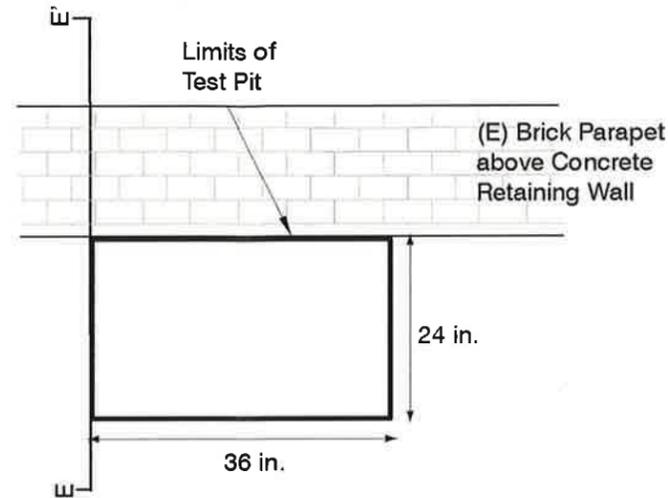
Date 08/19/09 | Project No. 4986.01 | Figure 6

Treadwell&Rollo

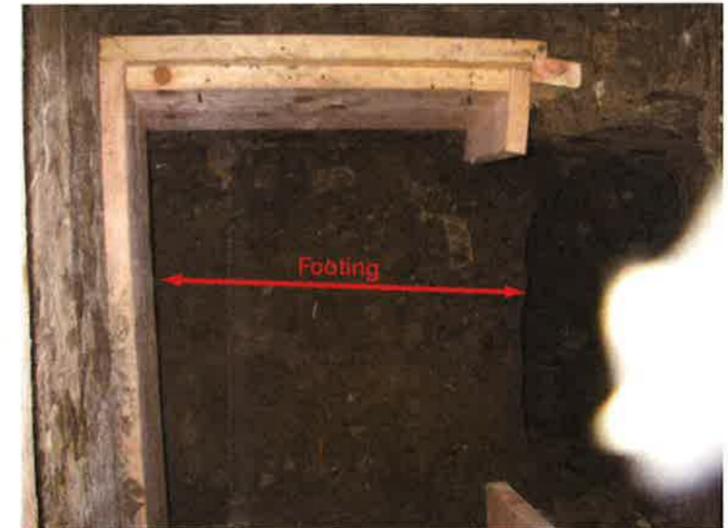
SECTION E-E'



PLAN VIEW



PHOTOS



- ① SANDY CLAY (CL)
brown (10YR 4/3) to dark brown (10YR 3/3), stiff, slightly moist, low to moderately plastic, heterogeneous with brick, concrete, and glass fragments scattered throughout, 10-20% fine- to medium-grained sand and 5-10% gravel [RETAINING WALL BACKFILL]
- ② SANDSTONE
yellowish brown (10YR 5/6) and grayish brown (10YR 5/2), homogeneous, dense, friable, well-sorted, fine- to very fine-grained, subrounded, slightly moist [BEDROCK]

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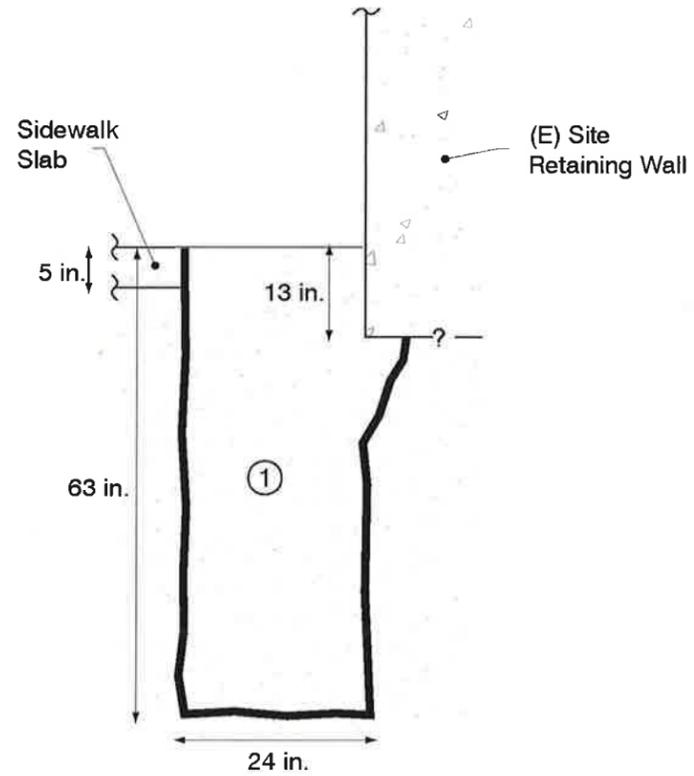
ALMA COLLEGE CONDITIONS ASSESSMENT
Santa Clara County, California

LOG OF TEST PIT
TP-5

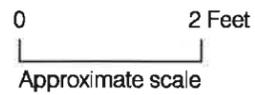
Date 08/19/09 | Project No. 4986.01 | Figure 7

Treadwell&Rollo

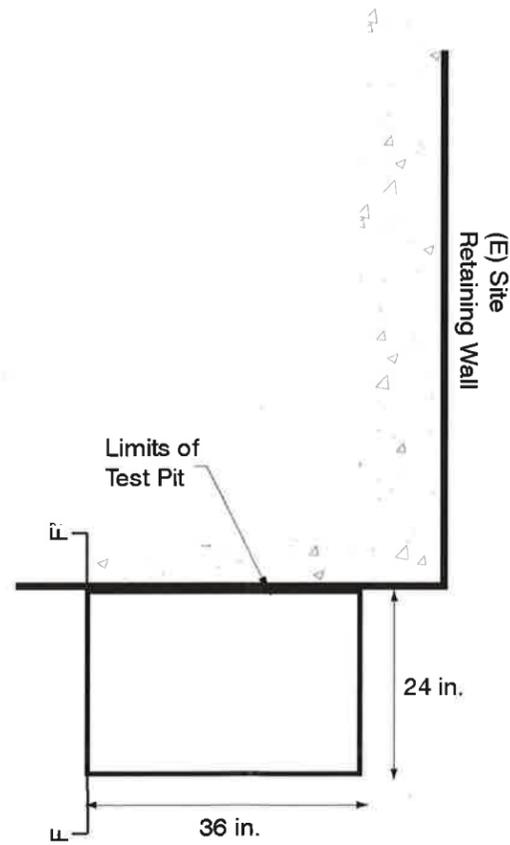
SECTION F-F'



- ① SANDSTONE
yellowish brown (10YR 5/6) and
grayish brown (10YR 5/2),
homogeneous, dense, friable,
well-sorted, fine- to very fine-
grained, subrounded, slightly
moist
[BEDROCK]



PLAN VIEW



PHOTOS



DRAFT

ALMA COLLEGE CONDITIONS ASSESMENT
Santa Clara County, California

LOG OF TEST PIT
TP-6

Date 08/19/09 | Project No. 4986.01 | Figure 8

Treadwell&Rollo

Appendix B: Structural Assessment

B. Structural Assessment

Introduction

In this stage of the Alma College rehabilitation project, the structural assessment updates and elaborates on the structural alterations identified in the *2010 Conditions Assessment* report dated March 2010 by the Knapp Architects team for the following structures:

1. 1909 Chapel
2. 1934 Library

The updates include compliance with the current 2013 California Historic Building Code (2013 CHBC) requirements and the latest geotechnical criteria developed for the site. Based on the latest geotechnical report, the garage, classroom, and wood shed buildings lie directly within the 50-ft fault trace setback and are not permitted by the County Engineer to be habitable due to their location and condition. These structures along with the 1950 Library are proposed for removal by the team and are therefore not included in the structural assessment.

The primary focus of the structural assessment related to the site rehabilitation effort was to assist in the development of cost-effective Options for strengthening the major site retaining walls based on the updated geotechnical information developed and included in this rehabilitation report. The northern and southern site retaining walls delineate the edges of the relatively flat-topped ridgeline that defines the core of the Alma College site. Based on this geotechnical information, the southern retaining wall crisscrosses a known fault trace and is consistently in the 50-ft fault trace setback. There is no feasible way to strengthen this retaining wall against fault rupture. Therefore, this wall will not be addressed in the structural assessment except for relatively minor strengthening at known localized failure locations.

The main structural scope for this project include the following:

1. Rehabilitation of 1909 Chapel for event use or as a visitor center.
2. Conversion of the 1934 Library to an open-air pavilion for use as an interpretive center.
3. Removal of the 1950 Library.
4. Strengthening of the northern retaining wall from the 1950 Library to the east side of the aqueduct.
5. Strengthening of southern retaining wall at previous failure locations and at the lily pond.

There are two rehabilitation Option developed in this report. The following are brief descriptions of the key structural items as they relate to each phase of each Option.

Base Option

Phase 1:

- 1.1. Strengthen full length of the existing north retaining wall with structural tiebacks.
- 1.2. Repair and strengthen portions of the existing south retaining wall adjacent to previous wall failures.
- 1.3. Stabilize and partially retrofit 1909 Chapel. Retrofit and strengthening to include foundation and basement level to allow for pedestrian access around the north patio of the chapel and provide stabilization at existing north basement wall which incorporates into existing north retaining wall. No access allowed inside of the structure.
- 1.4. Secure and fence 1934 Library. No structural work. No access allowed inside of the structure.
- 1.5. Removal of existing dormitories, garage, classroom and 1950 library structures to interpretative sites. Provide steel kickers/bracing at existing basement walls retaining more than 48 inches of soil in dormitory and garage structures. Infill remaining basement level of garage and classroom with soil per architectural section of this report.

Phase 2.

- 2.1. Stabilize 1934 Library. Minimal structural work as required to support architectural exterior improvements. No access allowed inside of the structure.
- 2.2. Strengthen the length of the existing south retaining wall adjacent to Lily Pond with structural tiebacks (approx. 100LF).

Phase 3.

- 3.1. Rehabilitate 1909 Chapel to allow for full occupancy. Complete structural strengthening of remaining structure not included in Phase 1.
- 3.2. Convert 1934 Library structure into open interpretive pavilion structure. Retain existing roof and some walls of the 1934 library. Provide structure steel framing system to support existing.

- 3.3. If determined it is required, provide slope stability study along existing south retaining wall to potentially allow increased pedestrian access adjacent to existing retaining wall.

Reduced Option

Phase 1:

- 4.1. Strengthen existing north retaining wall adjacent to central access road above aqueduct with structural tiebacks.
- 4.2. Repair and strengthen portions of the existing south retaining wall adjacent to previous wall failures.
- 4.3. Secure and fence 1934 Library and 1909 Chapel. No structural work. No access allowed inside of the structure.
- 4.4. Removal of existing dormitories, garage, classroom and 1950 library structures to interpretative sites. Provide steel kickers/bracing at retaining basement walls retaining soil more than 48 inches of soil in dormitory and garage structures. Infill remaining basement level of garage and classroom with soil per architectural section of this report.

Phase 2.

- 5.1. Strengthen remainder of existing north retaining wall not included in Phase 1 with structural tiebacks.
- 5.2. Stabilize and partially retrofit 1909 Chapel. Retrofit and strengthen to include foundation and basement level to allow for pedestrian access around the north patio of the chapel and provide stabilization at existing north basement wall which incorporates into existing north retaining wall. No access allowed inside of the structure.
- 5.3. Stabilize the 1934 Library. Minimal structural work as required to support architectural exterior improvements. No access allowed inside of the structure.
- 5.4. Strengthen the length of the existing south retaining wall adjacent to Lily Pond with structural tiebacks.

Phase 3.

- 6.1. Rehabilitate 1909 Chapel to allow for full occupancy. Complete structural strengthening of remaining structure not included in Phase 2.
- 6.2. Convert 1934 Library structure into open interpretive pavilion structure. Retain existing roof and some walls of the 1934

library. Provide structure steel framing system to support existing.

- 6.3. If determined it is required, provide slope stability study along existing south retaining wall to potentially allow increased pedestrian access adjacent to existing retaining wall.

Overall Rehabilitation Option (Figure C.1) PLEASE USE THE CURRENT ALMA COLLEGE SITE REHABILITATION PLAN DRAWING



Figure C.1 – Rehabilitation Plan Base Option

1909 Chapel Building Existing Conditions

1. General

The existing Chapel building is a one-story over crawlspace wood frame structure built in 1909. There is also a one-story below-grade wood frame portion (assumed to be added in 1934, when the side chapels were added to the Chapel building), which is below the exterior walkway

to the north of the main structure. This portion was not investigated in detail.

The structural system for the Chapel building consists of the following:

- Two (2) layers of 1 x straight sheathing at the roof and asphalt shingles.
- The roof sheathing is supported by a two-way system of 3x6 exposed roof rafters spaced at 4 feet to 5 feet on center each way.
- The roof rafters are supported by heavy timber, exposed and clad, roof trusses at approximately 10 feet on center spanning approximately 45 feet.
- Exterior stud bearing walls are 2x6 studs at 16 inches on center.
- The ground floor framing system over crawlspace consists of finished wood flooring over 1x diagonal sheathing (where exposed to view). Flooring is supported by 3x12 floor joists at 16 inches on center. Floor joists span between the exterior foundation walls and interior wood girders on support posts.
- The interior girder and post line in the crawlspace is supported on unreinforced brick masonry pier footings. The continuous exterior foundation walls are constructed of unreinforced brick masonry of 8 inches thickness, plus a brick veneer course, for a total thickness of 13 inches.
- Lateral (wind or seismic) loads are resisted primarily by the exterior and interior wood sheathing on the exterior stud walls. The existing 1x roof sheathing and the existing 1x diagonal sheathing and finished flooring at the floor level act as diaphragms to transfer the lateral loads to the exterior walls, which are then transferred to the existing foundations.
- Based on our limited walkthrough observations, the main structure of the Chapel appears to be in fair to good condition and appears to have performed well over its life, including in past earthquake events. Only minor evidence of foundation cracking or settlements or variations in floor levelness was noted during our site visits.
- The exceptions noted were the lack of proper site drainage around the building, the need for additional crawlspace and lower level venting, areas of deterioration and dryrot damage at the roof eaves and at the exterior porch roof framing/trellis, and settling and movement of adjacent site retaining walls and site access structures.

2. Foundations

The existing interior post pier footings and perimeter foundations are of unreinforced brick masonry construction. No independent field testing of the brick shear strength was possible within the scope of this report.

These foundations, including the interior post piers, were observed, appear to have performed adequately over their life. Although unreinforced brick masonry foundations are acceptable under the 2013 California Historic Building Code if evaluated for their existing loading conditions, in our opinion, the existing foundations will likely require strengthening or replacement. This is addressed in more detail under the **Code Considerations** section below.

3. Wall Structure

The existing interior and exterior wood stud walls appear to be in good condition, including the interior wood panel finishes. The north and south exterior walls were noted to be deflected outward at the top likely due to the outward thrust of the roof trusses. Seismic deficiencies noted in the existing walls and their connections to the floor and roof diaphragms are addressed under the **Code Considerations** section below.

4. Roof Structure

The existing roof framing, except at the exterior, exposed rafter ends and at roof diaphragm edges exposed to weather, appeared to be in good condition, with little evidence of interior moisture/leaks or dryrot damage. A more detailed survey would be required to confirm this. Based on our preliminary analysis to date, the roof structure appears to be adequate to support the tributary dead and code live loads, with the exception being the existing joint connections of the heavy timber roof truss members, which would likely require strengthening. A more detailed analysis would be required to confirm this. Any seismic deficiencies noted in the existing roof diaphragm and its connections are addressed under the **Code Considerations** section below.

5. Floor Structure

Only limited access to observe the crawlspace framing was possible during our site visits. Review of additional photographs provided to us indicated that the crawlspace framing, in the areas photographed, is in fair to good condition. A more detailed survey would be required to confirm this.

6. Code Considerations

A preliminary seismic analysis of the Chapel building, not including the portion under the north exterior walkway, was completed based on known structural information. This analysis was based on the lateral load regulations of Section 8-706 of the 2013 California Historic Building

Code, including Tables 8-8-A and 8-8-B, allowable capacities for existing materials. The seismic lateral force level for evaluation of historic buildings required by this code section is equivalent to approximately 75% of the 2013 California Building Code (2013 CBC) seismic force level for new buildings.

As we understand it, seismic strengthening of the Chapel building would be triggered or required primarily by a proposed change of use in the rehabilitation Option. Our preliminary analysis indicated that there are several structural deficiencies that must be addressed per the 2013 CHBC requirements.

The structural deficiencies noted are summarized below. The proposed strengthening to address these deficiencies is covered in the **TREATMENT RECOMMENDATIONS** section of this report.

Roof Diaphragm Capacity:

The existing 1x skip sheathing does not have adequate capacity to transfer the code-required wind or seismic forces to the interior and exterior shearwalls or to brace the walls out-of-plane. In addition, the connections of the roof diaphragm to the interior and exterior shearwalls are likely deficient.

Floor Diaphragm Capacity:

The existing 1x diagonal sheathing and finish wood flooring has adequate capacity to transfer the code-required wind or seismic forces to the existing interior and exterior shearwalls. However, the connections of the floor diaphragm to these walls are likely deficient.

Existing Shearwall Capacities:

A detailed survey of the existing exterior wall sheathing was not possible during this phase. However, in general, the existing exterior wood sheathing and interior wood paneling do not have adequate capacity to resist the code-required wind or seismic forces. In addition, the exterior walls are not connected (bolted) to the existing foundations to transfer the code required wind or seismic forces.

Existing Foundations:

A detailed analysis was not possible without some additional brick shear strength testing. However, based on our experience and engineering judgment, the existing unreinforced brick masonry foundations do not likely have adequate capacity to resist their tributary code required

dead, live and wind or seismic forces without additional strengthening or replacement.

Additional Noted Deficiencies:

In addition to the deficiencies noted above, the following deficiencies/maintenance issues were noted, but not reviewed in detail:

- More crawlspace vents will likely be required.
- Portions, if not all, of the existing exterior porch roof framing/trellis will need to be stabilized/strengthened or replaced.
- The existing one-story below-grade portion of the Chapel building north of the main building was not reviewed in detail. It is possible that this portion could be demolished and backfilled depending on its historic significance and the proposed future use of the site. As a minimum, if this portion is to be retained, the existing deck finish would likely need to be removed and replaced in order to repair any water damage/dryrot in this area and in order to properly waterproof the structure below the porch deck.
- The existing brick and concrete site retaining wall north of the Chapel building, which the Chapel building relies on to retain the soil under its north foundations, has settled, rotated and deflected significantly. This is addressed in more detail under Site Retaining Walls later in this section.
- The existing exterior brick and concrete stairs which provide access to the lower level of the building under the north porch deck, have settled and failed and will need to be removed (and replaced) if the lower level is to be retained.

1909 Chapel Building
Structural Treatment Recommendations

1. General

Protect Foundations and Crawlspace Framing:

- Provide proper grading to direct site water, including roof runoff, away from existing or new foundations.
- Provide overall site and foundation drainage to keep site water away from the existing foundations and to prevent the infiltration and accumulation of site water into the crawlspaces.
- Provide proper, code required, wood-earth separation between the existing or new exterior wall sill plates and crawlspace framing and adjacent soil grades.
- Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 2

2. Chapel Structure

Roof Diaphragm Strengthening:

- Improve roof diaphragm capacity by the addition of new 5/8" plywood sheathing throughout over the existing 1x skip sheathing. Improve roof diaphragm connections to the existing exterior walls, including new, proposed shearwalls noted below, by the addition of new plywood edge nailing to existing blocking over walls and new Simpson framing clips to attach the blocking to the existing exterior wall top plates.
- Implementation:
 - Base Option: Phase 3
 - Reduced Option: Phase 3

Improve Floor Diaphragm to Foundation Connections:

- Provide additional Simpson framing clips and anchor plates (or bolts) to improve the connection of the existing floor diaphragms to existing or new blocking and the connection of the foundation sill plates to the existing (or new) foundations.
- Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 2

Improve Existing Shearwall Strength:

- Provide new plywood sheathing on the exterior face of selected exterior walls (see Figure C.2 in Appendix) and new foundation bolting, including new Simpson holdowns, to existing (or new) foundations to improve overall building seismic resistance.
- Implementation on walls below main level:
 - Base Option: Phase 1
 - Reduced Option: Phase 2
- Implementation on walls above main level:
 - Base Option: Phase 3
 - Reduced Option: Phase 3

Improve Roof Truss Connections:

- Investigate and strengthen existing truss member joint connections by the addition of new bolts and gusset plates at the truss member intersections.
- Implementation:

The existing Library building consists of the original one-story Library structure, assumed to be constructed in 1934, and the two-story Library structure addition, constructed in 1950. The original drawings for the 1950 Library addition which combined both architectural and structural information (12 sheets total) were provided for our use for this assessment. The rehabilitation Option specifies the removal of the 1950 Library, therefore that structure is not addressed.

A. 1934 Library Structure

1. General

The structural system for the 1934 Library structure consists of the following:

- 1x straight sheathing (assumed) at the roof with asphalt shingles.
- The roof sheathing is supported by wood roof rafters at approximately 24 inches on center (assumed; the roof framing, except for rafter tails, was not exposed at the time of our site visits).
- The wood roof rafters appear to be supported by interior concrete beams (extent of reinforcing unknown).
- The ground floor is a concrete slab-on-grade.
- The exterior walls consist of approximate 5-inch thick concrete walls (extent of reinforcing unknown) with exterior 8-inch thick brick veneer at the lower level and a wood shingle exterior wall finish at the upper level.
- The exterior wall foundations appear to be of concrete construction with an exterior brick veneer course (the extent of reinforcing and thickness of the foundation walls are unknown).
- Lateral (wind or seismic) loads are resisted primarily by the exterior concrete walls. The existing 1x roof sheathing acts as a diaphragm to transfer the lateral loads to the exterior walls and their foundations.
- The 1934 Library building appears to be in fair to good condition and appears to have performed well over its life, including in past earthquake events. Only minor evidence of foundation cracking or settlements or variations in floor levelness was noted during our site visits.
- The exceptions noted were the lack of proper site drainage around the building, areas of deterioration and dryrot damage at the roof eaves and at the exterior porch roof framing/trellis, and settling and movement of adjacent site retaining walls.

2. Foundations

The existing exterior perimeter foundations are of concrete construction. No independent field testing or investigation of the concrete strength or the extent, if any, of existing reinforcing steel in the concrete was possible

within the scope of this report. These foundations, where observed, appear to have performed adequately over their life. This is addressed in more detail under the **Code Considerations** section below.

3. Wall Structure

The existing exterior concrete walls appear to be in good condition. Seismic deficiencies noted in the existing walls and their connections to the roof diaphragm are addressed under the **Code Considerations** section below.

4. Roof Structure

The existing roof framing, except at the exterior, exposed rafter ends and at roof diaphragm edges exposed to weather, is assumed to be in fair to good condition, with little evidence of interior moisture/leaks or dryrot damage. A more detailed survey would be required to confirm this. It was not possible within the scope of this phase of the project to provide a preliminary analysis to verify if the roof structure is adequate to support the tributary dead and code live loads, or if it would require strengthening. A more detailed analysis, including exposing a portion of the existing roof framing, would be required to confirm this. Any seismic deficiencies noted in the existing roof diaphragm and its connections are addressed under the **Code Considerations** section below.

5. Code Considerations

The rehabilitation Option specifies an open steel frame structure to support and maintain the existing wood roof framing of the 1934 Library Structure. Due to this significant structural change, the 2013 CHBC will not apply to this structure. Therefore, the structural deficiencies summarized in the *2010 Conditions Assessment* report along with the **TREATMENT RECOMMENDATIONS** no longer apply, since this will be considered a new structure as defined by the current CBC.

Library Building *Conceptual Design Description*

1. General

The open structure supporting the existing wood roof framing will be designed per the latest version of the California Building Code. The open structure will most likely consist of cantilevered steel columns, supporting steel beams that would be located along all of the existing roof framing bearing locations. Wood sheathing would be applied to the existing wood roof framing to the extent necessary to maintain the roof shape during a

seismic event. Attachments would be added from the existing roof framing to connect the existing wood elements to the new steel structure below to resist the latest CBC wind and seismic lateral loads.

This scope of work is proposed to take place in Phase 3 of either the base or reduced rehabilitation options.

Concrete Retaining Walls

Existing Conditions

1. General

The existing site retaining walls delineate the edges of the relatively flat-topped ridgeline that defines the core of the Alma College site. The walls are concrete with non-structural red brick veneer on the exposed faces. No independent field testing of the concrete was possible within the scope of this report. Therefore, thicknesses and strength of the concrete as well as the extent of existing reinforcing steel in the retaining walls could not be determined. No existing building documents for the site retaining walls were available for review.

At various locations, sections of the existing wall have failed. These failure types vary from minor to complete. Minor failures have been defined as walls leaning towards the downhill side and separating from perpendicular retaining walls creating wide cracks through the thickness of concrete wall. Complete failures have been defined as sections of the wall collapsing down the hillside.

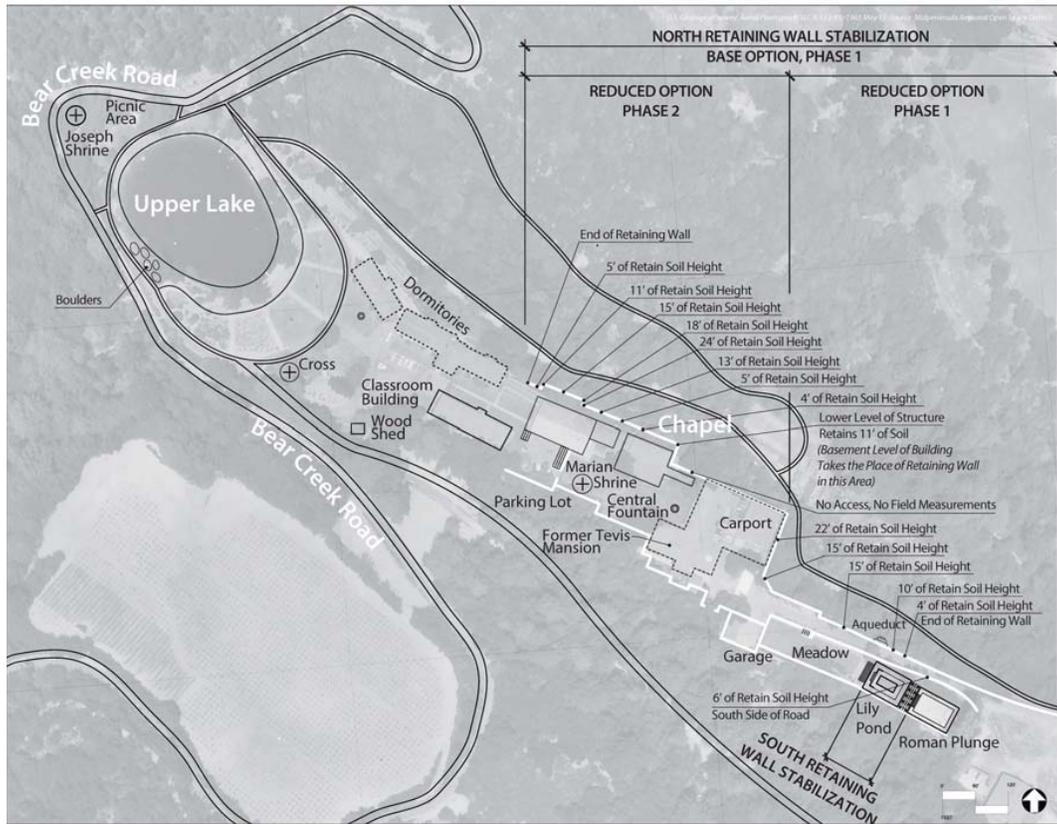


Figure C.3 – Retaining Wall Information

2. Foundations

The existing foundations under the retaining walls could not be observed, except for partial observation at one or two relatively small locations. At the partial observation locations, only the toe of the existing footing could be observed, while the heel was completely covered by the hillside and the retaining wall. The toe of the footing was visible due to the soil erosion causing the toe to daylight. In one location on the southern wall, the toe was suspended above the ground and soil did not contact the footing until an undetermined distance under the wall footing. The observable foundation consisted of concrete. The overall size could not be determined, and the exposed toe of the foundation was minimal (undersized) in size in comparison to the retaining wall above.

Although the 2013 California Historic Building Code allows for gravity structures and related foundations to be determined acceptable if in good condition and with no change in load or occupancy, in our opinion, the existing foundations will likely require strengthening. This is addressed in detail under the **Code Considerations** section below.

3. Wall Structure

The existing retaining walls are concrete with non-structural red brick veneer. The retained soil height varies from a few feet of retaining to approximately 25 feet. In most situations the wall extends approximately 36 inches above the retained soil to create a seating/boundary wall. At wall failure locations, the thickness of the concrete wall varied from 8 to 12 inches. At these same failure locations no steel reinforcement was consistently observed in the horizontal or vertical direction. Therefore, the walls are assumed to be unreinforced concrete. No proper drainage was observed adjacent to the retaining walls.

Unreinforced concrete, lack of drainage, and seismic deficiencies in the existing walls are addressed under the **Code Considerations** section below.

4. Code Considerations

A preliminary structural analysis of the retaining walls confirmed the walls to be inadequate for all loading conditions outlined in the latest geotechnical report. Those loading conditions include drained, undrained, seismic, and vehicle traffic. Multiple structural failures along the existing retaining wall validate the analysis.

Unreinforced concrete elements are proven to perform poorly in seismic events. Failures in unreinforced concrete tend to be sudden and complete failures, which is evident at multiple locations along the existing walls where sections of wall were noted to have collapsed down the hillside. The remaining retaining sections adjacent to the failure zones were noted to have clear shear failures with no structural reinforcement visible tying portions of the remaining walls to the failed sections. No evidence of slower more ductile failures was observed. Ductile failures allow more time for evacuation from the area when a failure is in progress.

No drainage system was observed adjacent to the site retaining walls. Without proper drainage, water builds up on the uphill side of retaining walls creating increased loading. This lack of drainage likely also contributed to the past failures of the existing walls noted at the site.

As we understand it, seismic strengthening of the retaining walls is optional. The 2013 CHBC does not explicitly cover existing site structures similar to retaining walls. Our preliminary analysis indicated that there are several structural deficiencies that would be prudent to address on a voluntary basis if pedestrian or vehicle traffic is anticipated adjacent to the existing walls. Based on the latest geotechnical information, which is part of this report, the major southern retaining wall crisscrosses a known fault trace and is consistently in the 50-ft fault trace setback. There is no feasible way to strengthen the southern retaining wall against fault rupture. Where retaining walls are not proposed to be strengthened, maintaining a safe clear distance by restricting pedestrian and vehicle traffic from the area immediately adjacent to the retaining wall is recommended. The proposed strengthening to address these deficiencies is covered in the **TREATMENT RECOMMENDATIONS** section of this report.

Concrete Retaining Walls

Structural Treatment Recommendations

1. General

Protect Foundations

- Provide proper grading and site drainage to direct site water, including roof runoff, away from the existing foundations to mitigate erosion at the retaining wall footings.
- Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 1

Tiebacks

- Provide pressure grouted tiebacks to anchor the walls into the hillside throughout the existing north site retaining walls and at the existing south retaining wall immediately adjacent to the Lily Pond. Grouted tiebacks can be constructed as steel rods drilled through the existing concrete wall out into the soil or bedrock behind the walls. Grout is then pumped under pressure into the tieback anchor holes so that the rods can utilize soil resistance to prevent tieback pullout and wall destabilization. Tiebacks are recommended for two reasons:
 1. Tight on center tieback spacing restrains the unreinforced concrete wall, which significantly reduces the flexural

demands on the wall and decreases the probability of brittle shear failures.

2. The tiebacks anchor the wall into the adjacent hillside to better resist sliding and rotation caused by any movement/creep of the hillside.
 - Based on our preliminary analysis, using the lateral loads defined in the latest geotechnical report, and assuming 8-inch diameter tieback rods which achieve 1,000psf soil skin friction, the following tieback designs have been provided to assist with preliminary cost estimates. See rehabilitation option (See Figure C.3) for location and length of existing wall to be strengthened.

Retained Soil Height in Feet From Top of Wall	Tieback Elevation in Feet From Top of Wall	Tieback Horizontal O.C. Spacing (ft)	Tieback Length (ft)	
			Drained Condition (Total w/ Seismic)	Undrained Condition (Total w/ Seismic)
0 to 8	6 ³	4	14	16
8 to 12	10	4	14	16
12 to 16	14	4	14	16
16 to 20	18	4	14	18
20 to 24	22	4	14	18

Notes:

1. Drained condition with traffic loading equals drained condition with seismic loading.
2. Undrained condition with traffic loading equals undrained condition with seismic loading.
3. Provide tiebacks at a downward angle at locations adjacent to the Lily Pond which are between 5 to 8 feet high. Please the tieback at mid wall height.

- Implementation:
 - Base Option:
 - Phase 1 (Full Length of North Retaining Wall)
 - Phase 2 (Lily Pond Wall)
 - Reduced Option:
 - Phase 1 (Approx. 1/3 of North Retaining Wall near Aqueduct)
 - Phase 2 (Remaining North Retaining and Lily Pond Walls)

Repair and Strengthen Areas Adjacent to Failure Locations

- At locations where the existing wall has failed, on either the major northern or southern walls, additional tiebacks should be added over the full height of the wall to stabilize the remaining free wall edge. Additional analysis will need to be provided to determine specific tieback criteria for these areas.
- Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 1

Restrict Access

- At locations where the existing wall is not strengthened, access to those areas should be restricted. This specifically applies to the existing retaining wall along the southern edge of the main campus. This southern wall cannot be adequately strengthened to resist seismic loading due to the known presence of the fault trace noted in the latest geotechnical report. Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 1

- Provide slope stability study along existing south retaining wall to potentially allow increased pedestrian access adjacent to existing retaining wall. Implementation:
 - Base Option: Phase 3
 - Reduced Option: Phase 3

Drainage

- In addition to the recommendations noted above, proper drainage should be considered to reduce loading from water accumulation behind the retaining wall caused by landscaping or rain. Providing proper drainage without providing strengthening will not alleviate sufficient loading to existing walls to remove the need for strengthening.

- Implementation:
 - Base Option: Phase 3
 - Reduced Option: Phase 3

Interim Drainage Plan

- For the initial phases of the rehabilitation project, an interim drainage plan should be developed to assist with mitigating the potential for water accumulation behind the retaining walls. This interim plan should be considered a temporary measure which will have limited effect on the overall stability of the walls. This plan does not strengthen the existing walls.

- The interim plan should include:
 1. The installation of a continuous 6" diameter perforated drainage pipe at 5'-0" minimum depth below the existing grade behind the existing retaining walls. The pipe should be surrounded by gravel and filter fabric to aid with

preventing the pipe from being clogged and allow water to access the pipe. The pipe should be sloped to drain to daylight.

2. Below the drain pipe, 1 1/2" diameter weep holes should be installed at 8'-0" on center in both the vertical and horizontal directions for the remainder of the wall height.

- o Implementation:
 - Base Option: Phase 1
 - Reduced Option: Phase 2

Appendix C: Cultural Landscape Analysis

The cultural landscape analysis is addressed through two elements. The first is below; the conditions assessment completed in 2010 as part of the 2010 Conditions Report was updated in 2015. Comments made in 2015 are added in red to the 2010 matrix. Please refer to the 2010 Conditions Report for the full spectrum of the landscape analysis including mapping, photos and sketches. The second is the discussion of landscape features and characteristics in Sections 5 Cultural landscape Overview, 10 Preferred Treatment Alternative - Alma College Site Rehabilitation Plan contained in this report.

Midpeninsula Regional Open Space District
Alma College Site Cultural Landscape Rehabilitation Plan

LANDSCAPE FEATURES: Survey of Conditions			
	Feature	Condition	Character Defining
1)	Cross with semi-circular hedge of Buxus japonica: 60' wide, cross +/-12-ft high. Log cross set in 30" high square concrete base. The semi-circle has a backdrop of blue weeping conifers fronted by the Buxus hedge. The semi-circle faces NW towards the former walk now drive.	+/- 85% of hedge is present. Colonization within semi-circle of Lonicera, Blackberry, Baccharis, C5 Cherry, Oak. See sketch plan, Item L1.	Yes
		Cross is broken - top piece missing, middle is sagging towards the ground on right side.	
2)	Wood Post: Shaped top. Set in ground 8x8, 33" height. Posts appear as path and drive markers in photographs of the Jesuit period.	Fair. Few markers remain. Top was originally painted white.	Yes
		Same	
3)	Flaggpole: Wood with sphere at top. Curb at base. 4-sided raised area, not rectangular.	Fair. Originally white-painted, condition of paint is deteriorated and flaking. Asphalt paving surrounds curbed base. Curb is beginning to crumble.	Yes
		Paint has failed. Curb is beginning to crumble on all sides.	
4)	Marian Shrine: Square 8' x 8' structure. Wood posts are 8x8 located at the corners, and have brick bases. Brick pedestal centered under the roof is 20" x 20", approx. 36" high. The floor is pink concrete. Rear posts are supported on part of a more extensive brick retaining wall, rather than on brick bases as at the front two posts. The shed roof is wood shingled. The structure is heavily covered with Lonicera and Poison Oak. The shrine is flanked by a pair of pencil conifers.	Fair to good. Some broken brickwork. Wood posts, roof structure and roofing weathered but intact. Concrete floor = good condition. See sketch plan, Item L4.	Yes
		Same, except structure is covered in Ficus pumila.	
5)	Fountain Basin: +/- 8' diameter circular made of concrete, with +/- 12" concrete base beyond. The sides and rim of the basin are ornamented by 22" high at rim. Prior to the extant concrete base and flush with grade, there was a brick header course that sat one brick higher than adjacent lawn level.	Poor. +/- 20% of rim is broken also at the fill/drain line. A further 30% is damaged but not missing.	Yes
		Same	
6)	St. Joseph's Shrine: Bilaterally symmetrical walled shrine with integral plinth set in front central wall, flanked by two side walls, with a level cleared area in front. The rear center wall is +/- 11-ft in height, of roughly coursed stone with a brick centerpiece panel, medallion and 30" high brick plinth; the top of center wall is curved. It is flanked on each side by a curved stone wall set 3-ft in front of center wall. The floor is concrete. The flanking stone walls are 6'-6" high at their tallest and step down on each side as they become more distant from the center. The approach to the shrine is terraced with the lower and upper terraces separated by a set of brick steps and a roughly semi-circular graded bank; the terraces are generally level. Along the nearby drive are trees of Liquidambar styraciflua (Liquidambar). Many young saplings have invaded the lower, formerly clear, terrace. Originally sited to be visually connected to Upper Lake. In front of the flanking walls and near the plinth are the remnants of a pair of Taxus sp. (Yews) 4-5 ft in height, now dead.	Brick and Stonework are in good condition. 1 corner cap brick missing from 1 side wall. 2 cracks in concrete floor. Flanking Conifers dead, missing, or failing. Graded slope and brick stairs are in good condition. View to lake almost obscured by Liquidambar styraciflua saplings. Path to and from stair absent. See sketch plan, Item L6.	Yes
		Same, more overgrown. Shrubs in poor condition.	
7)	Drive around Lake: Originally asphalt. Much now duff covered. No curbs. East side several layers of asphalt. Broken and colonized by plants in places. Southeast section near Cross is gravel +/- 12' wide.	Varies. Mostly stable. On west side, the condition is good. On east side, several layers of asphalt are built up with significant surface failure and the condition is Poor to Fair. The gravel section is in good condition.	Yes
		Same	
8)	Upper Lake: Water spout in middle sits +/- 2' or more above the observed waterline (suggesting the lake was observed with a low water level). Reeds and cattails have naturalized around 100% of the lake's shore. On the Northeast side of the lake is an raised cylindrical concrete utility vault approx. 3' diameter, 6' high possibly serving as a pump vault for the spray jet. On the West side is a square concrete pad/lid 2' by 2' that may house the valve from the water supply from a higher elevation.	Fair. Lake appears to be relatively similar in size to its size during the Jesuit period, though some siltation may have occurred. It is unknown if the jet is functional. The shore line has been heavily invaded by cattails and reeds.	Yes
		Spring-fed, was pumped to cistern across road to uphill cistern, planned to be abandoned.	

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LANDSCAPE FEATURES: Survey of Conditions		
Feature	Condition	Character Defining
9) Bedrock Mortar Grouping consisting of 7 boulders in the central arc, and 4 in an outer arc. The arcs are facing the lake. A wood bench with back to the lake and a Buxus hedge faces the central arc of boulders. There is a grassy clearing between mortars and the bench. A conspicuously eclectic group of tree species are located in this area including Sequoia giganteum (Gigantic Sequoia), a Juniper, Phoenix canariensis (Canary Island Palm). The source of these bedrock mortars remains a question.	Good = Mortars. Ground now rough, presume the area was more extended at one time. Bench wood = Poor condition. Hedge = Poor. See sketch plan, Item L9.	Not known
	Same	
10) Asphalt Paved Area with white-painted striping for ball courts, with concrete curbs at edges.	Good to Fair. Minor amount of cracks in asphalt with grasses in cracks. This area previously served as the central entry to the Jesuit campus.	No
	Similar with pot hole at entrance.	
11) Drive along the South side of the campus buildings. Surface material is asphalt in places and gravel in places. Date of installation not known.	Fair to Poor.	No
	Same	
12) Brick retaining wall on South side of drive (#11), below grade on the high side it is concrete, above grade on the high side it is brick. Above grade on the high side it is 30" high by 16" wide with a soldier brick cap. The cap is stepped at its ends. On the down slope side there is a steep slope towards Bear Creek. Where the terrain on the South side is steeper the wall steps, in plan view, towards the North. The wall is terminated at its South end with a large brick plinth. Overall length of this wall is approx. 150 feet.	Good. Occasional missing bricks, especially at corners. Visual observation only. Defer to structural-geotech for further commentary on condition. A test pit was excavated at this wall on uphill side.	Yes
	Same	
13) Concrete retaining wall connecting at end of the brick wall described above in #12. Like the brick wall adjacent to it, this wall sits approx. 30"-48" above grade on the high side. It is heavily covered in creeping fig and is exposed on its South end where it is broken with tangled rebar exposed. The broken end suggests a section of wall has been removed, possibly to permit the gravel drive through in this location. It is possible there was not through circulation in this location originally. Overall length of this wall is approx. 30-ft.	Fair but much of the wall is not visible due to vegetation coverage. Poor condition where cut down to ground for drive.	Yes
	Mansion foundation same.	
14) Brick Stair leading from fountain level at Library to drive level approaching mansion motor court level.	Fair, though 1 side wall is missing at the stair. The other side wall is brick and in good condition except a couple missing cap bricks at center of coping.	Yes
	Same	
15) Brick retaining wall at the edge of the stair described in #14; it turns the corner and after +/- 10' becomes a concrete retaining wall. Overall length is +/- 60-ft. The concrete retaining wall turns to form edge of the mansion motor court and is +/- 14-ft tall in this location. A test pit was excavated on southwest corner of this wall. Downhill side length facing mansion +/- 100-ft long.	One large displacement at the concrete wall at its corner. Defer to structural review otherwise. Vertical cracks with displacement at the concrete wall facing the mansion.	Yes
	Mansion foundation same.	
16) Boulder at mansion ruin, backed by brick wall.	Good.	Yes
	Same	
17) Asphalt paving at the South side of the mansion	Poor. 75% - 90% covered in vegetation colonizing cracks.	No
	Further deteriorated.	

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LANDSCAPE FEATURES: Survey of Conditions		
Feature	Condition	Character Defining
18) Brick retaining wall over concrete retaining wall base with brick stair located across the drive, opposite the parking court of mansion. The brick walls above grade on the high side of the retaining wall has a pile of concrete rubble within it. The Eastern area defined by the brick retaining wall is 20' x 12'; the Western area defined by the brick wall is 12' x 12', between the two is a stair that measures 10' x 5'. On the slope below, there are multiple brick walls that step down the slope. Brick coping to retaining wall is +/- 60' long and leads from the Eastern brick enclosed area towards the East.	The retaining wall is in Fair to Poor condition; see structural assessment. The stair is badly heaved and is in Poor condition. Its side wall is missing bricks from the coping; some treads and risers are not visible, possibly buried. Large pieces of brickwork are broken and lie down slope from the wall and stair.	Yes
	The retaining wall is in Fair condition; see structural assessment. The stair is badly heaved and is in Poor condition. Its side wall is missing bricks from the coping; most treads and risers are not visible, possibly buried. Large pieces of brickwork are broken and lie down slope from the wall above. The brick coping that forms the Southern end of this element is in Fair to Good condition.	
19) Stone retaining wall with random coursing and mortared joints located near the carport.	Significant vertical cracks. Defer to structural assessment.	Yes
	Same	
20) Brick wall above concrete retaining wall near garage.	Poor. Large pieces of brickwork are missing.	Yes
	Same	
21) Brick retaining wall above with concrete retaining wall below, located on the mansion side of the drive near carport and over aqueduct.	Fair. Some coping broken.	Yes
	Good condition given the height of the wall.	
22) Rock retaining curb/wall with random coursing and mortared joints located on the South side of the drive leads from the garage to the South, terminating after turning at the stair the former elevated area of the Lily Pond/Roman Plunge. It tapers in height from 0"-36", and is approx. 75-ft long. The stair that this rock retaining curb/wall terminates at is made of concrete and is inset from the face of the wall.	Good.	Yes
	Same	
23) Brick retaining wall located at South side of drive, leading East from the stair up to the former Lily Pond/Roman Plunge level. 4-ft to 14-ft in height. Approx. 130-ft in length.	Good. Minor damage to coping bricks. Defer to structural assessment.	Yes
	Same	
24) Boulder rubble retaining wall, rough random coursing without mortar. There is a significant batter to the wall. This wall is located on the South side of the drive leading to the East from the brick wall in #23. It retains the terrace where the Lily Pond/Roman Plunge was formerly located.	Fair. Significant settlement but generally still retaining the slope.	Yes
	Same	
25) Lawn, Lily Pond and Roman Plunge terrace has, at its West end, a Pergola with a single row of brick columns, 16" square +/- 10-ft tall, with a wood trellis consisting of two 3x12s with cross bracing. There are 5 brick columns visible, 10-ft on center, covered in grapevine. Remnant terracing is visible, and there is a remnant semicircular brick over concrete retaining wall that aligns with the former position of the Lily Pond. This 3-part feature (Lawn, Lily Pond, Plunge) sits above the associated retaining walls in #22, #23, #24 above, and has terracotta steps, and a terracotta paved path on the south side of the Plunge. The formerly open lawn terrace has been colonized by Baccharis and grasses to the East of the Pergola. On the South side of the terrace, approx. 60-ft east of the Pergola, there is a retaining wall with brick above the high side of adjacent grade and concrete below. This retaining wall appears to retain grade that creates the flat terrace of these features on South (or creek) side. The Lily Pond, Plunge and associated trellis/peristyle are no longer extant. Blue cedars mark the east end of the Plunge.	The terrace of the former Lily Pond and Roman Plunge remains in Fair to Poor condition. The brick columns of the Pergola are in Good condition and the wood elements are in Fair condition. The Pond and Plunge are missing. Five timbers are lying on the ground on the drive opposite this area and may have been members of the now-missing pergola that divided the Pond from the Plunge. They are 25-ft long, 12x12s with shaped ends.	Yes, in so far as it remains which is limited.
	Same	

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LANDSCAPE FEATURES: Survey of Conditions			
	Feature	Condition	Character Defining
26)	Brick retaining wall above concrete retaining wall at South and East edge of garage forecourt.	Fair to Good. This element is located in a fenced inaccessible area. Review of condition is not complete.	Yes
		Same	
27)	Pedestrian circulation within the area of the grouping of campus buildings is made up of series of pink-colored concrete walks, serving the classroom building and library, and level changes via concrete steps in the same areas or brick steps or terra cotta tile steps in the vicinity of the chapel and East end of the library. At the Northwest end of this area, there is a tile paved remnant of the covered walkway off the North corner of the classroom building and tile paving between the library and chapel.	Fair to Poor.	No, not in its current condition.
		Same	
28)	Fencing throughout the site consists of wood post and rail fence along Bear Creek Road and at perimeter locations and contemporary pressure-treated posts with wire fencing along the South side of Upper Lake and in locations where the Open Space District limits access to the Alma College site.	Post and rail fence is in Poor condition. Pressure-treated posts with wire fencing are in Good condition.	No
		Same	
29)	For a survey of vegetation see the "Alma College Ornamental Plant Resource Inventory" prepared by Keith Park 7.22.09. In summary the species on the plateau where the primary campus buildings are located are dominated by introduced ornamental trees and shrubs. Some are addressed in the items above. The majority of species seen from paths at a lower elevation than this plateau are predominantly native species with a limited number of escaped ornamentals. Generally, there is a rich preponderance of large conifers.	Trees that have low water use requirements or are in close proximity to Upper Lake appear to be well established and many are very large such as the Blue Atlas Cedars, Weeping Blue Atlas Cedars, and Western and Eastern Red Cedars at the Cross with Semi-circular ledge. Based on a review of available historic photographs a significant number of species and plants have been lost from the site. This is likely due to lack of regular watering and maintenance.	Yes, in so far as it remains.
		Same	
30)	Site grading and terraces predominate within the immediate environs of the campus buildings. At the North West end of the site, there was grading to establish Upper Lake; moving along the spine of the site, terraces were established at the flagpole area, on the North side of the classroom building, on the South side of the library, and the South side of the chapel. A significant level change lies between the chapel and the parking court level of the mansion, and a terrace was created at the Lily Pond/Roman Plunge. These spaces, and those occupied by the buildings themselves, were created by the construction of substantial walls on each side of this spur landform.	Fair to Good. The grading is predominantly still intact.	Yes
		Same	
31)	Entry Gates BC04: Flanked on each side by adobe style concrete block, 14-ft long by 3'-4" wide, 4-ft tall with elevated plinths at each end. 6-ft tall associated wood fencing and metal gates.	Approx 25% of coping block is broken. The remainder of the block work and gate is in Good condition. All in Good condition. Dates to Open Space District period.	No
		Same	
32)	Brick wall above concrete retaining wall on north side of library.	Upper wall good; lower wall has rotated away from the upper wall and is in poor condition.	Yes
		Same	

Appendix D: Architectural Analysis

Introduction

This report recaps historical identification of the buildings on the Alma College site and reviews the disposition of them envisioned in the Alma College Site Rehabilitation Plan.¹ For the two buildings that are to be retained (in whole or in part), it provides a basic update on observations of the building's conditions in 2015, presents general guidelines and observations for rehabilitation, and traces the work proposed for the building in the three stages anticipated for execution of the rehabilitation plan. For each of the buildings anticipated to be demolished, there is a short guideline on the approach to demolition and then observations about interpretation. Finally, this document offers a discussion of the state of the historic buildings at Alma College at the conclusion of each phase of the rehabilitation plan.

Summary Description and Conditions

Mill, Estate, and Seminary

The site was settled and timber was harvested and milled in the 1850's. The site was later developed into a rural estate by James L. Flood (1894-1905) and Dr. Harry L. Tevis (1905-1934). In 1934, after Tevis's death, the Jesuit Sacred Heart Novitiate of Los Gatos bought the property and established the first Jesuit theological seminary on the West Coast, Alma College. The Jesuits converted the Tevis house and library, both built in 1909, into a faculty residence and chapel, respectively, and built a library in 1934 and dormitory buildings in 1935. In 1950, the Jesuits built a two-story concrete addition onto the 1934 library structure.

In 1969, the seminary moved to Berkeley and the Alma College campus was leased to a private boarding school. In 1970, the dormitory buildings were demolished, and most of the faculty residence burned. In 1989, the property was sold to a private developer with plans to build a golf course and country club, but the project faced opposition and stalled. In 1999, the Peninsula Open Space Trust purchased the property and subsequently sold it to the Midpeninsula Regional Open Space District. The property was listed in the Santa Clara County Heritage Resource Inventory in 1995.

Buildings

Chapel

Though possibly converted from portions of an earlier barn dating from the Flood era, today's Chapel was built in 1909 as a library for the Tevis estate. It is a single-story building, basically square in plan, with a deep gable roof. Originally, deep roof overhangs covered portions of the wide porches that wrapped around the building, with low wood guardrails. A covered walkway led east to the main

¹ The descriptions of the buildings are drawn from the 2005 *Alma College Historic Resource Study* by Page & Turnbull and from the 2010 *Alma College Conditions Assessment* by Knapp Architects which is also the basis for much of the building conditions information in this document, with selected updating based on observations in 2015.

house; a part of it remains today, in very poor condition. The building was originally clad in vertical wood siding, but was later shingled. The interior was originally dominated by a single, open room with a fireplace at one end; although it held Tevis's book collection, historic photographs show that Tevis also used it for the parties that made his estate known to many of the wealthy and prominent residents of Northern California of his day. When they bought the estate in 1934, the Jesuits converted the library to serve as the Chapel. On the exterior, two small side chapels were added on both the north and south façades. The fireplace was removed, pews installed and a chancel and altar built at the west end with an adjoining sacristy. The pews have been removed. The lower level, which also runs under the open terrace along the north side of the building, consists of a series of rooms which are mostly finished in gypsum board and particle board, in contrast to the wood-grain finishes of the main chapel space on the first floor.

The Chapel exhibits various modes of deterioration and damage, and comparisons of photos from the 2010 report and this study indicate that both weathering and vandalism have progressed visibly on the interior and exterior in the past five years. The single most notable problem is a bat colony in the main space that has created deposits of guano with a strong odor. This presumably has damaged the floor in affected locations (although the carpet may have lessened this to a degree) and meant the building could not be entered for this report because of the risk of hantavirus. The eaves and roof are the most exposed and deteriorated exterior elements—exhibiting dry rot, splitting, misaligned members. Asphalt shingles are deteriorated and the flashing, gutters, and downspouts show damage and deterioration. Rakes have lesser deterioration and some loose members. Although the siding is fairly intact, it is likely brittle and dry. Installation of new shear wall material would probably require complete replacement of shingles in affected portions of the walls. The character-defining windows and French doors are in various states of deterioration and damage and likely will have to be replaced for the most part. Despite the roofing problems, interior evidence of leaks is limited to discrete areas, where the character-defining wood finish is water-stained. The roofs covering open areas north and east of the Chapel exhibit serious deterioration and would need to be rebuilt if they were to be retained.

1934 Library

Built in 1934, the Jesuits' library consists of a first floor in red brick, with a second story clad in wood shingles; the lower east wing is clad in shingles. The roof has Craftsman-style wood detailing like the Chapel with projecting rafter tails and knee braces at its eaves and two dormers. Its casement windows vary from paired ten-light units to single six-light units, in addition to fixed art glass windows. One-story, shingle-sided projections at the east and west connect to the 1950 Library and Chapel, and a semi-enclosed vestibule with a spindle screen shelters the main door along the south projecting rafter tails and knee braces at its eaves and two dormers. Its casement windows vary from paired ten-light units to single six-light units, in addition to fixed windows to the main space. The interior was significantly altered after its original construction, and (separate from any consideration of its condition) retains few features and materials compatible with the exterior.

Like the Chapel, the 1934 Library exhibits weathering and damage (much from vandalism) on the exterior. The asphalt roof shingles are markedly more deteriorated than five years ago; plants have begun growing on the roof where there were none in 2010; and there is more evidence of water

damage and mold on the walls and ceiling at the interior. The interior has far more graffiti than it did in 2010 and it is assumed that other forms of damage from vandalism have increased, though limitations on access prevented a detailed comparison. The steel casement windows with leaded glass, which are boarded over on the exterior, appear to be in surprisingly good condition overall.

1950 Library

West of the 1934 Library and attached to it—though apparently not connected on the interior—is the much larger and architecturally distinct 1950 Library. Designed by Paul A. Ryan, the two-story reinforced concrete building is dominated by a large room on the upper level and has a series of smaller rooms on the lower level. The lower level is below grade on most of the exterior, with significant windows only on the north elevation. The building's stucco exterior; broad, gently sloped clay tile roof; floor-to-gable window on the prominent west facade; and band of horizontal windows on the south facade lend it a Mid-Century character not shared by the other buildings on the property. Although its clay tile roof has likely protected the interior from extensive water intrusion, the windows and doors are in poor condition (mostly because of vandalism) and the stucco has cracks and spalls. There are signs of mold on the interior, though no testing or detailed observations were conducted to confirm this. The building is slated for demolition as part of the Alma College Site Rehabilitation Plan.

Classroom Building

The 1935 Classroom Building is the westernmost building in the main cluster, close to the south side of the ridge top site. One story high at the northeastern corner, it has a full story brick basement exposed at the southwestern corner. The long, narrow building consists of two attached sections. To the east, an exterior arcade runs along the north side, providing access to a series of classrooms. At the western end, which is wider and has a higher roof peak than the western portion, a room occupies the full width of the building. The wood frame walls are finished with shingle siding, and the asphalt shingle gable roof covers the exterior. As described elsewhere in this report, the building is located very close to a trace of the San Andreas Fault. The Classroom Building is in poor condition, with a severely deteriorated roof allowing extensive water intrusion, badly deteriorated siding and exterior trim, and widespread, major wood decay. The building is slated for demolition as part of the Alma College Site Rehabilitation Plan.

Garage

The Garage was built during the Jesuit era, and has brick piers at the garage level to support the roof, with concrete structure on the lower levels. It is part of the retaining walls and grading that form the south side of the relatively flat building area on the ridge top east of the Upper Lake—and is close to the main trace of the San Andreas Fault. The retaining wall has failed relatively near the Garage and the building has a deteriorated roof, partially missing walls and stairs, and missing windows and doors. The building is slated for demolition as part of the Alma College Site Rehabilitation Plan.

Outbuildings

Alma College has a number of outbuildings, including the wood shed near the Classroom Building and a small concrete block building north and east of the main building cluster. The roof, walls, door, and windows of the Wood Shed are in poor condition. These buildings are slated for demolition as part of the Alma College Site Rehabilitation Plan.

Remnants of Buildings

Tevis Mansion

Most of this building is gone, but portions of Carport A and Carport B remain, including brick, concrete, and wood structural elements which exhibit a variety of defects and forms of deterioration. The foundation would be retained and interpreted as part of the Alma College Site Rehabilitation Plan so that visitors could get a sense of the location and layout of the building; the carport columns would be stabilized and retained.

Dormitories

Built by the Jesuits, the dormitories were located west and slightly north of the 1950 Library, angling progressively to the north to frame the spatial transition from the Upper Lake to the ridge top building cluster. The buildings no longer exist, but their basement walls and slabs remain in place, obscured by overgrown vegetation. They would be retained and interpreted as part of the Alma College Site Rehabilitation Plan.

Recap of Alma College Site Rehabilitation Plan

Disposition of buildings

The Classroom Building, 1950 Library, Garage, and Wood Shed would be demolished. The clay tile walking surface of the porch on the north side of the Classroom Building would be retained, and the foundations of the building would be retained so that the building can be interpreted. The Alma College Site Rehabilitation Plan would interpret the location of the 1950 Library by retaining its foundation walls flush with the adjacent grade level. The buildings can be interpreted additionally through signage, publications, digital media, and archives so that their physical characteristics and place in the history of the site can be understood in the future. The Garage would be interpreted through retention of its lower level. The Wood Shed would not be interpreted physically.

Phases

The Alma College Site Rehabilitation Plan would stabilize the Chapel and weatherproof the 1934 Library in Phase 2, and rehabilitate both buildings in Phase 3. The walls of the 1934 Library would be removed at least partially, opening the interior space to the outdoors for use as an interpretive center.

The main floor of the Chapel would be rehabilitated, with the lower level upgraded structurally but not for occupancy.

Treatment Recommendations

Treatment of Buildings that Are to Be Retained

Chapel

Rehabilitation scheme

The Alma College Site Rehabilitation Plan would maintain the historic site conditions on the south and west sides of the building; on the north side it would retain the roof of the covered walkway where it links the 1950 Library, the 1934 Library, and the Chapel. The deteriorated walkway and stairs on the east side of the Chapel would be removed; the historic connection to the Tevis mansion to the east could be conveyed through landscape treatments. The plan calls for reusing the main floor of the Chapel for a partner or District programs.

Treatment

—Rehabilitation

The rehabilitation of the exterior and main level of the Chapel should conform to the Secretary of the Interior's Standards for Rehabilitation. The alternate means provided in the State Historic Building Code for achieving the health, safety, and welfare goals of the prevailing code should be used wherever they would allow the design to preserve a higher level of historical integrity.

For the exterior, it is likely to be relatively easy to maintain the historic form and massing of the building with no change, which is probably the most important consideration for maintaining the historical integrity of the building. No additions are anticipated. The building will need to be re-roofed with flashing, gutters, downspouts and rainwater drainage replaced; asphalt shingles are acceptable historically and would likely be the most practical roofing material. For sustainability, it is likely the roof will need to be insulated if the interior is to be heated and cooled; this should be accomplished by adding insulation on top of the roof sheathing so that the character-defining open framing and roof sheathing can be maintained on the interior. It may be possible to incorporate new electrical conduit and firesprinklers piping above the roof sheathing along with the insulation. If photovoltaic panels are desired, they could be installed on the north side of the roof (though this might not be optimal for performance) because they would be difficult or impossible to see. (As a general note, PV panels could also be installed anywhere on the property where a new building or shade structure is desired on the former site of a building.) The siding should be repaired; a substantial portion of the shingles will likely need replacement. To the degree it is feasible in conjunction with structural repairs, the foundation conditions should be maintained visually. The Chapel has limited window and door openings, but they may be adequate for the new use. If new openings are required, the west elevation would be the first choice, then the east elevation. New openings on the north and south elevations should be minimized. The original windows and doors should be repaired if possible; the ones that are too

damaged to repair (or are missing) should be replicated as closely as possible to the original design, materials, detailing, and finishes. The only changes should be insulated glass (if the interior is to be heated and cooled), accessible hardware, and impact glazing.

On the interior, the paramount guideline is to maintain the main space (the worship space of the Jesuits which was adapted from the main library room Tevis built). This room should not be subdivided with full-height opaque partitions (and partial-height or glass partitions should be used as little as required, and only in locations that do not prevent a visual understanding of the original space). The Jesuits' side chapels should be treated to preserve their original relationship to the main space (and if possible, a sense of their function as well). The existing, non-compatible light fixtures and surface-mounted electrical conduit should be removed. The highly significant wall paneling, trusses, and ceiling finish should be carefully restored where damaged by bats and roof leaks. Although it would be optimal to restore the original floor surface, it may be re-carpeted as long as this does not preclude future restoration of the original floor finish.

Consideration should be given to maintaining the configuration, features, and finishes of the other spaces on the main level. While they may be altered (including partition changes where vital for programmatic requirements), a new visual design concept or urge to add a contemporary counterpoint to the original interior should not be allowed. The site will be changed significantly, and has deteriorated radically through the past three decades; the Alma College Site Rehabilitation Plan cannot legitimately be termed a rehabilitation if it also provides for an assertive new architectural vision to be imposed on the one historic building which is retained. Rehabilitation, and particularly interpretation, should convey both the Tevis and Jesuit eras.

The Alma College Site Rehabilitation Plan calls for converting the lower level of the Chapel into leftover space, which would allow for structural work to be accomplished there as needed, without limitations which might otherwise apply because of the loss of usability as occupied space. This recommendation was made because of feasibility considerations—the lower level appears to be much less significant historically than the main level, and required structural improvements might be much more expensive if the function of the interior spaces could not be sacrificed. It should be noted that this recommendation is for practical reasons only; if funding is available and a program calls for more space, it would be desirable to rehabilitate the lower level for interior occupancy. If an interior stair must be added between the levels, it should not damage or destroy character-defining features on the main level.

If there is an ambitious goal for sustainability, the following measures are among those that should be considered:

- Insulation on top of the roof sheathing
- Use of icool™ roofing in an appropriate color
- Placing solar collectors on the north slope of the roof or elsewhere on the site on retained roofs or new buildings or shade structures on the location of former buildings
- Blowing insulation into wall cavities to avoid impacts on character-defining wall paneling and finishes on the interior
- Use of insulating and/or Low-E glazing in window and door units that are otherwise identical to the original ones

- Incorporating building systems into the lower level as much as possible to avoid having them impair features and spaces on the main level
- Use of the State Historical Building Code to avoid prescriptive energy measures which would damage character-defining features or materials
- Use of locally-sourced materials similar to the original ones to reduce environmental effects of unnecessary transportation and off-gassing of synthetic materials
- Storing rainwater in cisterns in the lower level
- Use of cooler air ducted from the unoccupied lower level to reduce temperature rise in the main level interior during the day, possibly combined with night flushing, instead of mechanical chilling
- Use of unobtrusive interior shading on glazing on the south and west facades instead of addition of exterior brise-soleil features not compatible with the character of the building
- Use of water from the Upper Lake for water-sourced heat pumps (if environmentally acceptable for aquatic life)
- Use of debris from selective demolition for recycled material or fill elsewhere on site instead of trucking it for off-site disposal

—Stabilization

There are four main imperatives for stabilization of the Chapel pending its rehabilitation, in descending order of urgency:

- Ensuring the building is free from intrusion by vandals and thieves (to prevent malicious damage and destruction, theft, and arson and to prevent intruders from being killed, injured, or exposed to disease)
- Removal of the bat colony and clean-up of the existing guano, with effective bat exclusion barriers installed to prevent re-entry (to stop the damage from guano, remove disease risk to humans, and allow convenient access by District personnel, potential partners, etc. while the building's future is being planned)
- Re-roofing, even if it is temporary (to prevent further damage from water infiltration)
- Installation of passive ventilation (primarily by placing louvers in door and window openings that are now closed with solid plywood, to avoid excessive moisture in interior air)

The first three items are very high priority, and they go hand-in-hand to a great degree. Until they are achieved, the building will continue to be at risk from intentional damage or destruction; it will suffer from the bats' presence (and be more difficult to enter safely); and it will be damaged by water whenever it rains. Although ventilation is a lower priority, it should be provided if the building will not be rehabilitated within a few years.

There are also lower-priority stabilization measures that would be very beneficial, especially if rehabilitation is not anticipated for an indefinite period. A full interior survey and inventory of conditions and character-defining features and materials would provide a baseline and would be useful in rehabilitation design. Specific features which are vulnerable (to damage, deterioration, or theft) should be removed if possible and stored appropriately. An alarm or surveillance system would be desirable if it fits with District management of remote buildings. A temporary fire sprinkler system could save the building, though it may not be feasible to install one depending on overall site development. In any case, there should be a regular inspection and monitoring program, including

inspections and measurements of interior humidity in the rainy season. Debris, dirt and useless content such as the couch in the main space should be removed; the carpet should be inspected after the bats are removed to determine whether it provides helpful protection for the original floor or harbors guano and urine that cause ongoing damage (which seems much more likely).

1934 Library

Rehabilitation scheme

The Alma College Site Rehabilitation Plan would maintain the historic site conditions on the south and east sides of the building; on the north side it would retain the roof of the covered walkway where it links the 1950 Library, the 1934 Library, and the Chapel. The 1950 Library on the west side of the 1934 Library would be demolished, opening the 1934 Library on three sides instead of the two that are now exposed. The Alma College Site Rehabilitation Plan calls for maintaining the roof of the 1934 Library and demolishing most or all of its walls, with the interior becoming an open interpretive space.

Treatment

—Rehabilitation

As a note about nomenclature, the proposed treatment of the 1934 Library would not conform to the Secretary of the Interior's Standards for Rehabilitation. The exterior walls are a character-defining feature indispensable to the core nature of this building, which has always been a library. Demolishing them to convert this *building* into what the National Register Criteria classify instead as a *structure* would not conform to the Secretary's Standards because it would fundamentally alter the basic identity of the 1934 Library. The treatment is proposed because it would retain some portion of the walls and the entire roof, providing a visual signal that this was once a building, and providing a very readable clue to the historic architectural context of the Chapel. In the overall situation of the Alma College property, this appears to be feasible while rehabilitation of the existing building (which has been greatly altered on the interior) may not be feasible. Although the overall treatment of the 1934 Library would not conform to the Secretary's Standards, they should be used as the yardstick for work on the roof.

The entire roof of the 1934 Library should be retained and repaired. This includes the main upper gable and its dormers, the lower gable on the east side, and the vestibule on the south side. The connected roof of the north porch could either be marked by retaining a small zone of it where it meets the 1934 Chapel, or it could be demolished entirely with a simple trim closure marking the place on the original building where it began. (The porch roof should be treated the same way where it adjoins the 1934 Library and the Chapel.) The trim, including the rafter tails and, if possible, the spindle screens flanking the front entry on the south facade, should be retained in place. The roofing must be replaced; asphalt shingles are acceptable historically and would likely be the most practical roofing material. The trim, which is decayed, split, and otherwise damaged in numerous locations, should be rehabilitated.

Demolition of the walls should be done with the following goals:

- The design should provide a visual clue to the original extent of the walls and the fact that this was a conventional, enclosed building. This might include retention of one or more doors or windows, though this should be done in a way that conveys the role of the doors or windows in the original building instead of using them as an architectural metaphor or commentary that is part of a new layer of design. The original footprint should be strongly marked visually. Leaving the base of the walls in place might be one way to do this.
- The shingled, upper portion of the walls should be exhibited somehow, at least partially. This might mean leaving a portion of the walls intact full height, or else leaving the bottom of the wall (brick) and the top (shingle) in place with the space in between open.
- If the walls are demolished along the entire building perimeter and new structure is provided to support the roof, the new structure should be designed so it is visually clear that it is a later intervention, and it should not upstage the remaining portion of the original building.
- The removed portion of the walls should be simple in form if possible, with the goal solely to eliminate wall surfaces; the shape and location of wall removal should not call attention to itself and create a new visual form or motif that competes with the roof.
- The remaining portions of the wall should generally conform to the architectural principles that characterize the existing building, and the only change in the character of the wall should be its reduction in size.
- The interior face of the remaining wall portions should be faced on the exterior side with the original exterior materials; the interior side should be a simple, neutral material which is obviously a filler or cover material and does not convey the impression that it is original or is a conventional exterior material. The goal is to exhibit the original exterior material and provide a hint on the interior side that the building was not originally open to the exterior.
- It may be desirable to retain all of the ceiling and potentially the top of all the partitions, inside the building, so that looking up from what is now the interior of the building provides a strong visual clue that this was a conventional building. The treatment of the walls and ceiling should be visually logical and complementary.
- Consideration should be given to incorporating any new building systems (lighting, fire sprinklers, etc.) into new construction instead of putting it on the existing portion of the building fabric that is retained.
- It may be possible to salvage some features and reincorporate them elsewhere as spolia. Other materials may lend themselves to reuse on site. Existing building materials and features that are removed from the site should be recycled if possible.

The north slope of the roof could be a potential location for solar collectors, as on the Chapel. The west elevation of the converted building will be a design opportunity, as it is now obscured by the 1950 Library and presumably does not offer an opportunity to preserve anything. It is probably not a good idea to try to restore the site condition of the 1934 Library from the time before the 1950 Library was built. Too little information is likely to be available and even if it were, creating the impression that the 1934 Library was never altered before its walls were removed would convey a false sense of historical development. The west side of the 1934 Library is therefore a good location to consider for new elements that are required, such as kiosks, display panels, or site infrastructure. Since the building was constructed to as a library for Jesuit seminarians, spolia (such as Jesuit seal on the exterior of the 1950 Library) could be placed on the walls or ceiling to convey this association.

—Stabilization

The intention to demolish the walls and interior of the 1934 Library makes stabilization a lower priority than it is for the Chapel. Even so, preventing unauthorized entry is important from the get-go, since it could lead to a fire. The roofing is very deteriorated, and if the conversion does not happen in the next few years, it would be wise to provide at least temporary water protection so the roof framing does not decay. As with the Chapel, a full survey and inventory should be conducted before long. Building features that are going to be salvaged should be removed as soon as the inventory is complete. If the windows are removed, it would be wise to put louvers in some of the closure panels that replace them. Because the dormers already have louvers, openings in walls or ceilings should be made if needed in order to allow air to circulate through the entire interior. Debris, dirt and useless content such as the furniture littering the interior should be removed. If an alarm, monitoring system, or fire sprinklers are installed in the Chapel, they should also protect the 1934 Library. It should be checked regularly like the Chapel.

Treatment of Buildings Slated for Demolition

Generally, these buildings do not need to be secured or stabilized from the viewpoint of historic preservation, but they still pose problems as attractive nuisances—and could attract squatters or vandals who could also damage the Chapel and 1934 Library. All of them present similar opportunities and challenges in general. Their location (and ideally, their form, function, and historical development) should be visible as much as possible after they are demolished. One option to consider would be retaining one wall of each building to its full height (which would require structural bracing and protection of the interior face). Where a building is demolished, site conditions may include drops at the perimeter of the building from outside grade to the basement or crawl space level. In some cases, the Alma College Site Rehabilitation Plan calls for using plant materials to discourage access to these drops, and in other cases it calls for guardrails, which have the potential to be visually more prominent than the surviving traces of the building. One way to avoid this might be to place fill so that the differential in height is less than 30 inches (the code maximum without a guardrail) or to retain the original building wall to a height of 42 inches (the code height for a guardrail).

The buildings that will be demolished contain features, materials, and artifacts of value (architectural drawings are visible in the room on the east end of the main level of the 1950 Library). For this reason, a general survey and inventory should be conducted as an early task in the rehabilitation, with immediate salvage and storage of vulnerable items. And when the buildings are demolished, some of their features could be salvaged for reuse or as spolia—or they could be repurposed or processed for other use on site or elsewhere. The planned demolitions will produce three materials in the greatest quantity: concrete, wood, and plaster/gypsum board. After testing and taking toxic materials into account, thought should be given to opportunities to process and use these as fill, landscape, or slope stabilization materials.

Before demolition, all the buildings and important site features should be photographed (preferably to archival standards), and an archive assembled with past documents as well as the photographs. Because the Society of Jesus has a long reputation for scholarship and institutional history, it would be desirable to donate copies of new documentation to the Jesuit Archives in Berkeley to make them available to future researchers who go there.

The following observations give specifics for each building.

1950 Library

—Demolition

The roof tiles may be appropriate for salvage and re-use elsewhere—or they could potentially be crushed and used on site as a walking or vehicle surface. The stucco could be tested for toxic materials and if it is untainted, it could be used as a base material or fill, or potentially as the aggregate for concrete. The structural concrete might lend itself to being cut into manageable pieces and used for civil or landscape work, and it could also be crushed and used as scrap steel (rebar) and aggregate for new concrete.

—Interpretation

The Alma College Site Rehabilitation Plan would interpret the location of the 1950 Library on site by retaining the foundation walls level with grade. But documentation should also be retained (and obtained from Jesuit archives if necessary) so that this building can be included in archives and off-site interpretation. This is important both because the building is part of the site's history and also because visitors to the completed site may notice conditions that are not explained by the buildings that are retained or interpreted physically.

Classroom Building

—Demolition

The Alma College Site Rehabilitation Plan calls for demolishing the building but retaining the tile walkway along most of its north side. Demolition will therefore need to be carefully executed to avoid destroying the walkway; this might mean leaving the base of the north wall intact. Since the footprint of the building is to be preserved, consideration should be given to devising a scheme that retains the perimeter of the building to a low height, probably with some portion of the main floor structure along one wall or at one corner.

—Interpretation

If the perimeter is retained, the footprint will be clearly understandable. Since the building was constructed to educate Jesuit seminarians, spolia (such as Jesuit seal on the exterior of the 1950 Library) could be placed along the perimeter. If the crawl space is filled to minimize the drop on the north side next to the tile walkway, the fill should be sloped or terraced inside the building footprint to convey an understanding of the original condition.

Garage

—Demolition

The Garage is of greatest interest for its siting and the clues it provides about development of the ridge top and its topography. Architecturally, it does not appear to offer resources of great value, so the demolition can be driven mostly by structural and geotechnical design and practicality. During demolition, there may be opportunities to observe concealed conditions that answer some of the questions about the sequence of development and alterations.

—Interpretation

The proposal to retain the lower level, with an overlook, will offer visitors a chance to appreciate the unusual siting of the Garage. Because it was a service building, it does not require great emphasis.

Outbuildings

Although they are buildings, these are best approached as site features. There is much to document on the site—which will continue to change as all landscapes do, and emphasis and buildings and landscape features should be balanced. The Wood Shed in particular shares architectural characteristics with more significant buildings, but its small size, location, and utilitarian function do not justify allocating much effort and expense when there are far more important buildings and features that will be a challenge to preserve and interpret.

Treatment of Surviving Building Remnants

Tevis Mansion

—Treatment

Because the building changed greatly over a long period; because relatively little remains; and because it is not easy to understand the Tevis mansion by looking at what is left, this existing feature is instructive in considering how future visitors will understand the site after the Alma College Site Rehabilitation Plan is complete. The proposal to bring back missing parts of exterior walls should be executed in a way that differentiates the reconstructed elements from the surviving ones.

—Interpretation

While the overall approach in the Alma College Site Rehabilitation Plan is to acknowledge, retain, and interpret the various historical layers of the property, consideration should be given to simplifying the physical presentation of the Tevis mansion remains. At an archaeological site dating back thousands of years, it is generally considered heresy to eliminate other layers in order to interpret one clearly. But this site is not being preserved or restored purely as a heritage property and visitors could have trouble understanding the Tevis mansion if all they see is a point cloud of isolated remnants of various eras that do not convey a full picture of any one era. This could mean removing some fabric that remains as well as restoring selected lost elements.

Dormitories

The Dormitories are today a very interesting counterpoint to the Tevis mansion. While they are much less visible to the casual visitor, if one walked about them on all sides and navigated through the undergrowth, the basement of one dormitory emerged amazingly intact in 2010 (including part of the first floor structural assembly). The basement was very easy to understand, and still had a main electrical panel with subpanels labeled “Village” and “Faculty Bldg.” which gave a sense of Alma College as an active community.

—Treatment

The undergrowth poses a challenge—should it be left in place as a landscape artifact in its own right and a barrier to unauthorized access, or should it be eliminated to reveal the location of the Dormitories from afar? As of 2010, the Dormitories contained a variety of artifacts in the basements which provided a palpable connection to the history of Alma College. It may be possible to record these and leave them in place.

—Interpretation

The options for physical interpretation are simple because only the basements remain, but they are complete. The Dormitories were confined to one layer of Alma College history, and were not expanded or altered significantly.

Summary of Rehabilitation Phases

Phase 1

Integrity

The existing buildings that are to be retained will not change in Phase 1. The only change in integrity will be incremental deterioration or damage from vandalism, fire, earthquakes, etc. The buildings that are slated for demolition will be removed; their integrity will be lost.

Risks

If the buildings are not secured and stabilized, significant losses could occur. The hazards which exist today will not be reduced.

Opportunities

During this phase, one opportunity may be to enlist local students or community groups to assist in inventory and cataloguing of the buildings, their features, and contents.

Uses and Interpretation

This phase is premature for opening the buildings to anyone other than District staff, potential partners, and the rehabilitation team.

Phase 2

Integrity

In Phase 2, the buildings to be retained will be stabilized. This will inevitably entail a small increase in their integrity and more importantly, it will greatly reduce the ongoing loss of integrity.

Risks

Risks will greatly be reduced in Phase 2. It is acknowledged that when the buildings have been stabilized but not rehabilitated, they may have temporary security and weather protection elements that are not compatible with their character.

Opportunities

The stabilized buildings will be easier and safer for authorized entry than they are now. The interiors will become available for viewing. Contents and features that are salvaged may add to understanding of Alma College.

Uses and Interpretation

Until they are rehabilitated, the building interiors will remain accessible only to authorized visitors associated with rehabilitation. The exteriors will not convey much more about Alma College history than they do now.

Phase 3

Integrity

Rehabilitation will remove some incompatible features, and as described above, it will repair or restore character-defining features so the buildings can once again be understood. Once rehabilitation is complete, the ongoing integrity of all the buildings will be the same as for any building—just a maintenance issue.

Risks

After rehabilitation—and particularly if the site is popular with the public and programs begin using the buildings—the risks to the buildings will be greatly diminished. It can be hoped that public exposure will engender interest, leading in turn to support for ongoing maintenance and access.

Opportunities

Providing the community with the opportunity to understand the ridge top site may spur interest in historical features elsewhere in preserve that are connected to the history of Alma College. This could lead to research, preservation, and interpretation of a greater site.

Uses and Interpretation

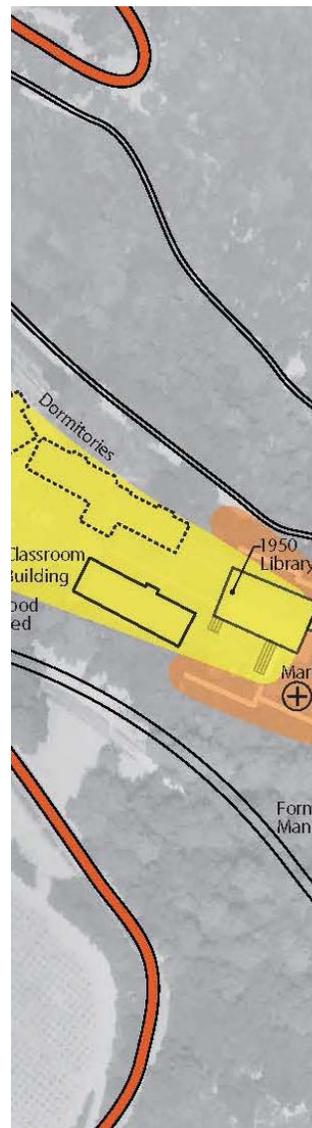
Completion of the rehabilitation in Phase 3 will allow full interpretation of the buildings discussed in this document. The Alma College Site Rehabilitation Plan lends itself to a variety of interpretation schemes. Execution of the three Phases may reveal new information about the site history, which would set the stage for additional interpretation.

Conclusion

The buildings and surviving portions of buildings that exist today on the Alma College site convey much of the 19th and 20th century developments which make it historically significant. These buildings are an integral and indispensable part of the cultural landscape. Years of disuse and vandalism, the site's location, and geotechnical challenges have created the current condition in which none of the buildings is suitable for occupancy. Rehabilitating the buildings would be very expensive and would require grappling with a host of issues, including site circulation, accessibility, site utilities, and programmatic requirements for a new use.

The Alma College Site Rehabilitation Plan calls for rehabilitating the Chapel and retaining the roof of the 1934 Library. The other buildings would be demolished, and traces of each would be retained as a record of the building's location and footprint, to provide visitors with a sense of the development of the ridge top site. To make this approach a success, the Chapel should be rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation. The roof of the 1934 Library should be treated similarly, and its walls should be deconstructed in a manner that emphasizes interpretation of the original building (and eschews any effort to make the removal of walls a distinct design in its own right which competes visually with the original building). Carefully selected portions of the other buildings should be retained so they are stable and safe—and so they help tell the story of what Alma College was. The first task should be to secure and protect what remains, and the site should be surveyed to allow immediate retention of historically valuable items and creation of an inventory that can be used in subsequent phases and final documentation.

Appendix E: Recreation Planning Analysis



FORMER ALMA COLLEGE SITE HISTORICAL RESOURCE TECHNICAL REPORT

LOS GATOS, CALIFORNIA
[15271]

PREPARED FOR:
MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

PAGE & TURNBULL

imagining change in historic environments through design, research, and technology

DECEMBER 09, 2015

REVISED

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I. INTRODUCTION

This Historic Resource Technical Report has been prepared at the request of Midpeninsula Regional Open Space District (MROSD) to assess PGAdesign's Alma College Cultural Landscape Rehabilitation Plan (Rehabilitation Plan) prepared in August 2015 for the former Alma College campus in Los Gatos, California. The proposed Rehabilitation Plan includes two approaches (Preferred Plan and Alternate Plan) for the rehabilitation of the Alma College site, which would see the property transformed into a publically accessible recreational-use open space within the larger Bear Creek Redwoods Open Space Preserve. According to the Rehabilitation Plan, the site would function as a part of the Preserve, displaying interpretive content inspired by past eras of use. The Plan outlines the future treatment of historic and non-historic features within the site and is intended to facilitate management decisions regarding the future of the property.

This Historic Resource Technical Report includes a summary of historic significance determinations, a site description, and a list of character-defining features that were identified in previous documentation of the site. The report also includes an evaluation of the Proposed Plan and the Alternative Plan presented in PGAdesign's Alma College Cultural Landscape Rehabilitation Plan (August 2015), using the established historic significance and identified character-defining features to analyze potential impacts under the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (the Standards) and the *Guidelines for the Treatment of Cultural Landscapes*. Full compliance under the Standards presumes a finding of "No Impact". If the Plan does not fully comply with the Standards, further analysis regarding the eligibility of the resource for the California Register will be completed pursuant to the California Environmental Quality Act (CEQA), including analysis for potential specific impacts and cumulative impacts for both the Proposed Plan and Plan Alternative.

To prepare for this Historic Resource Technical Report, Page & Turnbull reviewed the PGAdesign's Alma College Cultural Landscape Rehabilitation Plan, as well as a number of previous sources of historic documentation, which are described in more detail below.

SUMMARY OF HISTORIC SIGNIFICANCE

Alma College has been documented and evaluated for historic significance on numerous occasions by various historic preservation professionals. A chronology of previous evaluations and subsequent determinations is included below. This Historic Resource Technical Report includes no additional evaluation and relies on previous determinations to guide analysis.

Alma College was listed in the Santa Clara County Heritage Resource Inventory (HRI) in 1995. The listing included the classroom building, the auditorium, the chapel, the utility building, and the library. The HRI documentation was updated in 2004 using a State of California Department of Parks and Recreation (DPR) Primary Record (523A) and Building, Structure, and Object (523B) forms. The DPR forms were produced by Archives & Architecture. They identified the period of significance for the site as 1934-1969, and six resources were identified in association: the classroom building, the 1934 and 1950 library buildings, the chapel, and the landscape features of the upper lake, brick alcove, and picnic area.

In 1995, a "Historical and Architectural Resource Evaluation" for an Environmental Impact Report was prepared by Glory Anne Laffey of Archives & Architecture. This report found that the buildings on the site composed a historic district eligible for the California Register of Historical Resources (California Register) under Criterion 1 (Events), citing the significance of Alma College as the first Jesuit School of Theology in the West. The Classroom Building, the 1934 Library and the 1950 Library Addition, the Chapel, the Upper Lake, and the landscaping around the Upper Lake were determined to contribute to the eligible historic district.

A detailed historic context and evaluation of Alma College was provided in Page & Turnbull's "Alma College Historic Resource Study" (November 2005), prepared at the request of the Midpeninsula Regional Open Space District. The report found that the chapel appeared individually eligible for listing in the California Register for its architectural significance (Criterion 3), but that the deteriorated condition of the site resulted in a loss of integrity of the historic district. The report stated that the site might be eligible for listing as a cultural landscape pending further research.¹

As part of initial planning efforts to open the property to public use, MROSD commissioned Knapp Architects' "Alma College Conditions Assessment Project: Phase 1: Assessment of Existing Conditions" (March 2010). The report (Condition Assessment) found that the Alma College site is significant as a cultural landscape under Criterion 1 of the California Register for its historical parallels with the broader events of California history. The report defined the period of significance (POS) for the Alma College Cultural Landscape as circa 1850 to 1951, and stated that although integrity has been compromised due to the loss of several buildings and features, lack of maintenance, and vegetation overgrowth, the Alma College site retains sufficient integrity to express the layered periods of the site's history, including the Milling period (1850), Tevis Estate period (1906-1934), Alma College period (1934-1949), and the Later Alma College period (1950-1969) (Figure 1).² According to Knapp Architects' report, the extant structures and features, even those in ruin, still convey the cultural landscape's significance as remnants with interpretive value. The Rehabilitation Plan (2015) builds on the cultural landscape determination outlined in the Conditions Assessment document by identifying additional cultural landscape features.

In sum, the Alma College site is a vernacular cultural landscape that is historically significant under California Register Criteria 1 for its association with the broad events of California History. The cultural landscape has a POS of 1850-1951.

¹ Per the National Park Service, a cultural landscape is "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated an historic event, activity, or person, or exhibiting other cultural or aesthetic values". Furthermore, "designed or vernacular landscapes evolve from, or are often dependent on, natural resources. It is these interconnected systems of land, air and water, vegetation and wildlife which have dynamic qualities that differentiate cultural landscapes from other cultural resources, such as historic structures. Thus, their documentation, treatment and ongoing management require a comprehensive, multi-disciplinary approach."

Under the California Register, "A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development... When conducting a comprehensive survey you should generally record large and complex cultural landscapes as districts."

² The Cultural Landscape Analysis found that the Flood Era (1894-1905) did not retain enough integrity to convey its significance.

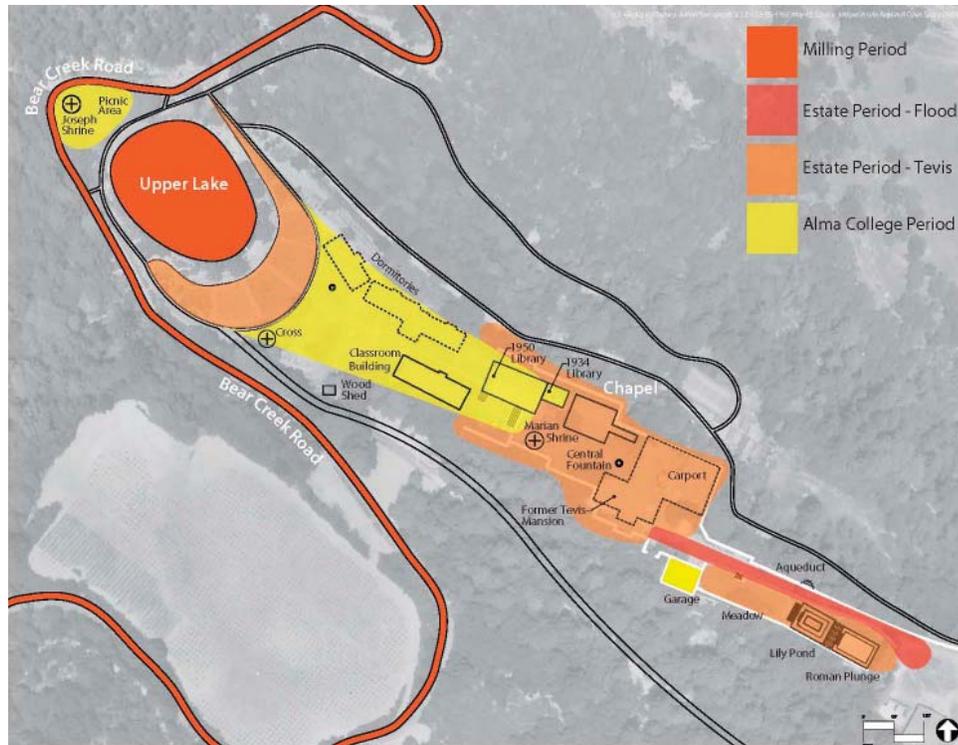


Figure 1. Site plan illustrating various historical periods at the former Alma College site, as described in Knapp Architects' 2010 report. Source: PGA Design, Alma College Cultural Landscape Rehabilitation Plan (August 2015): 13.

II. CHARACTER-DEFINING FEATURES

SITE DESCRIPTION AND HISTORIC CONTEXT

The description and context included here is excerpted from the Executive Summary of the Conditions Assessment prepared by Knapp Architects in 2010. It is brief and intended only to provide a general understanding of the site as the context for the discussion of character defining features that are outlined in the next section of this report. The subject property has been thoroughly described in previous documentation including the Rehabilitation Plan.

... The Alma College campus is located near District Gate BC04 on Bear Creek Road in Bear Creek Redwoods Open Space Preserve, in unincorporated Santa Clara County near the Town of Los Gatos. For the purposes of this study, the Alma College site is defined as extending from Bear Creek Road near Upper Lake and including all features contained along the flat-topped ridge line to and including the site of the former Roman Plunge. The sides of the flat-topped ridge are established by retaining walls in the southeast and by the road that encircles Upper Lake in the northwest part of this area. This defines the historic core of the Tevis estate and later Jesuit seminary.

The site was settled and timber was harvested and milled in the 1850's. The site was later developed into a rural estate by James L. Flood (1894-1905) and Dr. Harry L. Tevis (1905-1934). In 1934, after Tevis' death, the Jesuit Sacred Heart Novitiate of Los Gatos purchased the property and established the first Jesuit theological seminary on the west coast, the Alma College campus. The Jesuits converted the Tevis house and library, both built in 1909, into a faculty residence and chapel, respectively, and built a library in 1934 and dormitory buildings in 1935. In 1949, the Jesuits built a two-story concrete addition onto the 1934 library structure.

In 1969, the seminary was relocated to the Graduate Theological Union at the University of California, Berkeley and the Alma College campus was leased to a private boarding school. In 1970, the dormitory buildings were demolished, and the faculty residence burned down, leaving only a remnant of the structure. In 1989, the property was sold to a private developer with plans to build a golf course and country club, but the site was never developed. In 1999, the Peninsula Open Space Trust purchased the property and subsequently sold it to Midpeninsula Regional Open Space District. As part of the Bear Creek Redwoods Open Space Preserve, the site is included in the Draft Sierra Azul/Bear Creek Redwoods Master Plan, currently under development...³

A more complete description of the landscape is included in Section E Part II of the Conditions Assessment, starting on page 41.

GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES

For a property to be eligible for national, state or local designation under one of the significance criteria, the essential physical features (or character-defining features) that enable the property to convey its historic identity must be evident. The *Guidelines for the Treatment of Cultural Landscapes* (the Guidelines) state that cultural landscapes are composed of a collection of features that are organized in space. Both vegetation and buildings are able to convey the character of a cultural landscape. Other elements may include small-scale features such as individual fountains or statuary, or land patterns that define the spatial character. Some features may be more important than others. But overall, the Guidelines state that it is the arrangement and interrelationship of these character-

³ Knapp Architects, Alma College Conditions Assessment Project, Phase 1: Assessment of Existing Conditions, 2010: 4-5.

defining features as they existed during the POS that are most critical to consider prior to treatment. As such, cultural landscape features should always be assessed as they relate to the property as a whole. For this reason, spatial organization and land patterns are always listed first in each section of the Guidelines.⁴

In addition, per the Guidelines, it is important to recognize that spatial relationships may change over time due to a variety of factors, including: environmental impacts (eg: drought, seismic activity), plant growth and succession, and changes in land use or technology.⁵

Spatial Organization and Land Patterns

A cultural landscape differs from a historic building or district in that it is understood through the spatial organization of the property, which is created by the landscape's cultural and natural features. Some features may create viewsheds or barriers (such as a fence), and others create spaces or "rooms" (such as an arrangement of buildings and structures around a lawn area). Some features, such as grading and topography, underscore the site's development in relationship to the natural setting. As stated above, it is the arrangement of features within the landscape that is critical to consider prior to treatment. The arrangement may derive from a preferred aesthetic, or they may relate to the historic function and use of the site. Per the Guidelines, both the function and visual relationship between spaces is integral to the historic character of a property.

The spatial organization and land patterns of the former Alma College Site were not described in prior documentation for the specific purpose of guiding evaluation and analysis. Page & Turnbull has made an effort to extrapolate those characteristics which define the spatial organization and land patterns of the former campus, so that they may provide a context for the proceeding analysis. They include but are not limited to the following elements:

- The linear alignment of the landscape along a ridge set above surrounding wooded areas
- The north and south boundaries as defined by retaining walls (due to the topography)
- Vehicular access to the site at the northwest end and southeast end
- Axial relationship of the linear landscape to the Upper Lake
- Pedestrian circulation that parallels the linear orientation of the ridge, creating a pedestrian "spine" throughout the site
- Three "zones" that are arranged along the linear axis: the pond and open space at the northwest, the buildings and pedestrian paths (campus area) at the middle, and the sequence of formal landscape features at the southeast.

Character-Defining Features of the Landscape

The character-defining features of the Alma College site are those features that collectively illustrate the property's significance as a cultural landscape. Knapp Architects' 2010 Condition Assessment report provided two tables that outlined character-defining features. The most applicable table for the purposes of this Technical Report is located in Exhibit G-1 of the Conditions Assessment document and is entitled "Considerations for Future Use". It lists the elements of the site, their existing condition, and assigns level of significance. Significant features were described as primary defining elements, while contributing features were described as secondary elements. Those distinctions are indicated in the list below with an (s) for *significant* or a (c) for *contributing*.

The report provided further analysis of cultural landscape features in a separate table titled "Landscape Features: Survey of conditions" (Exhibit E-4 of the Conditions Analysis document). The survey did not classify the elements listed in the table as *significant* or *contributing*. Rather, the table

⁴ Ibid

⁵ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/organization.htm>

indicates whether or not the elements are *character-defining*. There was some overlap between the two tables. Those features that were included in the Landscape survey but were not included in the Considerations for Future Use table are listed below without a (s) or (c) designation. The Rehabilitation Plan (2015) updated the Landscape survey in Appendix C of the Plan document, identifying additional features which are marked below with an asterisk. These features are not classified as *significant* or *contributing* within the Plan document.

The Guidelines outline five types of Character-Defining Features of the Landscape: Topography; Vegetation; Circulation; Water Features; and Structures, site furnishings, and objects. The spatial arrangement of features that fit into these categories creates a Cultural Landscape. Page & Turnbull has re-organized the character-defining features identified by Knapp Architects and PGAdesign below according to type as outlined per the Guidelines. It's possible some elements could be categorized under more than one type (ie: the concrete fountain basin is both a water feature and a site feature), but are listed under only one category here for the sake of efficiency and readability. It should be noted that several of the character-defining features listed below are in severely deteriorated condition but were found to contribute to the Alma College Cultural Landscape regardless, as they provide opportunities for interpretation and education. Condition and Integrity are discussed in both the Evaluation Framework and Project-Specific Impacts Analysis sections of this report.

The character-defining features of the Alma College Cultural Landscape include:

Topography

- (s) Brick and concrete retaining walls along north and south perimeters of project site

Vegetation

- Blue cedars along the east end of the plunge
- * Natural or scenic agricultural setting
- * Grapevines

Circulation

- (c) Covered walkway along north façades of Chapel and Library buildings
- (c) East walkway from Chapel to Tevis House/Faculty Residence ruin
- Brick stair leading from library level south of the fountain basin to garage level
- Drive around lake
- * Bear Creek Road
- * Radial organization of elements around the upper lake
- * Carriage Road from the site of the main house to Route 17

Water Features

- (s) Aqueduct
- (s) Upper Lake, including fountain and infrastructure (renovated in the 1920s)
- (c) Concrete Fountain Basin

Structures, Site Furnishings, and Objects⁶

- (s) Chapel (1909/1934)

⁶ Specific guidance on the treatment of historic buildings can be found here:
<http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/organization.htm>

- (s) Library (1934)
- (c) Library addition (1950)
- (s) Classroom Building (1934)
- (c) Garage (constructed at an unknown date, likely the 1940s)
- (c) Two dormitory buildings from the Jesuit campus period (only the foundations remain extant)
- (c) Tevis House/Faculty Residence ruin including carport structure
- (c) Wood shed
- Boulder at Residence ruin
- (c) St. Joseph Shrine
- (c) Marian Shrine
- (c) Sequence of the Meadow/Lily Pond/Roman Plunge
- Pergola with brick columns at the west end of the Roman Plunge terrace
- (c) Wooden Cross with semi-circular hedge
- (c) Flagpole
- (c) Wood posts

III. PROPOSED PLAN

The following Plan description is adapted or excerpted from the Alma College Site Cultural Landscape Rehabilitation Plan produced by PGAdesign Inc. in August 2015. The Rehabilitation Plan boundary includes the land extending from Bear Creek Road at the northwest, through the area of the Roman Plunge and adjacent driveway to the southeast. Retaining walls define the Rehabilitation Plan boundaries to the north and south.

The Midpeninsula Regional Open Space District (MROSD) sought a rehabilitation plan for the former Alma College site in order to open the property to new users as part of the Bear Creek Redwoods Open Space Preserve. The goal of the Rehabilitation Plan is to “establish an achievable vision...that will respect the site’s history, character and cultural landscape, while telling its story to visitors.”⁷

In developing the Rehabilitation Plan, PGAdesign had two broad components to consider: the physical site issues and the future management and use of the property. The physical site issues relate to the deteriorated conditions resulting from a combination of abandonment and seismic activity. The five extant buildings are in fair to poor condition and present concerns for public safety. The San Andreas Fault runs through the south side of the Alma College site, in close proximity to the classroom building and a trace of the fault lies along the general alignment of the south retaining wall (**Figure 2**).⁸ According to the Rehabilitation Plan document, per California’s Alquist Priolo Earthquake Fault Zone Act, buildings cannot be occupied within a 50 foot range of the fault or the trace. The Classroom building and the garage both fall within 50 feet of the trace line. Additionally, buildings within a 500 foot range of the fault and trace lines cannot be occupied more than a specified number of hours per year. This requirement will impact all other buildings on the cultural landscape site, including the 1909 Chapel. These limitations have guided the layout and treatment of historic features in the Rehabilitation Plan. In considering future management and re-use issues relating to the buildings on the site as well as the overall landscape, the Rehabilitation Plan took into account the earthquake faults and the state law. It also considered the financial investment that would be needed, and how attractive the investment might be to potential partners for MROSD. The Plan is outlined in three phases to allow for funding and the time required to identify potential partners. Finally, the Rehabilitation Plan was also developed to comply with the *Secretary of the Interior’s Standards for Rehabilitation*.

The Rehabilitation Plan:

- Identifies physical features recommended for rehabilitation or removal,
- Addresses the addition of new visitor amenities,
- Addresses accessibility, safety and code issues, and
- Makes recommendations concerning:
 - Road access and parking improvements
 - New pedestrian paths
 - Event/gathering areas
 - Interpretative opportunities/approaches
 - Low-maintenance vegetation management
 - Improvements to landscape sequences that maximizes scenic viewpoints

The report developed two schemes that became a Preferred Plan (Scheme B) and Alternative Plan (Scheme A); both are detailed and analyzed in Section Five of this report: **Analysis of Impacts**.

⁷ PGAdesign, Alma College Site Cultural Landscape Rehabilitation Plan, 2015, Executive Summary.

⁸ PGAdesign, Alma College Site Cultural Landscape Rehabilitation Plan, 2015. Project Parameters.

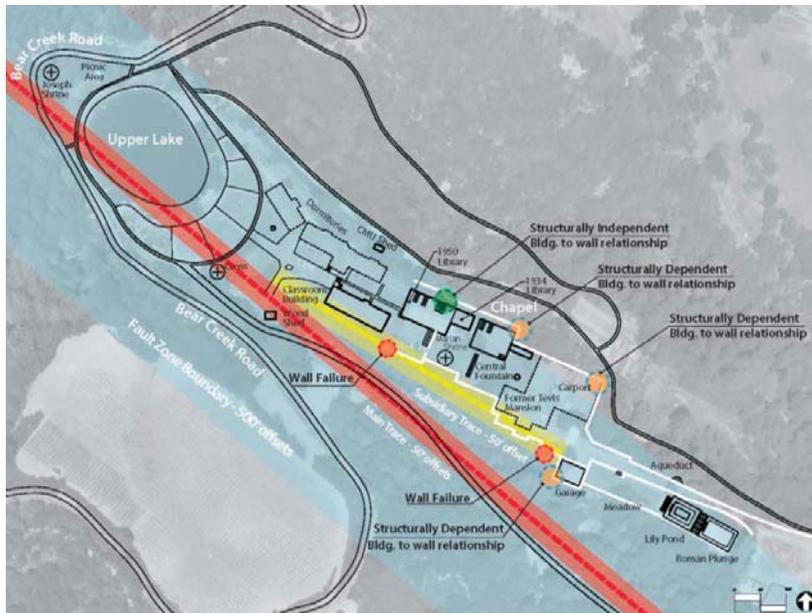


Figure 2. Site plan roughly illustrating the fault lines and zones at the former Alma College site. The red line illustrates the San Andreas Fault plus 50 ft buffer, the yellow line represents a trace plus 50 ft buffer, and the blue zone shows the 500 ft buffer zone Source: PGA Design, Alma College Cultural Landscape Rehabilitation Plan (August 2015): 19.

IV. EVALUATION FRAMEWORK

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

This section of the report summarizes CEQA review procedures for determining whether a property is a resource and reviews what constitutes a significant effect on the environment.

The California Environmental Quality Act (CEQA) is state legislation (Pub. Res. Code §21000 et seq.) that provides for the development and maintenance of a high quality environment for the present-day and future through the identification of significant environmental effects.⁹ CEQA applies to “projects” proposed to be undertaken or requiring approval from state or local government agencies. “Projects” are defined as “...activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps.”¹⁰ Historic and cultural resources are considered to be part of the environment. In general, the lead agency must complete the environmental review process as required by CEQA. In this case, the proposed project is the Cultural Landscape Site Rehabilitation Plan (the “project”) at Alma College, and the Midpeninsula Regional Open Space District will act as the lead agency.

A building may qualify as a historic resource if it falls within at least one of four categories listed in CEQA Guidelines Section 15064.5(a), which are defined as:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852).
4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Pub. Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Pub. Resources Code) does not preclude a lead agency from determining that

⁹ State of California, California Environmental Quality Act, http://ceres.ca.gov/topic/env_law/ceqa/summary.html, accessed 31 August 2007.

¹⁰ Ibid.

the resource may be an historical resource as defined in Pub. Resources Code sections 5020.1(j) or 5024.1.¹¹

The Alma College property is eligible for listing in the California Register for its significance as a cultural landscape, which makes it a historical resource CEQA as defined under Category 3 above.

Threshold of Significant Impacts

According to CEQA, a “project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment.”¹² Substantial adverse change is defined as: “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired.”¹³ The significance of an historic resource is materially impaired when a project “demolishes or materially alters in an adverse manner those physical characteristics of an historic resource that convey its historical significance” and that justify or account for its inclusion in, or eligibility for inclusion in, the California Register.¹⁴ Thus, a project may cause a substantial change in a historic resource but still not have a significant adverse effect on the environment as defined by CEQA as long as the impact of the change on the historic resource is determined to be less-than-significant, negligible, neutral or even beneficial.

In other words, a Plan or Project may have an impact on a resource, and that impact may or may *not* impair the historic resource’s eligibility for inclusion in the California Register. If an identified impact would result in a resource that is no longer able to convey its significance and is therefore no longer eligible for the California Register, then it would likely be considered a Significant Impact. In cases where an impact is identified but the resource is still able to convey its significance and would therefore still be considered eligible for the California Register, it may be considered a Less-Than-Significant Impact, or Less-Than-Significant with Mitigation Incorporated.¹⁵

In addition, according to Section 15126.4(b)(1) of the Public Resources Code (CEQA), if a project adheres to the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* (the Standards), the project’s impact “will generally be considered mitigated below the level of a significance and thus is not significant.”

SECRETARY OF THE INTERIOR’S STANDARDS FOR REHABILITATION

The *Secretary of the Interior’s Standards for the Treatment of Historic Properties* (Secretary’s Standards) provide guidance for working with historic properties. The Secretary’s Standards are used by lead agencies to evaluate proposed rehabilitative work on historic properties. The Secretary’s Standards are a useful analytic tool for understanding and describing the potential impacts of proposed changes to historic resources. Projects (or in this case, Plans) that comply with the Secretary’s Standards benefit from a regulatory presumption that they would not result in a significant impact to a historic resource. Projects that do not comply with the Secretary’s Standards may or may not cause a substantial adverse change in the significance of a historic property.

In 1992 the Secretary’s Standards were revised so they could be applied to all types of historic resources, including landscapes. They were reduced to four sets of treatments to guide work on historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

¹¹ Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.

¹² CEQA Guidelines subsection 15064.5(b).

¹³ CEQA Guidelines subsection 15064.5(b)(1).

¹⁴ CEQA Guidelines subsection 15064.5(b)(2).

¹⁵ CEQA Handbook, 2.1.6-2, http://www.ucop.edu/ceqa-handbook/chapter_02/pdf/2.1.6.pdf

Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.

Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.

Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods.

Reconstruction re-creates vanished or non-surviving portions of a property for interpretive purposes.¹⁶

Typically, one set of standards is chosen based on the proposed Project (or Plan). In this case, the proposed Plan is focused on adapting a historic property to a new use and user group. Additionally, the Alma College site represents multiple eras of history that evolved in a vernacular fashion, responding to the needs of the tenants. Therefore, the *Standards for Rehabilitation* are applied.

The Guidelines for the Treatment of Cultural Landscapes

The *Guidelines for the Treatment of Cultural Landscapes* (the Guidelines) illustrates how to apply the four treatments detailed above to cultural landscapes in a way that meets the Standards. Per the Guidelines, a successful Rehabilitation will see that most of the character-defining features and materials of a historic landscape are protected and maintained, but a determination is made prior to work that a greater amount of existing historic fabric has become damaged or deteriorated over time and, as a result, repair and replacement may be required.¹⁷ The Rehabilitation treatment also allows for the use of substitute materials in the replacement of historic features, and for a new contemporary use through alterations to existing features and compatible new construction.

The Guidelines also includes special consideration for work that must be done to meet accessibility, health and safety, environmental protection, or energy efficiency requirements. Typically, work undertaken to meet these requirements is: "not part of the overall process of protecting cultural landscapes; rather, this work is assessed for its potential impacts on the cultural landscape."¹⁸ As stated earlier in this section, an "impact" would be a change to the landscape which impairs the property's eligibility for inclusion in the California Register.

¹⁶ <http://www.nps.gov/tps/standards/four-treatments.htm>

¹⁷ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/rehab/approach.htm>

¹⁸ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/special.htm>

V. ANALYSIS OF IMPACTS

The following Impact Analysis includes analysis of both the Preferred Plan and the Alternative Plan, both of which are outlined in PGAdesign's Rehabilitation Plan document. The analysis will determine if either proposed plan complies with the Standards and if they would significantly impact the property's ability to convey its historic significance as a cultural landscape.

PREFERRED PLAN

The Preferred Plan (referred to as "Scheme B" in the Plan document) for the Alma College Cultural Landscape includes the following scope items:

Existing Features

Vegetation:

- Clear the Meadow of invasive spaces and preserve the Lily Pond and Roman Plunge remains, restore the arbor and the row of conical coniferous shrubs on the long side of the meadow;

Circulation:

- Rehabilitate the central path of the former radial path system near the Upper Lake, and interpret the rest of the radial paths with rows of planted evergreen shrubs;
- Rehabilitate the pedestrian path system and terracing along the central spine of the campus;
- Retain the terrace along the south/southeast façade of the 1950 Library Addition and rehabilitate the clay tile stairs along the southeast edge of the terrace;
- Rehabilitate the covered walkway along the north facades of the Chapel and the 1934 Library buildings;

Buildings, Structures, Site Furnishings, & Objects:

- Rehabilitate the 1909 Chapel;
- Stabilize and retain the 1934 Library structure and roof as an open-air pavilion for visitor use;
- Strengthen the north retaining wall, stabilize broken ends of south retaining wall;
- Retain the foundations of the Dormitories to mark their historic location and for interpretation;
- Demolish the remaining structures, walls, and roofs of the Classroom Building, Garage, and 1950 Library Addition due to their proximity to the fault line and severely deteriorated conditions. Retain their foundations to mark their historic location and for interpretation;
- Stabilize the extant carport columns and walls at the rear of the Residence ruins;
- Rehabilitate and interpret St. Joseph and Marion shrines and accompanying gardens;

Water Features:

- Rehabilitate the fountain basin near the Residence ruins;

New Features

Vegetation:

- Establish a vegetation management program that involves retaining introduced trees and removing encroaching natives from the campus core, removing introduced plants from native forest areas, and controlling weeds;
- Introduce buffer shrub plantings along the south retaining wall as a barrier to limit potential impacts in the case of a seismic event;
- Bring the forest up to the edge of the developed portion of the Alma College site;

Circulation:

- Provide new vehicular entry from Bear Creek Road in the vicinity of the southwest side of Upper Lake;

- Provide parking for about 60 cars via the new entry from Bear Creek Road;
- Introduce new pedestrian circulation to ensure the site is fully accessible;
- Provide for site security, with a particular focus on significant level changes at retaining walls and building footprints;

Buildings, structures, site furnishings, & objects:

- Provide picnic areas
- Interpret the Residence ruins with new partial walls and pavers;
- Incorporate new visitor amenities including visitor information, science education facilities, and flush toilets (the toilets will likely be located in the rehabilitated Chapel building);

Water Features:

- If feasible, potentially construct a “pontoon” platform in the northwest side of the Upper Lake for science education, collection of water samples, and site viewing.

Additional items that relate to finding project partners and topics for reinterpretation are also outlined in the Preferred Plan. They are not included in this portion of the Technical Report as they do not have the potential to impact the character- defining features or materials of the subject property in their implementation.

Analysis of Preferred Plan – Secretary of the Interior’s Standards for Rehabilitation

The following section includes an analysis of the proposed Preferred Plan under the *Secretary’s Standards for Rehabilitation*.

Rehabilitation Standard 1: *A property will be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

The Alma College site is being repurposed for use as a low-intensity recreational area within the larger Bear Creek Redwoods Preserve. It appears that the site will function as a welcome point and visitor center, with trail heads and interpretive information available.

The site formerly functioned as a lumber milling site, a private estate, and a school campus. It currently sits in a state of ruin, having been abandoned for several decades. The site’s re-use as part of an open space preserve will not require the heavy removal or reconstruction of its historic features. Rather, a low-intensity recreational use allows for the stabilization and interpretative of the site’s historic core. Furthermore, given the natural setting surrounding the Alma College site, an outdoor recreational area is an appropriate choice for its re-use. It does not require extensive new construction or alteration of the site and takes advantage of the existing environment. While the new use may require the insertion of new features such as picnic areas, accessible toilets, and security rails, it seems as though these interventions will require minimal change to the defining characteristics.

Therefore, the Preferred Plan complies with Rehabilitation Standard 1.

Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features and spaces that characterize a property shall be avoided.*

The first Guideline for the rehabilitation of Cultural Landscapes recommends “*identifying, retaining, and preserving the existing spatial organization and land patterns of the landscape as they have evolved over time... This includes the size, configuration, proportion, and relationship of component landscapes... such as a terrace garden,... or*

*forest-to-field patterns.*¹⁹ Therefore, analysis of the Plan under this standard will focus on the proposed treatment of those character-defining features that contribute to the historic spatial organization of the property. The Preferred Plan seeks to restore the pedestrian paths, terraces, and historic tile-paved stairs that help to define both the central pedestrian spine and the axial relationship of the former campus to the Upper Lake. The Preferred Plan also includes the restoration of the pedestrian paths that radiated out from the Upper Lake during the POS. Where historic radial paths are non-extant and are not proposed for restoration, evergreen shrubs will be used to imitate the historic division of space.

Vegetation that has encroached on the historically open spaces of the cultural landscape would be removed, and a vegetation management plan would be implemented to maintain the open and planted spaces that characterize the site. Blue cedars and Italian cypress trees that date to the POS would be maintained in place.

The Preferred Plan would rehabilitate and re-use a secondary entrance point that dates to the estate period at the southwest edge of the Upper Lake, off Bear Creek Road. And the sequence of landscape features at the southeast end of the property including the Meadow/Lily Pond/Roman Plunge will be also rehabilitated and interpreted. The formal sequence of landscape features comprising the Lily Pond, a pergola, and Roman Plunge is currently in a state of ruin. The Plan would seek to preserve and stabilize the ruins and control encroaching vegetation in the vicinity.

The Dormitories and the Residence are no longer standing, having been demolished and destroyed by fire respectively. Their extant foundations will be preserved, and interpreted. The Preferred Plan would demolish the Classroom Building, the Garage, and the 1950 Library Addition buildings down to their foundations, due to severe deterioration and in the case of the classroom, its proximity to the fault lines. The tile porch pavers along the north side of the classroom building will be preserved along with the foundation of the building, and interpretation of the buildings is proposed. The Classroom Building was listed as a *significant* element in the Conditions Assessment document, while the Garage and 1950 Library Addition were listed as *contributing*. The demolition of these three buildings has the potential to impact the historic resource through the removal of contributing features and altering the spatial organization. However, the retention of their foundations and the adjacent walkways minimizes their loss through allowing the spatial arrangement of the former campus area of the property to be maintained. Lastly, the Preferred Plan proposes to remove the walls of the 1934 Library- retaining only the structure and the roof. The 1934 Library building was also listed as *Significant* in the Conditions Assessment document.

The Preferred Plan proposes to mitigate the loss of the above character-defining features by conveying the history of the buildings through on-site interpretative materials. An Interpretive Plan has not yet been developed, and is included as a Plan Improvement Measure in section six of this report: **Project Improvement Measures**. Although the three-dimensional spatial organization of the Cultural Landscape will be altered by the demolition of the buildings' walls and roofs, retention or their foundations will continue to define the layout of the landscape and guide circulation throughout the site, and their interpretation will help convey the developmental history of the cultural landscape.

In sum, while the Preferred Plan does propose the removal of some character-defining features, a majority of extant features (including circulation patterns, the natural setting, water features, and site furnishings) and the overall spatial arrangement of the site will be retained and will continue to convey the cultural landscape's historic character, aided by educational interpretation. Furthermore, those features scheduled for partial demolition date to the Jesuit era of the site, and several other

¹⁹ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/rehab/spatial.htm>

character-defining features that convey the character of that time period will be retained and rehabilitated under the Plan (further discussion on this is included under Standard 4). Lastly, many other character-defining features which are only partially intact, such as the radial paths around the Upper Lake, open spaces which have been overtaken by vegetation, and the secondary entrance of Bear Creek Road will be rehabilitated, thereby re-establishing some elements of the spatial organization and land patterns which have been lost over time. Therefore, the Preferred Plan, with Plan Improvement Measures, largely complies with Rehabilitation Standard 2.

Rehabilitation Standard 3: *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other buildings, shall not be undertaken.*

With the exception of those few features scheduled for partial demo, the character-defining features of the former Alma College site will be stabilized and/or rehabilitated in place under the Preferred Plan. No features are proposed to be moved around the site, and no conjectural features or elements from other sites are being incorporated.

Where new construction is proposed, it should be designed in a contemporary but compatible style that will not distract from the historic quality of the site. The areas of the site that will see new construction (such as accessible paths) should be designed to be compatible with but not replicate historic features. It will be necessary for the lead agency (MROSD) to ensure that new construction is undertaken in a sensitive manner by working with qualified preservation professionals during the project implementation process.

The Rehabilitation Plan is a master planning-level document and does not include details on the rehabilitation of individual elements of the cultural landscape, such as the rehabilitation of the 1909 Chapel, nor does it involve specifications for new construction. Therefore, it would be appropriate to involve qualified preservation professionals in the design and review process during each phase of Plan implementation. See Section Six: **Plan Improvement Measures**, for more information.

The Interpretive Plan included as one of the Improvement Measures, mentioned under Standard 2, will illustrate the historic appearance and functions of character-defining features and will also help the Alma College Cultural Landscape to be understood as a record of its period of significance. Therefore, with Plan Improvement Measures, the Preferred Plan complies with Rehabilitation Standard 3.

Rehabilitation Standard 4: *Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.*

The Alma College cultural landscape has a period of significance starting in 1850 and extending through 1951. This timespan saw several eras of development on the site, all of which contribute to the significance of the cultural landscape. The Rehabilitation Plan breaks down the eras of development as such: the Milling Period (1850s-1880s); the Flood/Tevis Estate Period (1887-1934), and the Alma College or Jesuit Period (1934-1969).

Features from each period are being rehabilitated as part of the Preferred Plan is outlined here-

- Milling/Lumber period: the Upper Lake, Bear Creek Road, and the naturally wooded setting surrounding the developed ridge.
- Estate period: Ornamental vegetation, the north and south retaining walls, the pedestrian path system and terracing of the central spine, the Residence foundation, the Chapel (former

Library), the 1934 Library structure and roof, and the sequence of landscape features including the Meadow/Lily Pond/Roman Plunge, among others.

- Jesuit period: Ornamental vegetation in selected areas, the St. Joseph and Marion shrines, the foundations of the Dormitories and the foundations of the Classroom Building, and the 1950 Library Addition.

No one period of development appears to be favored in the Preferred Plan, as the elements of each era built upon the previous one. Features from later periods within the POS that have acquired significance in their own right are recommended for treatment in the Plan. The minor changes that have occurred on the site since 1951 have not acquired historic significance. Per the project description outlined in the Preferred Plan, the rehabilitation will allow the property to continue to be read as a layered historical landscape.

Therefore, the Preferred Plan complies with Rehabilitation Standard 4.

Rehabilitation Standard 5: *Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.*

As discussed under Standard 2, it is largely the spatial arrangement and the layered history of the site that allows the former Alma College campus to convey its significance as a cultural landscape. The Preferred Plan retains the site's overall spatial arrangement through the rehabilitation and rehabilitation of features that contribute to the organization of the landscape.

The site retains several structures, water features, site furnishings, and other character-defining features that will also be preserved or rehabilitated under the Preferred Plan. These features include, but are not limited to: the tile steps to the south of the 1934 Library building, the covered walkway along the north facades of the 1934 Library and the 1909 Chapel, the fountain basin near the residence ruin, the Upper Pond, two shrines, and several targeted areas of ornamental vegetation. Overall, a majority of the property's character-defining features will be retained under the Preferred Plan. However, the partial demolition of several buildings, including the garage, the 1934 Library, and the Classroom building would result in the loss of character-defining features that also illustrate construction technique and craftsmanship. This is most evident in the proposed demolition of the 1950 Library, which is the only concrete modernist building on the former campus and therefore a unique example of construction technique and craftsmanship within the cultural landscape.

While it is understood that the location of the buildings which are scheduled for partial demolition near the fault and trace lines limit their potential for reuse, the Preferred Plan does not comply with Rehabilitation Standard 5.

Rehabilitation Standard 6: *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*

As discussed under Standard 2, several features at the Alma College site are failing and deteriorated. These features are primarily buildings which have been abandoned for decades and/or have experienced seismic activity. Replacement of these features does not appear within the rehabilitation approach. Rather, the Preferred Plan largely relies on stabilization of deteriorated features to rehabilitate the Cultural Landscape. Where rehabilitation or repair of features is recommended, such as the 1909 Chapel, the Plan does not fully outline the scope. The Plan should note that

rehabilitation and repair methodologies must abide by the Standards, and require the involvement of qualified preservation professionals in the design and review process to ensure that the Standards are adhered to on the individual project-level. The rehabilitation of specific elements within the cultural landscape may involve the repair and replacement of materials and features, requiring Preservation Maintenance or Monitoring. This approach is outlined under Section Six of this report, **Plan Improvement Measures**.

The Preferred Plan proposes the removal of some deteriorated features which have been determined to be beyond repair or replacement. Per the Guidelines, “In order for the landscape to be considered significant, character-defining features that convey its significance in history must not only be present, but they must also possess historic integrity.”²⁰ The former Alma College Site has been fully documented and evaluated for historic significance and historic integrity. It has been determined that none of the buildings which are scheduled for partial demolition under the Preferred Plan retain enough integrity to be considered individually eligible resources. It has also been determined that the buildings do not retain enough integrity to comprise a historic district. However, the Conditions Assessment authored by Knapp Architects determined that the buildings do provide value to the cultural landscape.

It is the professional opinion of Page & Turnbull that the buildings referenced above do not require repair and/or replacement to continue to contribute to the cultural landscape as character-defining features. They have lost individual integrity over time, and essentially serve as ruins in their present condition. The stabilization and retention of their foundations will continue to represent the former campus, contribute to the spatial arrangement of the site, and will also provide ample opportunity for interpretation. Furthermore, a majority of character-defining features will undergo sensitive repair, while some features (ie: the radial paths around the Upper Lake) which have been lost will be restored using historical photos uncovered during prior documentation. Therefore, the Preferred Plan, with Plan Improvement Measures, complies with Rehabilitation Standard 6.

Rehabilitation Standard 7: *Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, will be undertaken using the gentlest means possible.*

As previously stated, the Preferred Plan was written at the master planning- level to guide future facility and management decisions. Therefore, the Plan does not include a detailed discussion of the chemical or physical treatments proposed for the rehabilitation of character-defining features. Such a level of detail is more appropriate to individual project planning and review during Plan implementation. Detailed treatments would be included in a Preservation Maintenance or Monitoring Plan. Further discussion is included under Section Six of this report, **Plan Improvement Measures**.

As written, it cannot be determined at this time whether or not the Preferred Plan complies with Standard 7. However, with Plan Improvement, the Plan complies with Rehabilitation Standard 7.

Rehabilitation Standard 8: *Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.*

Archaeological resources appear to have been outside the scope of the Alma College Cultural Landscape Rehabilitation Plan. Following conversations with representatives from MROSD, it is

²⁰ http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/preservation_planning.htm

apparent that full protection of both existing and potential Archaeological Resources is included in the Draft Bear Creek Redwoods Preserve Master Plan document (Preserve Plan).

The Preserve Plan includes appropriate mitigation measures for both the unexpected discovery of Archaeological and Paleontological materials and the application of the Native American Burial Plan. Therefore, as written, it cannot be determined at this time whether or not the Preferred Plan complies with Standard 8. However, when considered in combination with companion planning documents, the Plan complies with Rehabilitation Standard 8.

Rehabilitation Standard 9: *New additions, exterior alterations, or related new construction will not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the historic integrity of the property and its environment.*

Several new features will be constructed on the property to allow it to act as an entry point to the Bear Creek Redwoods Preserve. The new features will include educational and interpretive signage, picnic areas, accessible paths, and parking surfaces. Furthermore, the 1909 Chapel is potentially slated to act as a classroom or interpretive center, which will require new accessible toilets among other alterations.

Most of the proposed new construction is small scale and related to future interpretation of the site or conversion of the site into a public recreational facility. This type of new construction is unobtrusive and generally considered to be standards compliant under the Rehabilitation treatment. However, one new feature that has the potential to impact the historic character of the site is the proposed parking surface at the south side of the Upper Lake. Historically, parking areas were peripheral and not located within the central alignment of the former campus. Furthermore, the area where the parking surface is intended to be located is part of a historic system of designed lawns and paths that radiated out from the Upper Lake and dated from the Estate period of the landscape. This system is unique within the landscape. Including a parking surface around the Upper Lake will break up the intended pattern of lawns, hedges, and paths which historically defined the area.

Presumably the lot was located here because it was a relatively graded surface that is large enough to support a large number of vehicles. The Preferred Plan attempts to mitigate the impact by shaping the parking surface to resemble the historic lawns, but the intervention is too noticeable and remains incompatible. Per the Guidelines, designing and installing new structures, furnishings, or objects when required by the new use, should be compatible with the preservation of the historic character of the landscape. More specifically, it is not recommended that new structures, furnishings, or objects are located in a way that detracts from or alters the historic character of the landscape.²¹

Therefore, the Preferred Plan does not comply with Rehabilitation Standard 9.

Rehabilitation Standard 10: *New additions and adjacent or related new construction shall be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

The new construction outlined in the Preferred Plan appears as if it could be removed without impacting the essential form and integrity of the historic property. As discussed under Standard 9, the proposed parking surface directly impacts historic materials that contribute to the overall

²¹ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/rehab/structure.htm>

character of the site. Yet, it does not impact the site to the point where the cultural landscape's form and integrity as a whole are unreadable. The linear orientation of the site with a central terraced spine lined by buildings (or building foundations) remains apparent.

Therefore, the Preferred Plan largely complies with Standard 10.

In sum, the Preferred Plan fully complies with Rehabilitation Standards 1, 4, 8, and 10. With appropriate Plan Improvement Measures, the Preferred Plan would comply with Standards 2, 3, 6, and 7. And the Preferred Plan does not comply with Standards 5 or 9.

Analysis of Preferred Plan - Specific Impacts

As the above analysis illustrates, with proposed improvement measures, the Preferred Plan appears to be in overall compliance with eight out of ten of the *Secretary of the Interiors Standards for Rehabilitation*. As stated under section four, **Evaluation Framework**, projects that adhere to the Standards will generally be considered mitigated below the level of a significant impact. Because the Preferred Plan does not adhere to all of the standards, additional analysis is required to determine if the Preferred Plan results in significant adverse impacts to historic resources under of CEQA.

The significance of an historical resource is materially impaired when a project “demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance” and that justify or account for its inclusion in, or eligibility for inclusion in, the California Register.²² For a property to retain its eligibility for the California Register, it must have both historic significance and sufficient integrity to convey that significance.

Integrity is defined in this context as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.”²³ Seven aspects of integrity are used to evaluate a resource’s ability to convey its historic significance, including location (meaning in this context to be the place where the historic resource was constructed), design, setting (meaning in this context to be the physical environment of the historic property inclusive of its landscape and spatial relationships), materials, workmanship, feeling (meaning in this context to be the historic resource’s expression of the aesthetic or historic sense of a particular period of time), and association (meaning in this context to be the direct link between the historic resource and an important event or person).

The Preferred Plan includes overall physical changes to the historic resource, most notably expressed in the demolition to the foundation of the Classroom Building, the Garage, and the 1950 Library Addition, the partial demolition of the 1934 Library, and the proposed location of the new surface parking lot in an area of historic lawns. These alterations have the potential to result in diminished integrity of design, workmanship, and materials. However, as stated in the previous discussion of character-defining features it is the arrangement and the interrelationship of the features as they existed during the POS that is most critical to consider when formulating proposed treatment. In other words, elements or features must not be considered in isolation, but in relationship to the landscape as a whole. Thus, spatial organization and land patterns are listed first in the Guidelines.²⁴

As written, the Preferred Plan maintains integrity of location, setting, feeling, and association given the proposed treatment of historic circulation patterns, the layout of landscape features (including the

²² CEQA Guidelines subsection 15064.5(b)(2).

²³ California Code of Regulations, Title 14, Chapter 11.5, Section 4850 et seq.

²⁴ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/organization.htm>

retention of the foundations from the buildings proposed for demolition), and vegetative management. These features contribute more to the overall spatial organization and organization of features than do the individual buildings, guiding movement throughout the site and creating view corridors. Additionally, the Plan proposes retention of features from all eras of development during the extended 100 year POS, illustrating the historic land patterns of the property. Therefore, the amount of change proposed will not impact the property to the point where it can no longer convey its layered historic significance or where it would no longer be eligible for the California Register as a cultural landscape; most of the identified historic features would be retained, it would be read as a layered landscape with various past uses, and the proposed new construction is minimal and required for the change of use.

The impact posed by the demolition of three buildings, the partial demolition of the 1934 Library, and the location of the new parking surface will be lessened by the extensive Interpretation component already included in the Plan. The potential impacts of the plan would be further lessened through the recommendations posed in Section Six of this report, **Plan Improvement Measures**. While demolition is proposed for three of the items included in the character-defining features list outlined in this document, a great majority of the items are proposed for retention, stabilization, and/or rehabilitation. The Plan Improvement Measures would ensure that the rehabilitation and new construction posed under the Plan would comply with the Standards at the individual project level as projects are phased over time. As long as those features that are not slated for demolition in the Preferred Plan are retained and treated in a sensitive manner, the cultural landscape will continue to convey its significance, thereby maintaining its eligibility for inclusion in the California Register. With the proposed interpretation already offered in the Rehabilitation Plan and the additional Plan Improvement Measures outlined in the next section, the Preferred Plan will allow the property to retain its eligibility for the California Register. As such, the Preferred Plan *with Plan Improvement Measures* results in a **less-than-significant impact** under CEQA.

Analysis of Preferred Plan - Cumulative Impacts

The following discussion will focus on potential effects that the Preferred Plan may have on the setting of the nearby historic resources, and whether the effect on setting would be significantly adverse so as to render the resources unable to convey their historic significance.

CEQA defines cumulative impacts as follows:

“Cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.²⁵

Because the project specific analysis of the Preferred Plan with Plan Improvement Measures resulted in a finding of a less-than-significant impact, there is the potential that it could be considered a cumulative impact in combination with other projects in the immediate environment that also have less-than-significant impacts. However, there do not appear to be other planned projects in the vicinity, nor are there other known historic resources in the vicinity of the Alma College Cultural Landscape. Therefore the proposed Preferred Plan would not compound or increase other impacts

²⁵ CEQA Guidelines, Article 20, subsection 15355.

to historic resources in the surrounding area. In sum, the Preferred Plan does not represent a cumulative impact on the surrounding area.

ALTERNATIVE PLAN

The Alternate Plan (referred to as “Scheme A” in the Alma College Site Cultural Landscape Rehabilitation Plan) largely overlaps with the Preferred Plan. This section will only include those elements of the Alternate Plan that differ from the scope outlined above:

- Rehabilitate rather than just stabilize the 1934 Library;
- Retain and stabilize the 1950 Library Addition;
- Build two open-air structures, roofed or as open trellises, for picnicking and event use on the location of the Residence ruins;
- Provide a loop road to a new trailhead and site parking near the Roman Plunge;
- Fully rehabilitate the landscape sequence including the Meadow, the Lily Pond, and the Roman Plunge;
- Establish grapevines in the Dormitory Buildings’ footprints and orchard trees in the Classroom Building footprint.

In sum, the Alternate Plan includes the rehabilitation of more buildings and landscape features (resulting in the demolition of only the Classroom Building and the Garage), and relocates the proposed parking surface to a site below the Roman Plunge.

Analysis of Alternative Plan- Secretary of the Interior’s Standards for Rehabilitation

The following section includes an analysis of the Alternate Plan under the *Secretary’s Standards for Rehabilitation*. The analysis focuses on those standards in which the discussion is most affected by the difference in scope between the two plans: Rehabilitation Standards 2, 5, and 9. The analysis for the other Rehabilitation Standards from the Preferred Plan also applies to the Alternative Plan.

Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features and spaces that characterize a property shall be avoided.*

The Alternate Plan differs from the Preferred Plan in that it retains and fully rehabilitates the 1934 Library rather than only retaining and stabilizing the structure and roof. It also retains and stabilizes the 1950 Library rather than demolishing it to the foundation. However, the Classroom Building and the garage would still be demolished with only the foundations retained in the Alternative Plan.

Similar to the Preferred Plan, the Alternate Plan includes the partial demolition of the character-defining features, and therefore has the potential to impact the overall character of the cultural landscape. However, the Alternate Plan proposes demolition that is less concentrated in the middle of the landscape (where the Classroom building and the 1950 library overlap along the linear pedestrian axis). Under this plan, the spatial arrangement which characterizes the property will be retained. Removal of distinctive features is proposed, but does not appear to impact the overall spatial organization of the site. Additionally, under the Alternate Plan, demolition is avoided except at the buildings within 50 feet of the fault and trace lines where no occupancy is permitted. Per the Guidelines, environmental factors (such as seismic activity) and changes in land use or technology may necessitate changes to the spatial relationships over time. The interpretation scheme already included in the Rehabilitation Plan would include information on seismic activity in the area and changes that have been necessitated over time due to the location and geography of the site.

Both the Alternate and the Preferred plans would meet overall compliance with Standard 2 due to their sensitivity to the historic spatial arrangement of the former Alma College Campus. However, due to the Alternate Plan's proposed retention of more character-defining features than the Preferred Plan, it is Page & Turnbull's professional opinion that the Alternate Plan comprises a more sensitive site rehabilitation.

In sum, the Alternate Plan, with Project Improvement Measures, complies with Rehabilitation Standard 2.

Rehabilitation Standard 5: *Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.*

The Preferred Plan did not comply with Rehabilitation Standard 5 in large part because it would demolish the 1950 Library building down to its foundation along with two other buildings. While several buildings on the property date to the Jesuit era of the site, the 1950 Library building is the only modern building on the former campus. In proposing to retain and stabilize the 1950 Library building the Alternate Plan would retain a unique construction technique and example of craftsmanship that dates to the cultural landscape's period of significance. The Alternate Plan would still propose to demolish the garage and the Classroom building to their foundations, but their loss is lessened through the retention of the chapel and the 1934 library- which are representative of the same construction technique and level of craftsmanship.

Therefore, the Alternate Plan complies with Rehabilitation Standard 5.

Rehabilitation Standard 9: *New additions, exterior alterations, or related new construction will not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the historic integrity of the property and its environment.*

With regards to the proposed grapevines in the footprints of the Dormitories and Classroom Buildings, the Guidelines recommend "designing a compatible new vegetation feature when required by the new use to assure the preservation of the historic character of the landscape. For example, designing and installing a hedge that is compatible with the historic character of the landscape to screen new construction." The Guidelines do not recommend placing a new feature where it is incompatible with the character of the historic vegetation.²⁶

Grapevines and fruit trees were located at the subject property historically, particularly during the Tevis Estate period. However, it would be more appropriate to use the building footprints of the Dormitories and the Classroom Building to interpret the Jesuit period rather than the Estate period. Moreover, it seems that the small-scale orchard and vineyard would distract from the buildings' footprints. Therefore the proposed grapevines and fruit trees in the Alternate Plan have the potential to negatively impact the Alma College Cultural Landscape.

The Alternate Plan also proposes construction of two open air structures to be used for picnicking where the Residence ruins are located. This proposed new construction should be designed at a scale and in materials that are compatible with other buildings and structures on the site, per guidance provided by the Secretary's Standards and included in the Preservation Maintenance or Monitoring

²⁶ <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/rehab/vegetation.htm>

Plan described in the Plan Improvement Measures of this report. If undertaken in such a manner, the new structures would not pose an impact to the historic property.

Perhaps most importantly, the Alternate Plan removes the parking surface from the south side of the Upper Lake (as proposed in the Preferred Plan) and relocates it to the southeastern end of the linear ridge (below the Roman Plunge) which is a more sensitive and appropriate location.

The introduction of the additional grapevines and fruit trees poses a small impact to the historic resource. However, it does not appear to directly impact historic material that helps to characterize the cultural landscape. And it would be clearly differentiated as new construction. Therefore, the Alternate Plan meets overall compliance with Rehabilitation Standard 9.

In sum, the Alternate Plan largely complies with the *Secretary of the Interior's Standards for Rehabilitation*.

Analysis of Alternative Plan- Specific Impacts

Provided below is an analysis of the proposed Alternative Plan's impacts to historic architectural resources in terms of CEQA criteria (determination of significant adverse impact).

The Alternate Plan, with intended interpretive content, does not include any direct physical changes to the Alma College Cultural Landscape that would result in a substantial negative impact to its location, design, setting, materials, workmanship, feeling, or association. However, rehabilitation efforts and new construction at the individual project-level will still need to comply with the Standards in order to avoid future significant impacts to the cultural landscape.

Therefore, the Alternate Plan *with Plan Improvement Measures* will result in a finding of **no impact** to the historic resource.

Analysis of Alternative Plan - Cumulative Impacts

CEQA defines cumulative impacts as follows:

“Cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.²⁷

Because the project specific analysis of the Alternate Plan, with Plan Improvement Measures, resulted in a finding of a no impact, it would not contribute to any potential cumulative impact in the event there are other projects in the immediate environment. Therefore, the Alternate Plan does not represent a cumulative impact on the surrounding area.

²⁷ CEQA Guidelines, Article 20, subsection 15355.

VI. PLAN IMPROVEMENT MEASURES

The analysis included in this report was completed contingent on the incorporation of the below Plan Improvement Measures. If the Plan Improvement Measures are not implemented prior to the issuance of demolition and/or building and site permits, the proposed Rehabilitation Plan would not remain in compliance with the Standards and would potentially result in significant adverse change to the cultural landscape.

Because the Preferred Plan and the Alternate Plan resulted in a less-than-significant impact finding *with Plan Improvement Measures* and a no impact finding *with Plan Improvement Measures* respectively, this report includes the following measures for Plan Improvement:

- Prior to issuance of demolition permits, the project sponsor will commission an Interpretive Plan.
- Prior to issuance of approvals or building permits, the project sponsor would commission the development of a Preservation Maintenance or Monitoring Plan.
- A qualified preservation professional shall be retained in order to review design of the proposed new construction and rehabilitation of contributing features for conformance with the *Secretary of the Interior's Standards*. The preservation professional would also monitor compliance with the Preservation Maintenance or Monitoring Plan at the individual project-level.

Interpretive Plan

Both the Preferred Plan and the Alternative Plan already propose interpretive content that will allow the cultural landscape new outlets by which to convey its significance. This opportunity for interpretation would minimize the potential impacts posed by the partial demolitions outlined in the Rehabilitation Plan, but the contents and method of interpretation is not specified.

Prior to issuance of demolition permits, the project sponsor shall facilitate the development of interpretive content focused on the history and environmental setting of the affected character-defining features. For example, the interpretive content at the site of the Classroom foundation would incorporate historic photos of the building and site, a history of the Jesuit programs on the campus, and information on the nearby fault line. This content should be outlined in an Interpretive Plan. The plan should also include the proposed format and location of the content, as well as high-quality graphics and written narratives to be incorporated. The Interpretive Plan will be developed by a graphic designer or professional curator in consultation with preservation professionals. The information included in the Interpretation Plan may draw on research already completed during prior documentation of the site.

The Interpretive Plan should include onsite interpretation, such as display panels or screens installed throughout the site or curated tours. The Interpretive Plan should also explore contributing to digital platforms that are publically accessible, such as the History Pin website and iPhone application. The Interpretive Plan may be done at the site-wide level or on a project-specific basis (ie: demolition of the Classroom building).

Preservation Maintenance or Monitoring Plan

The compliance of both the Preferred Plan and the Alternate Plan laid out in the Rehabilitation Plan under the *Secretary of the Interiors Standards for Rehabilitation* heavily relies on ensuring that future individual projects identified in the Rehabilitation Plan also comply with the Standards. The Rehabilitation Plan was written at a master planning-level and did not include detailed information about the proposed rehabilitation of specific character-defining features within the cultural landscape,

such as the Roman Plunge. Therefore, it is necessary to adopt a Preservation Maintenance or Monitoring Plan that will guide future work at the project level.

Per Preservation Brief 36, *Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes* a Preservation Maintenance or Monitoring Plan is the practice of controlling change in the landscape to ensure that its historic integrity is not altered and features are not lost. This is particularly important during the long-term planning process.²⁸ An effective Preservation Maintenance or Monitoring Plan must have a focused approach. The Rehabilitation Plan outlined in this document provides a solid backbone for the approach to the former Alma College site. But more than that, the Preservation Maintenance or Monitoring Plan will have been formulated by a team with a firm understanding of preservation maintenance techniques that would allow the property owner to address issues relating to building or landscape failure, stabilization, and rehabilitation without negatively impacting the property's existing character.

A Preservation Maintenance or Monitoring Plan for the former Alma College site would streamline future treatment of features or elements in the landscape by outlining specifications for removal, retention, stabilization, preservation, rehabilitation, and restoration. Following the specifications for each procedure would allow project teams to move forward with the treatment of features as already outlined in the Rehabilitation Plan. For example, if the Alternate Plan was selected for implementation, the 1909 Chapel would be rehabilitated and the 1950 Library Addition would be stabilized. The specifications for rehabilitating or stabilizing a buildings in compliance with the Standards would already be outlined in the Maintenance Plan.

The Maintenance or Monitoring Plan should also include specifications for the treatment of unexpected discovery of archaeological evidence during the rehabilitation (per Rehabilitation Standard 8) and outline appropriately sensitive chemical or physical treatments to be used at the individual project-level (per Rehabilitation Standard 7). If this information is already contained elsewhere in a Master Plan or EIR, it can be referenced or summarized in the Preservation Maintenance or Monitoring Plan. Lastly, the Preservation Maintenance or Monitoring Plan should include information to guide future permanent maintenance staff at the site in on-going day-to-day upkeep and maintenance of a cultural landscape. An overall maintenance program can assist in routine cyclical maintenance of the landscape, such as deterioration of plant material or replacement of pavers.

Qualified Professionals

As stated above, the compliance of both the Preferred Plan and the Alternate Plan laid out in the Alma College Site Cultural Landscape Rehabilitation Plan under the *Secretary of the Interiors Standards for Rehabilitation* depend on ensuring that future individual projects identified in the Plan also comply with the Standards. Like the *Secretary of the Interiors Standards for the Treatment of Historic Properties*, the National Park Service also provides standards for professionals working in the historic preservation field. In order to implement the Alma College Site Cultural Landscape Rehabilitation Plan in a manner that is compliant with the Standards, qualified professionals who meet or exceed the Standards outlined by the NPS should be retained at the individual project-level. The *Professional Qualifications Standards* define minimum education and experience required to perform identification, evaluation, registration, and treatment activities within a historic property, such as a cultural landscape. Standards are provided for Historian, Archaeology, Architectural History, Architecture, and Historic Architecture.²⁹

²⁸ <http://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm#implement>

²⁹ http://www.nps.gov/history/local-law/arch_stnds_9.htm

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Persons meeting the appropriate professional Standard should be retained for project-level implementation of the Rehabilitation Plan within the Plan area. The preservation professional may lead the project, or work as a consultant to a larger team including experts in other fields. However, the preservation professional must be consulted in all aspects relating to the removal, retention, and rehabilitation of character-defining features at the former Alma College site. Furthermore, the preservation professional should be responsible for monitoring compliance with the above mentioned Maintenance or Monitoring Plan.

December 7, 2015

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Page & Turnbull, Inc.

VII. CONCLUSION

The former Alma College campus has been determined eligible for listing in the California Register of Historical Resources under Criterion 1 (Events) as a cultural landscape. The period of significance for the property spans from 1850 when the site began to be used to support the milling and lumber industry, extending through the early 20th century when the property was expanded and shaped by grand estate owners, up until 1951, the year after the Jesuits oversaw the construction of a new Modern library. The property has been abandoned and neglected in recent decades, to the point where no individual resources are eligible for the California Register due to loss of integrity. Yet enough remnants from each era of history associated with the site remains to result in a layered cultural landscape.

The proposed Alma College Site Rehabilitation Plan outlines two approaches for the treatment of the Alma College Cultural Landscape. Both approaches meet overall compliance with the *Secretary of the Interior's Standards for Rehabilitation* if implemented according to the outlined Plan Improvement Measures, in that they do not impact the cultural landscape to a level that it would no longer be able to convey its significance or eligible for the California Register.

The demolition of the three buildings and the introduction of a surface parking lot in the Preferred Plan result in a less-than-significant impact to the resource, while the Alternate Plan results in no-impact. Therefore, the Alternate Plan is more fully compliant under CEQA evaluative criteria. In sum, the proposed Rehabilitation Plan, when implemented in combination with an Interpretive Plan, a Preservation Maintenance Plan, and overseen by qualified Preservation Professionals (Plan Improvement Measures), will not have substantial negative impacts on the cultural landscape, and the resource will continue to convey its historic significance and retain its eligibility for the California Register. .

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PLANNING & RESEARCH
PRESERVATION TECHNOLOGY

www.page-turnbull.com

417 S. Hill Street, Suite 211
Los Angeles, California 90013
213.221.1200 / 213.221.1209 fax

2401 C Street, Suite B
Sacramento, California 95816
916.930.9903 / 916.930.9904 fax

417 Montgomery Street, 8th Floor
San Francisco, CA 94104
415.362.5154 / 415.362.5560 fax

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