

TOPANGA RANCH MOTEL Condition Assessment and Conceptual Design for Rehabilitation

Topanga Ranch Motel 18711 Pacific Coast Highway Malibu, CA 90265



Draft Report January 11, 2019 WJE No. 2018.1868



Prepared for: James Newland 225 Avenida Califia San Clemente, CA 02672

Prepared by: Wiss, Janney, Elstner Associates, Inc. 2000 Powell Street, Suite 1650 Emeryville, California 94608 510.428.2907 tel | 510.428.0456 fax



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aron Weis

Aaron Weiss, Architect

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Robert Kraus, PE

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Appendix C: Conceptual Cost Estimate



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PROJECT SCOPE

California State Parks (State Parks) would like to rehabilitate the Topanga Ranch Motel to a level of habitability that would allow a concessionaire to operate the facility as a motel. The primary goal of this study is to provide a conceptual plan and cost estimate for rehabilitation of the site and buildings of the motel complex for habitation.

State Parks has engaged Wiss, Janney, Elstner, Associates (WJE) to provide a program and conceptual design for rehabilitation of the Topanga Ranch Motel property. WJE and the project team, including PGAdesign, Landscape Architecture (PGA); Salas O'Brien, Mechanical, Electrical and Plumbing Engineers (SOBE); and Leland Saylor and Associates, Construction Cost Estimators (LSA) is providing architectural, structural, landscape, mechanical, electrical and plumbing (MEP), and cost estimating services for this project.

METHODOLOGY

Our scope of services includes the following tasks:

- Building Condition Assessment
 - Review Existing Documentation
 - Prepare Existing Condition Drawings
 - Field Condition Survey
- Historic Structures Investigation Report
 - Condition Evaluation
 - Conceptual Repair Design
 - Conceptual Repair Drawings
 - Preliminary Cost Estimate

Document Review

The following documents were reviewed as part of this study:

- Background and Eligibility Report: Topanga Ranch Motel Historical Background and Determination of Eligibility Report, California State Parks, July 29, 2009.
- Continuation Sheet: Topanga Ranch Motel Continuation Sheet Descriptions, California State Parks, May 19, 2009.
- Continuation Sheet Photos: Topanga Ranch Motel Continuation Sheet Photos, California State Parks, June 29, 2009.
- Recordation Forms: Topanga Ranch Motel Recordation Forms, California State Parks, 2009.
- Facilities Overview Report: Topanga Ranch Motel 18711 PCH -- Facilities Overview, California State Parks Angeles District, May 26, 2004.
- 1928 Aerial Photograph: 1928.tif, digital file, California State Parks records.



- 1940 Aerial Photograph: 1940.tif, digital file, California State Parks records.
- 1946 Aerial Photograph: 1946.tif, digital file, California State Parks records.
- 1956 Aerial Photograph: 1956.tif, digital file, California State Parks records.
- Folder of digital photographs: Titled 2005-Apr-06 Motel Monitoring April 6, 2005, California State Parks records.
- Folder of digital photographs: Titled 2008_Dec08 Site Visit Alexio, December 8, 2008, California State Parks records.

Site Investigation

On July 30, 2018 the design team conducted a site visit to the Topanga Ranch Motel property. The purpose of this visit was to discuss the goals for the rehabilitation project with State Parks, and to allow the design team to observe and document conditions at the site. In attendance were:

Design Team:

Aaron Weiss, WJE Cathy Garrett, PGA Andy Chan, SOBE James Zwingman, SOBE

California State Parks:

Jim Newland, Assistant District Superintendent (Project Manager) Barbara Tejada, Associate State Archeologist Rochelle Nicholas-Booth, Museum Curator Rick Matsuo, Sector Supervisor

Mr. Jim Newland discussed the history and background of the site, and the context and overall goals for the Topanga Ranch Motel property with the design team. This discussion exposed several characteristics of the site that will influence the final conceptual design, including some significant challenges which are discussed in the later Rehabilitation Project Summary section. The design team also spoke with Mr. Rick Matsuo about the maintenance history of the site, and about the site and building utilities. The team visually observed and documented the buildings and site. Access to the interior of most of the buildings was provided, where interior finishes generally concealed most of the wood framing. Observations of the building crawl spaces and foundations were also limited in many areas by cladding or lattice skirting.

WJE visited the site on two additional occasions to record detailed measurements and photographs of the buildings themselves, and to document their condition in further detail. A Matterport 3d scanner and 360-degree camera was used to scan the interior of many of the units, including at least one of each typical building configuration, and later used to produce conceptual floor plans. Finally, limited measurements of the site were made to establish the relationship of the buildings to one another.

BACKGROUND

Historic Status

The Topanga Ranch Motel is located on the north side of the Pacific Coast Highway (PCH), on the east side of Topanga Creek (Figure 1 and Figure 2). The motel consists of 23 detached wood-frame cabins currently containing 28 individual units, and 3 additional buildings including a Barn, a Shop and a Storage



Cabin. See *Figure 3* and Appendix B for an existing site plan of the property. The complex has been determined eligible for the National Register of Historic Places (NRHP) under Criterion A and Criterion C:

Originally named the Topanga Beach Auto Court, the Topanga Ranch Motel is historically significant under NRHP Criteria A for its association with the development and evolution of automobile-oriented roadside recreational activities along the Pacific Coast Highway; and the development of the Topanga Beach and Lagoon area as a popular recreational automobile-oriented tourist community from the early 1930s to the mid-1950s. The motel's hand-built cabins' vernacular style, use of readily available building materials, and spatial arrangement around an open court convey its historical significance under NRHP Criteria C as a rare surviving example of a locally owned and operated 1930's-built vernacular style automobile tourist court motel, adapted between the late 1940s to mid-1950s to meet the needs of an ever-changing public. Despite some alterations, the motel has kept its overall integrity. Its design, layout, materials, and workmanship combine to convey the feeling and association of a transitional phase in American motel development between the sprawling early 20th century autocamp and the more formal nationally franchised mid-20th century motel. Although no longer in operation as a motel, it continues to be a popular location for motion picture and television production companies filming in Topanga State Park.¹

Site History

The area around Topanga Beach was generally inaccessible to the public until 1921 when Los Angeles County (LA County) constructed a dirt road along the privately owned Malibu Ranch's coastline (Figure 4). This road, along with other road connections made to the greater Los Angeles area in Santa Monica, caused an increase in automobile and truck traffic along this new coastal route that ran past the current motel site.

Cooper's Auto Camp began operation on the site around 1924, providing small cabins and tent cabins as lodging accommodations along the east bank of Topanga Creek. Responding to public pressure resulting from the increased traffic through the area, the State of California constructed an improved concrete road along the coast from 1927 to 1929. What was known as the Roosevelt Memorial Highway included a multispan concrete bridge over the mouth of Topanga Creek (Figure 5 and Figure 6). Cooper's Auto Camp closed some time prior to 1933, when the coast highway was realigned and widened where it passes the current motel site. A significant amount of imported fill was installed along both sides of the highway and on both sides of Topanga Creek to realign and widen the highway, and to narrow the mouth of the creek. The graded fill forms a nearly flat plateau on both sides of the highway bridge was constructed to replace the existing multi-span bridge. The highway project necessitated the relocation of a number of privately leased cabins located on the eastern bank of Topanga Creek, and the State Division of Highways agreed "to preserve [some of] the buildings and place them on new foundations on the complete fill."²

The highway improvement completed in 1929 "allowed thousands of auto-tourists access to the once inaccessible Malibu coastal area's spectacular beaches and mountains and elevated the Topanga Beach area from an end-of-the line destination to a popular stop-over point along a major West Coast arterial

¹ Background and Eligibility Report, page 24.

² Background and Eligibility Report, page 6.



highway."³ A building permit application in June of 1933 likely captures the inception of what is now the Topanga Ranch Motel site, where the application describes intentions to "Alter [an] Auto Camp, [at] Roosevelt Highway and Topanga Canyon."⁴ The site operator is believed to have repurposed many of the former wood-framed cabins that were originally at the site prior to 1933, as reported by careful comparison of historic photographs described in the Background and Eligibility Report.

The Topanga Ranch Motel continued operation for four years after State Parks initially purchased the property in 2001. The Facilities Overview Report, issued in May of 2004, questioned how the motel could continue to operate based on code and water pollution violations. Articles in the Malibu Times on August 25, 2004 and April 6, 2005 document the final transition of the property to State Parks management, including eviction of the final remaining residents at the motel. The majority of the property was decommissioned, and Units 23 and 24 were renovated and combined to create Cabin-Unit 23/24⁵, which is used as a residence for State Parks staff. Based on the available reports and other photographs taken since State Parks purchased the property, many non-historic intrusions have already been removed, and many alterations that remain fall within the period of historic significance (POS), from 1933 to 1952⁶. Additionally, the landscape and buildings have deteriorated noticeably since State Parks' acquisition of the property.

Four of the original buildings at the northwestern extent of the site have also been removed due to collapse of the sloped earthen embankment in this area. The State Parks staff member who occupies the on-site residence indicated that the erosion and collapse of the embankment at the west of the site, where it is undermining Cabin-Unit 22 has noticeably progressed in the eight years that he has resided at the property. The existing landscape contains many features which date from the POS including numerous mature eucalyptus trees in extremely close proximity to many of the buildings. A number of plantings including several large trees visible in photographs taken after State Parks acquired the motel no longer exist.

The site has generally been vacant since 2005. Several of the buildings are currently used for storage. Cabin-Unit 30 also contains State Parks radio equipment that serves the area. Although all of the buildings at the site are in need of significant repair, the motel buildings and site retain most of their historic integrity.

³ Background and Eligibility Report, page 7.

⁴ Background and Eligibility Report, page 7.

⁵ Previous documentation of the property indicates the use of both *Cabin* numbers, and *Unit* numbers. Cabin numbers refer to the individual buildings with guest units, some of which contain multiple units. Unit numbers refer to the individual motel units themselves. Most of the buildings at the property contain a single unit, so the use of Cabin numbers, which differ from the Unit numbers, to identify single-unit buildings is cumbersome. The term *Cabin-Unit* is used in this report to identify buildings by the Unit number, while clarifying that the reference is to the entire single-unit building.

⁶ Background and Eligibility Report, pages 1, 21.



Figures



Figure 1. Aerial image of site vicinity.



Figure 2. Aerial image of Topanga Ranch Motel site.



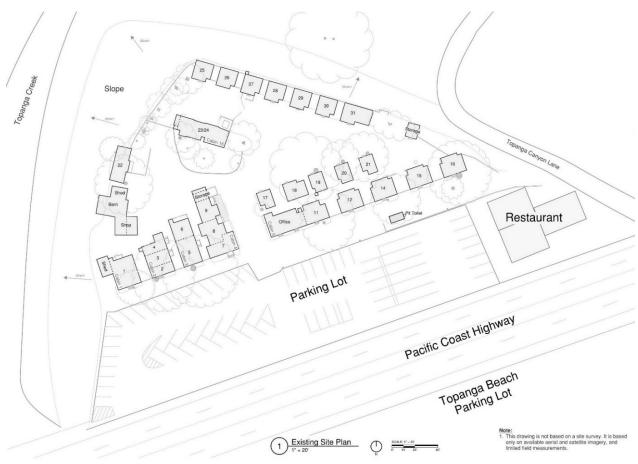


Figure 3. Existing Site Plan of Topanga Ranch Motel.



Figure 4. Topanga Creek Lagoon prior to construction of the highway and multi-span concrete bridge over the mouth of the creek. Photo taken facing southwest, ca. 1900. The present-day site is left of center, on the near bank of Topanga Creek. (Source: Santa Monica Public Library Image Archives, permission pending)





Figure 5. Cabins and tents along the east bank of Topanga Creek prior to construction of the graded plateau. Photo taken facing southwest, between 1927 and 1933. Cooper's Autocamp (present day site) is located to the right of the highway, on the near side of Topanga Creek. (Source: Randy Young Collection, permission pending)



Figure 6. Original highway bridge over mouth of Topanga Creek prior to construction of the graded plateau. Photo taken facing southeast, between 1927 and 1933. Cooper's Autocamp (present day site) is located to the left of the highway, on the far side of Topanga Creek. (Source: Randy Young Collection, permission pending)



PROJECT SUMMARY

Goals and Constraints

The primary goal of this study is to evaluate the feasibility of rehabilitating the entire property to a condition where a concessionaire can operate it as a motel. The two most significant challenges that will affect the achievement of this goal are waste-water disposal (sewer), and the stability and capacity of the existing fill soils to support the buildings; primarily along the northeastern and western embankments. The latter will depend largely on the findings and recommendations of a site-specific geotechnical investigation by an appropriately licensed geotechnical engineer, which has not been conducted at this early stage of the rehabilitation project. Other important site constraints include large, historic eucalyptus trees in very close proximity to many of the building, and the overall poor condition of the buildings themselves. All of these challenges are discussed in detail in later sections.

In view of the accepted challenges, Mr. Newland discussed some interim goals that may be more achievable for State Parks that the design team should consider. The main interim goal would be to rehabilitate, stabilize and partially upgrade the buildings to a level that would prevent further deterioration, without completely finishing the buildings or the site for occupancy. Most importantly, this interim goal would defer the significant cost and complication of providing a sewer system to the site, in the hope that other public interests may eventually contribute to the extension of the LA County municipal sewer system past the site at some time in the future. This is discussed further in the Sewer System section below.

Another possible interim approach suggested by Mr. Newland was to substitute an on-site sewage treatment and storage system that would be regularly emptied by a septic truck, in place of a complete municipalconnected system. The intent of this approach would be to operate at least a portion of the buildings as motel accommodations until a municipal-connected sewer system could be provided at a later time.

There may be any combination of intermediate steps, such as occupying any number of the buildings as motel accommodations, occupying even fewer buildings as staff housing, regularly pumping a septic storage tank, or rehabilitating the buildings to use as light storage in the interim until the municipal sewer system is extended up PCH to serve the motel site.

We assume that State Parks' ultimate goal for the site is full occupancy of all extant buildings for use as motel accommodations, operated by a third-party concessionaire. Our evaluation will focus on State Parks' primary goal of rehabilitating the site for use as a motel in an effort to determine what the practical capacity of the site is, and provide an estimated cost for rehabilitation.

The project site has multiple significant constraints, and information about some of them is limited. Our conceptual design and cost estimate are therefore based on numerous assumptions, which are discussed in further detail in later sections. Ultimately, we recommend additional detailed investigation be performed to validate or update the assumptions used in this study, and determine the appropriateness of the findings in this report as additional information about the following items becomes available.

Soil and Slope Conditions

The scope of our investigation did not include a site survey or a geotechnical evaluation, which limits our ability to address the topographic and subsurface conditions at the site. The subsurface soil conditions at the site are complex, and are discussed in detail in the later Soil and Slope Conditions section. Many of the buildings are in close proximity to the sloped embankments at the northeast and west of the site, and there



is evidence of ongoing erosion of the slope in multiple locations. Several buildings have been removed at the northwest corner of the site due to erosion of the slope there (Figure 7). The remaining buildings at the west of the site are damaged, and directly threatened by the ongoing erosion there.

There is also evidence of differential settlement throughout the site, which is likely the result of both inconsistencies in the graded fill that forms the plateau and large tree roots which have grown beneath the buildings. Several potentially significant concerns regarding the stability of the sloped embankments, and the ability of the graded fill to support competent concrete building foundations are discussed in the later Soil and Slope Conditions and Existing Buildings sections.

Sewer System

The motel and neighboring restaurant reportedly share an old septic system that is damaged and currently serves only as a holding tank that is regularly emptied by a septic pumping truck. Information about the existing septic system is limited, and a detailed investigation of the existing system was not included in this study. We assume that the existing system is inadequate for the primary goal of rehabilitating the site to operate as a motel. We also assume that replacement of the existing septic system, namely installing a functioning leech field, is infeasible given the location of the site on a mostly-paved graded plateau directly adjacent to Topanga Creek, a flood plain, and across the highway from the Pacific Ocean. State Parks has requested that the design team evaluate on-site (hopefully interim) sewage treatment and disposal options including ongoing maintenance costs, and an alternate option to connect to the nearby LA County municipal sewer system.

Review of LA County sewer system maps indicate that the municipal sewer terminates approximately one mile east of the motel site, at the intersection of Coastline Drive with PCH (Figure 8). The City of Malibu, which is located just west of the motel site, has been under increasing pressure to provide a municipal sewer system for the central areas of the city. Although Malibu has constructed a wastewater treatment facility that serves a limited area to meet their immediate needs, future development and political and environmental pressure could eventually precipitate the extension of the LA County municipal sewer system from its current terminus, west along PCH, past the Topanga Ranch Motel site, and onward to areas of Malibu. Additionally, the Woolsey Fire recently destroyed many properties north and west of the motel site. Reconstruction efforts resulting from this fire may create additional pressure to extend the LA County sewer past the motel site to support reconstruction efforts.

Extending the LA County municipal sewer for the motel rehabilitation project is included in our evaluation as an alternate option for cost analysis. The complicated political situation regarding the possible extension of the LA County municipal sewer is the main reason that the interim goal of rehabilitation without occupancy is a reasonable consideration to preserve the buildings in hopes that a municipal sewer connection may become more financially feasible at some time in the future. These considerations are discussed in more detail in the later Plumbing System Evaluation section.

Eucalyptus Trees

There are eleven large mature eucalyptus trees at the site which are directly adjacent to many of the buildings. The existing motel site was constructed from 1929 to 1933 as imported fill over the original geographical features to form a flat plateau, so the oldest trees and other landscape features were installed sometime later, likely at the same time as the buildings, beginning in 1933. The largest trees were planted during the POS and are significant character-defining features of the site which should be retained and respected. They relate directly to the layout of the buildings and provide invaluable shade to both the



buildings and the outdoor areas (Figure 9). Unfortunately, little forethought was given to their potential size when mature, as evidenced by their extremely close proximity to the buildings and the unfortunately small planters in which some are located (Figure 10).

The buildings currently have minimal, typically wood, surface-bearing foundations. Given their lack of embedment in the soil and their relative flexibility, the proximity of the buildings to the trees has caused relatively little damage to the foundations themselves in many areas. However, these same accommodating attributes have led to substantial differential settlements of the buildings and distress in the overlying buildings which have rotated and settled unevenly with the underlying soil and root movements.

New concrete foundations are necessary to provide adequate support to the rehabilitated buildings as well as to separate wood members from the ground to prevent decay. Large tree roots undoubtedly extend beneath the buildings and will conflict with the new foundations. Construction of new concrete foundations between, around and over the large historic tree roots that will likely be encountered beneath many of the buildings will be significantly more challenging than on conventional sites without roots, requiring design ingenuity, careful excavation, and substantial field adjustment during construction.

For all of these reasons, Mr. Newland suggested that the design team consider permanently relocating some of the buildings on the site by several feet, in a way that preserves their general relationships to one another while providing the eucalyptus trees with room to continue growing. Rehabilitating the buildings in their existing locations, if even possible, would not provide longevity for the site as the trees would quickly begin to damage the rehabilitated buildings.



Figures

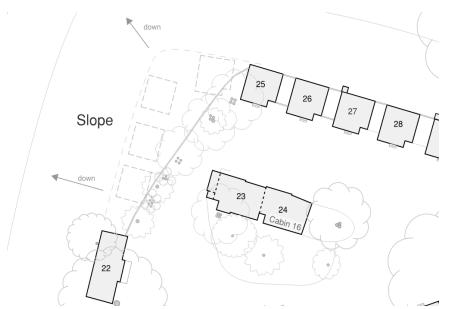


Figure 7. Northwest corner of the building site, where as many as four additional buildings were located according to historic aerial photos. These buildings have been removed due to erosion of the earthen embankment in this area.

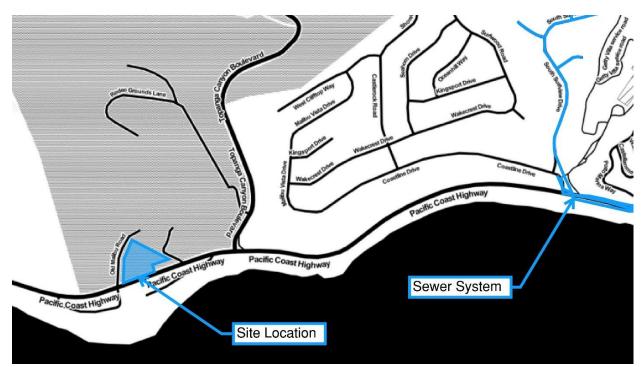


Figure 8. LA County municipal sewer system terminus, approximately one mile from site. (Source: Stamen Design)





Figure 9. Planted eucalyptus trees providing shade to buildings and outside areas. Photo taken facing east.



Figure 10. Eucalyptus trees planted in close proximity to buildings within small planters. Photo taken facing northeast.



Rehabilitation Scope

Overall, the site, landscape and buildings should be rehabilitated to depict the features and character of the Motel during its POS (1933 until mid-1950s). This study focuses on the ultimate goal of occupancy of all of the remaining buildings at the site as a motel. Due to the complexity of the rehabilitation project, the high anticipated cost of construction, and State Parks' stated goals for the property, we have divided the overall conceptual rehabilitation scope into two primary phases: a Stabilization Phase and a Rehabilitation Phase which are described below. Three alternates are included to retain some flexibility in scope and to account for uncertainty regarding existing site conditions. Additional intermediate or interim steps are not included in our evaluation. Individual sections focusing on each design discipline follow with detailed information and conceptual designs for rehabilitation.

Phase 1 Scope: Stabilization without Occupancy

The intent of this option is to stabilize the buildings to be weather-tight and structurally stable so that they can be maintained without further deterioration. Due to the logistics of addressing the challenges present at the site, this will also include partially upgrading the buildings in preparation for later occupancy. This option includes the following items:

- Construct concrete retaining wall to stabilize earthen embankments
- Construct new reinforced concrete building foundations to mitigate the observed building settlement and slope erosion and stability issues
- Permanently relocate 14 buildings (South Row West, South Row East and Courtyard South groups) approximately two feet to accommodate the large adjacent eucalyptus trees
- Temporarily relocate 11 buildings (Courtyard West and Courtyard North group) along the top of the sloped embankments to facilitate installation of embankment stabilization measures
- Remove interior finishes, salvaging trim and other historic materials where possible
- Repair and strengthen wood framing and sheathing for the resistance of wind and seismic loads
- Repair and paint building cladding and install new roofs
- Perform basic landscape and site maintenance required to maintain the property without further deterioration
- Retain existing utility service to Cabin-Unit 23/24, including the existing septic storage tank
- Retain electrical service for the existing site lighting and the State Parks radio equipment in Unit 30 to allow continued operation of these facilities in their current limited capacity

All new site and building MEP work, including providing a new sewer system would be deferred until Phase 2. Rehabilitation and replacement of interior building finishes and fixtures, and the majority of exterior site and landscape improvements would also be deferred. Salvaged materials, finishes and fixtures would be stored in the completed buildings in the interim.

Phase 2 Scope: Rehabilitate as Motel

The intent of this Phase is to expand on the stabilization work of Phase 1 to complete the rehabilitation of the entire property for a concessionaire to operate as a motel. In addition to the Phase 1 scope described above, this option would include the following items:

- Install all MEP, including service upgrades, below-grade, and in-building utilities
- Install interior finishes and fixtures in the buildings for use as guest rental units and motel support facilities
- Install a new septic collection and storage tank of sufficient size to serve the motel use, which will require frequent emptying by a septic pumping truck



- Construct accessibility upgrades at two units and the Office, including parking, site pathways and ramps
- Rehabilitate the landscaping and other site features

Alternates

In addition to the two primary phases of the conceptual rehabilitation scope described above, three alternates are included to address the most significant concerns and items for which important information is not currently available. The following alternates are provided for cost analysis purposes and further investigation and evaluation will be required to determine their applicability to rehabilitation project.

Alternate Site Scope: Remove Barn, Shop and Cabin-Unit 22

This alternate removes the Barn, Shop and Cabin-Unit 22 from the site, fences the unstable slope off, and abandons the western extent of the site to allow Topanga Creek to continue reclaiming this area.

The sloped embankment along the western extent of the site has experienced significant erosion and collapse. All three remaining buildings at the top of this western embankment are damaged or directly threatened by the erosion of the slope, and several other buildings have already been removed. This slope faces the creek, and is heavily vegetated. It is not clear at this preliminary stage in the rehabilitation project what environmental concerns regarding invasive slope stabilization construction adjacent to the creek may also impact this portion of the project.

Alternate Foundation Scope: Construct Deep Foundations

The sub-surface soil conditions at the site are complex, and generally unknown at this early stage of the rehabilitation project. Differential settlement evident throughout the site, and the proximity of the buildings to the eucalyptus trees may require deeper, and stiffer foundations in order to reduce the potential for soil-related movement. This alternate substitutes deep (pier and grade beam) foundations, in place of shallow strip foundations.

Alternate Sewer Scope: Connect to Municipal Sewer

The economics and politics surrounding the sewer connection between Malibu and LA County are complex, and beyond the scope of this study. An alternate option is included to extend the LA County municipal sewer system approximately one mile to serve the motel site. The segment of PCH from the sewer's current terminus to the motel site is flanked by costal cliffs and a narrow stretch of rocky beach. The sewer line would almost certainly need to be installed beneath the roadway itself, at significant cost and impact to traffic.



CONDITION ASSESSMENT AND CONCEPTUAL DESIGN FOR REHABILITATION

Soil and Slope Conditions

A site-specific geotechnical report was not available for our use at this preliminary stage of the rehabilitation project and a geotechnical investigation was not include in our scope of work. The sub-surface soil conditions at the site are generally unknown, and likely complex given the history of regrading and imported fill soils. A geotechnical investigation will be required to determine the actual sub-surface soil conditions at the site, as well as recommendations for the design of soil stabilization structures and building foundations.

The following sections describe the primary challenges regarding the soil conditions at the site, and a conceptual design to mitigate likely soil and slope conditions. A conceptual design for a retaining structure to stabilize the sloped embankments is included for rough-order-of-magnitude cost estimation purposes. This conceptual design is based on multiple broad assumptions, which will need to be re-evaluated by a future geotechnical investigation.

Description

The buildings at the motel are situated on top of a large, compacted, area graded into a nearly-flat plateau that was constructed as part of the highway realignment project completed in 1933. Historic photos of the site from before the construction of the graded plateau show buildings on a low, flat flood plain (Figure 11). Although the Background and Eligibility Report references "tons of compacted fill," detailed information about the composition or construction of this graded plateau is not known. While efforts may have been made for compaction of these fill soils in 1933, it is unlikely that either the fill soil composition or the achieved relative compaction of these fills would be judged adequate by modern geotechnical engineering recommendations due to the advancements in geotechnical standards and compaction techniques, equipment, and testing that have occurred in the time since original grading.

Sloped embankments form the northeast, and west edges of the triangular graded plateau where the motel is located, with Topanga Creek to the west and a grassy flood plain to the northeast, below. The embankment along the northeastern boundary of the building site is approximately 20 feet in height, consisting of the earthen fill (Figure 12), and the actual amount of fill is possibly deeper. The surface of the graded plateau is approximately 35 feet above sea level, and is presumably founded on a former lagoon and flood plain based upon review of historic photos and available reports.

Slope Stability

The earthen fill forming the leveled site terminates in steeply downsloping embankments at the northeast and west boundaries of the building site (Figure 13 and Figure 14). At the northeastern embankment, rough site measurements indicate a slope of approximately 30° (1:2, vertical to horizontal) (Figure 15). Observations and approximate site measurements of the slope at the western embankment indicate that portions of this slope are much steeper, exceeding 45° (1:1) in some locations where the slope has collapsed from apparent previous surface erosion (Figure 16). Although slope stability is dependent on a number of factors, the steepness of the observed embankments as well as the localized minor slope failures suggest the embankments may be in need of stabilization or new retaining structures. These conditions should be analyzed by a qualified geotechnical professional as part of a more comprehensive site geotechnical investigation.



A row of eight buildings is situated at the top of the northeastern embankment, and a similar row of six buildings was originally situated along the top of the western embankment according to historic aerial photographs, though only three remain. As many as four buildings at the north end of the western embankment have been removed where a large portion of the graded plateau has collapsed. Similar, smaller slope failures have occurred along most of the western embankment, undermining the northwest corner of Cabin-Unit 22 and the entire west edge of the Barn, which appears structurally unsound and unstable due to this undermining and associated building movement. Smaller slope failures have also occurred along the top of the northeastern embankment, undermining a slab on ground, and threatening the buildings along this slope in a similar manner (Figure 17). As noted in the Site History section above, the on-site staff member reports observing continued erosion and collapse of the embankment adjacent to Cabin-Unit 22 over the last eight years.

Liquefaction

Liquefaction can occur when specific soil types saturated with groundwater undergo cyclic loading, such as during an earthquake. The cyclic loading generates large pressures in the water trapped between the soil particles, in some cases reducing contact pressure between soil particles to the point where the soil liquefies, or behaves in a flowable, nearly-liquid manner. This liquefaction temporarily decreases the soil's strength and stiffness, undermining the soil's ability to support building foundations. Liquefaction can cause significant vertical and horizontal displacements and significant damage to overlying buildings, retaining structures, and even subterranean utilities such as piping and sewers. Where soils are unconfined at an edge, such as the embankments surrounding the site, liquefaction and the accompanying temporary loss of strength can result in slope failures with substantial lateral displacements of the liquefied soil, known as lateral spreading.

The potential of a soil to liquefy is a complex function of a number of factors, including soil type, presence of finer or cohesive soil particles, age, and porosity of underlying or overlaying soil types. Ultimately, a geotechnical investigation will be required to determine the actual risk of liquefaction at the site, which will likely require soil borings to evaluate the composition and characteristics of the sub-surface soil conditions, including those of the native soils underlying the earthen fill. The results of such an investigation and subsequent geotechnical recommendations will have a significant bearing on the scope and cost of foundation and slope stability improvements needed at the site.

Differential Settlement

One characteristic of earthen fill, particularly where compaction is poor, is the tendency for differential settlement to occur as inconsistencies in the composition, compaction, or moisture content of the fill soils result in differing vertical settlements under portions of the buildings. This differential settlement results in buildings tilting out of level, and more detrimentally, in relative deformations being imposed on the building foundations and structures, which can lead to damage to structural and non-structural elements. Poor or inconsistent compaction during installation, and the presence of large sub-surface tree roots, can exacerbate this effect.

Many of the buildings at the site have experienced differential settlement, evidenced by non-level, or nonflat floors, non-plumb walls, racked doors and windows, and excessively cracked concrete floor slabs with visible vertical offsets across cracks. While differential settlement and associated damage to the buildings has already occurred, it is likely to continue over the site following any future rehabilitation of the buildings. For this reason, competent and robust foundations should be constructed under the leveled buildings to mitigate the effects of any future settlement on the buildings due to soil or root movement. Specific recommendations on the design requirements for such foundation systems should be provided as part of a



site-specific geotechnical investigation prior to their structural design. Building foundations are discussed in detail in the later Existing Buildings section.

Conceptual Design

Site Retaining Wall

From our site observations it was apparent that the sloped embankments along the northeast and west boundaries of the building site are unstable. The work to mitigate this is likely to be a significant cost for implementing the final rehabilitation project; therefore, we have included a conceptual design for a site retaining wall along sections of the embankments where buildings are located. The intent of the conceptual retaining wall design is to get rough, order-of-magnitude, pricing to incorporate into the decision process.

Since a geotechnical investigation was not included in our current scope we based our conceptual retaining wall design on a number of conservative assumptions about the site conditions, including:

- The earthen fill is likely composed of poorly compacted sand or clayey sand;
- Native soil in the area is likely loose wind-blown sand over weathered, weak rock at highly variable depths;
- The native soil beneath the earthen fill at the site, for which essentially no information about composition is known, may have been deposited in an inland lagoon, and could contain a variety of materials including organic deposits, sand or silt;
- That soil-anchors of a sufficient strength can be installed to support the top of the retaining wall.

A full geotechnical investigation will ultimately need to be performed to establish the final design parameters, and final mitigation measure could change based on future investigation. The intent of the retaining wall concept provided in these studies is to be sufficiently conservative, relative to cost, and to illustrate the potential intrusions into the historic landscape needed to address the slope stability issues.

A conceptual design for a concrete secant pile retaining wall is included in Figure 18 and additional details are included in Appendix B. A secant pile retaining wall uses large circular cast-in-drilled-hole (CIDH) piles, or caissons, that slightly overlap one another so as to interlock and form a planar wall structure. Alternating piles are reinforced, providing strength and stiffness to the wall. The reinforced piles extend to a depth of 50 feet from the top of slope, or approximately 15 feet below sea level. This is assumed to extend beyond the questionable soil layers and into what is presumed to be competent native rock. The intermediate (unreinforced) piles only extend to the bottom of the sloped embankment where slope retention is assumed necessary, approximately 20 feet below the top of slope. These unreinforced piles terminating at a shallower depth are assumed to allow the necessary drainage from behind the retaining structure.

A reinforced concrete tie-beam near the top of the wall further interconnects the secant piles, and allows for soil anchors to be placed at a spacing of approximately 10 feet. Installation of the soil anchors and tie-beam requires excavation at the top of the slope, and access for heavy equipment.



Figures



Figure 11. Low flood plain prior to construction of the graded plateau. Photo taken facing northeast, ca. 1930. This photo would be facing the western embankment of the present-day site. (Source: Santa Monica Public Library Image Archives, permission pending)



Figure 12. Sloped embankment of earthen fill located along the northeastern boundary of the site. Photo taken from the adjacent, lower flood plain area facing northwest.





Figure 13. Sloped embankment at northwest corner of the building site. Photo taken from the adjacent, lower flood plain near the creek, facing west. Topanga creek is beyond the bushes at the right of the photo.



Figure 14. Steep embankment at western boundary of the building site, with Topanga Creek below (to the left). Photo taken near the top of the embankment facing north.





Figure 15. Northeastern embankment with an approximate slope of 30°. Photo taken facing northwest.



Figure 16. Western embankment with an approximate slope in excess of 45°. Photo taken facing north.





Figure 17. Northeastern embankment failure, undermining a slab on ground. Photo taken facing southeast.

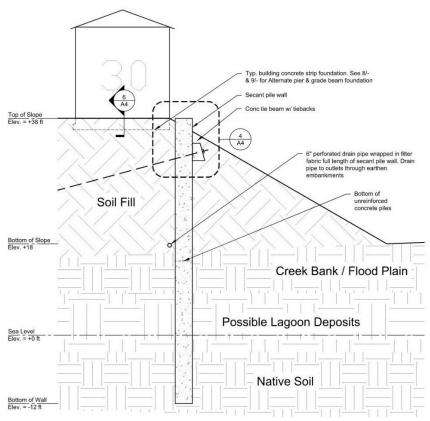


Figure 18. Conceptual design for concrete secant pile retaining wall.

LANDSCAPE ARCHITECTS

Site and Landscape

The property is historically significant for its association with the development and evolution of automobile-oriented roadside recreation activities in the Topanga Beach and Lower Topanga Canyon area. The period of significance (POS) is from 1933 to the mid-1950s. In this context the character of the landscape of the Topanga Ranch Motel is vernacular and eclectic. This landscape narrative and associated conceptual design seeks to maintain this character.

Description

As described in the previous sections, the site is located on top of a nearly-flat graded plateau with steeply sloped embankments at the northeast and west boundaries of the site. The buildings are set back approximately 40 feet from the Pacific Coast Highway, with a paved parking area separating the buildings from the road. The buildings are generally arranged around a D-shaped plan with a central island that contains lawn, plantings, and one building which currently serves as a residence for State Parks staff. A driveway once encircled the central island providing vehicular access to many of the cabins, however wood fences currently enclose a yard to the northwest of Cabin-Unit 23/24 which interrupts this driveway. The cabins vary in both their general configuration and specific layout, and are described in detail in the Existing Building section below.

Eleven large, mature eucalyptus trees are located primarily in two rows along the front of the buildings in the South Row and Courtyard South groups. The 1940 Aerial Photograph indicates the presence of these eucalyptus trees. More trees are evident in this photo than remain today. These trees were likely planted for shade as much of the public space, where social interaction could take place, was outside. The trees that remain are to be protected and pruned to ensure ongoing health. Their crowns should not be materially reduced as this kind of pruning of eucalyptus trees can alter their overall shape and arboricultural character. The three southwestern-most eucalyptus trees, those on the south side of Units 1, 2 and 5, and one at Unit 11, have been heavily pruned and require assessment and treatment by a licensed arborist with a view to rejuvenating and reshaping the trees back to their natural shape as determined by their species.

The conceptual architectural design, discussed in the Existing Buildings section below, includes the relocation of the footprint of buildings in the South Row West, South Row East, and Courtyard South groups. The intent of this building relocation effort is to provide additional space for the historically significant eucalyptus trees to grow, and to limit their impact on the cabins in the future. The trees are currently very close to and have impacted some cabins and associated entry stairs. By relocating entire rows of buildings together, the character of the cluster arrangement and the relationship between individual cabins is maintained. A modest impact to the spatial organization will be evident at the rear of the cabins where they will be four feet closer together (and touching in a few locations).

The landscape features of the extant Topanga Ranch Motel are described in the following lists of Existing Plant Species and Site and Landscape Features. These two lists, combined with the Existing Site Plan included in Appendix B, illustrate the scale and overall character of the landscape of the site today. Despite facing challenging issues of condition, the site retains very good integrity.

Existing Plant Species The following lists the plant species that currently exist at the site:

Botanical Name	tanical Name Common Name		Location	
TREES		·		
Acmena smithii	Lilipily		NW of U23	
Butia capitate	Jelly Palm	Yes	W of U17	
Chamaecyparis sp.	False Cypress		At U23-24	
Citrus sp.	Lemon		E of U22	
Cordyline stricta	Cordyline		W of U23	
Eucalyptus globulus	Tasmanian Blue Gum	Yes	Various, see plan	
Euphorbia candelabrum	Euphorbia Tree		SE of U16	
Ficus microphylla	Small-leafed Fig		S of U23-24	
Juniperus sp.	Juniper		N of U31, W and E of U23-24	
Musa sp.	Banana Palm		W of U1, N of U15	
Phoenix canariensis	Canary Island Date Palm		S of U16	
Pinus halepensis	Aleppo Pine	Yes	E of U24	
Platanus racemose	California Sycamore	Yes	N of site, in flood plain	
Salix lasiolepis	Arroyo Willow		On embankment slope of the creek	
Sambucus mexicana	Mexican Elderberry		E of U16	
Schinus terebinthifolius	Brazilian Pepper Tree		N of U25	
Washingtonia robusta	Mexican Fan Palm		W edge of site	
<u>SHRUBS</u>		·		
Aloe vera	Aloe		N and E of U22, S of U31	
Arundo donax	Giant Reed		On embankment slope to N and NW	
Cactus sp.			E of U8	
Crassula ovuta	Jade Plant		S of U14	
Hibiscus rosa-sinsensis	Rose Mallow		E of U22	
Lantana camara	Lantana		S of U29	

Botanical Name	Common Name	Dominant Species	Location
Laurus nobilis	Bay		S of Office
Monsteria deliciousa	Monsteria		NE of U16
Nandina domestica	Sacred Bamboo		E of U22
Nerium oleander	White Oleander		S of U12
Rosa sp.	Rose		S of Office/U11
Strelitzia reginae	Bird of Paradise	Yes	S of U1, 2, 5, 7
PERENNIALS Agave Americana	Century Plant		E of U9 and SE of U24
VINES			<u> </u>
Bougainvilliea sp.	Bougainvillea	Yes	Covering much of Storage Cabin, between U31 and Storage Cabin
Jasminum polyanthemum	Poet's Jasmine		Failing plants S of U26 and 28

Site and Landscape Features

The following table summarizes the site and landscape features at the site, including their historical status, contribution, integrity, and the degree to which they will be altered by the proposed conceptual rehabilitation. Both character-defining, and non-character-defining features are included, as well as several items that are no longer present at the site.

Feature	Date within POS					
		Contributing				
			Condition			
				Integri	ty	
					Project Impact	
1. NATURAL SYSTEMS	•	•			·	
Topanga Creek	Y	Y	NA	NA	No change	
Pacific Ocean	Y	Y	NA	NA	No change	
2. SPATIAL ORGANIZATION	•					
Cluster arrangement of buildings	Y	Y	Good	Good	Moderate change (relocating 3 groups)	
Close spacing between cabins	Y	Y	Good	Good	Moderate change (relocating 3 groups)	
Parking area between Motel and PCH	Y	Y	Fair	Fair	No significant change	
3. CIRCULATION						
Pacific Coast Highway	Y	Y	Good	Fair	No change	
Informal drive up to each cabin	Y	Y	Good	Good	No significant change	
Loop Drive (gravel) around Cabin-Unit 23/24	Y	Y	Good	Fair	No significant change	
White-painted curbs at Cabin entries	Y	Y	Fair	Fair	Moderate change (some repairs, other extended where buildings are relocated)	
Stairs to Units: concrete at units facing south, wood at units facing court	Y	Y	Poor	Fair	Moderate change (stairs reconstructed in-kind where buildings are relocated))	
Terracotta tile patio, dry-laid at Units 8 and 9	Y	Y	Poor to Good	Fair	Moderate change (relocated)	
Fenced pedestrian pathway from southeast corner of site, down to lower flood plain	N	N	Good	NA	No significant change	
<u>4. TOPOGRAPHY</u>						
Flat, man-made earthen plateau with sloped embankments on NE and W	Y	Y	Good	Fair	Moderate change (slope stabilization)	



Feature	Dat	Date within POS							
		Con	Contributing						
			Condition						
				Integrity					
					Project Impact				
5. VEGETATION									
Eclectic tree plantings including Butia capitata, Washingtonia robusta, Euphorbia candelabrum, Musa sp. Acmena smithii, and Pinus halepensis. See plant list.	Y	Y	Fair	Good	No significant change				
Eucalyptus globulus trees at cabin entries (11 extant)	Y	Y	Fair to Good	Good	No significant change				
Flowering shrubs and vines on trellises at many cabin entries	Y	Y	Poor	Good	No significant change (replant where missing)				
Plantings at the garden on the south side of Unit 23/24.	Y	Y	Good	Good	No significant change				
Planting on side-slopes on NE and NW embankment slopes	Y	Y	Fair	Good	No significant change				
Native Sycamore at original (lower) level of creek on N side of plateau	Y	Y	Good	Good	No significant change				
Palms - Washingtonia, Butia	Y	Y	Good	Good	No significant change				
Palms – Phoenix	N	N	Good	NA	Volunteer identified for removal				
Stands of banana palms	Y	Y	Good	Good	Potentially significant change if removed for slope stabilization efforts. Replant.				
Shrubbery with striking form or flower	Y	Y	Fair to Good	Good	No significant change				
<u>6. BUILDINGS</u>									
Cabin 1 (Unit 1)	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin 2 (Units 2 and 3)	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin 3 (Units 4, 5 and 6)	Y	Y	Poor	Fair	Moderate change (relocate)				
Cabin 4 (Units 6, 8 and 9)	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin 5 (Office and Unit 11)	Y	Y	Poor	Fair	Moderate change (relocate)				
Cabin-Unit 12	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin-Unit 14	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin-Unit 15	Y	Y	Poor	Good	Moderate change (relocate)				
Cabin-Unit 16	Y	Y	Poor	Good	Moderate change (relocate)				

eature Date within POS						
		Contributing				
		Condition				
			Integrity		ty	
					Project Impact	
Cabin-Unit 17	Y	Y	Poor	Good	Moderate change (relocate)	
Cabin-Unit 18	Y	Y	Poor	Good	Moderate change (relocate)	
Cabin-Unit 19	Y	Y	Poor to Fair	Good	Moderate change (relocate)	
Cabin-Unit 20	Y	Y	Poor	Good	Moderate change (relocate)	
Cabin-Unit 21	Y	Y	Poor to Fair	Good	Moderate change (relocate)	
Cabin-Unit 22	Y	Y	Fair	Fair	Significant change (remove for Alternate Site Scope)	
Cabin-Unit 23/24	Y	Y	Good	Fair	Moderate change (re-divide into 2 units)	
Cabin-Unit 25	Y	Y	Poor to Fair	Good	No significant change	
Cabin-Unit 26	Y	Y	Poor	Good	No significant change	
Cabin-Unit 27	Y	Y	Poor to Fair	Good	No significant change	
Cabin-Unit 28	Y	Y	Poor	Good	No significant change	
Cabin-Unit 29	Y	Y	Poor	Good	No significant change	
Cabin-Unit 30	Y	Y	Poor to Fair	Good	No significant change	
Cabin-Unit 31	Y	Y	Poor	Good	No significant change	
Barn	Y	Y	Very Poor	Very Good	Significant change (removed for Alternate 3)	
Shop	Y	Y	Very Poor	Good	Significant change (removed for Alternate 3)	
Storage Cabin	Y	Y	Fair	Very Good	No significant change	
State Parks Vault Toilet Building	N	N	Good	NA	No change	
7. LANDSCAPE STRUCTURES	1	1		1		
Fencing at perimeter of graded plateau	Y <mark>?</mark>	Y <mark>?</mark>	Fair to Poor	Fair	No significant change	
Fencing between cabins - lattice	Y <mark>?</mark>	Y <mark>?</mark>	Fair to Poor	Good	No significant change	
Fencing in front of Cabin-Unit 22	N	N	Poor	NA	Remove	
Fencing w surfboard palings	N	N	Fair to Poor	NA	Remove	

Feature	Date within POS					
		Contributing				
			Condition			
				Integrit	y	
					Project Impact	
Fencing and gate enclosing yard to N of Cabin- Unit 23/24	N	N	Good	NA	Remove	
Rail fencing enclosing garden on S side of Cabin-Unit 23/24	N	N	Good	NA	Remove	
Rail fence with round log posts at E end of site adjacent to path	N	N	Good	NA	No significant change	
Stone retaining wall at Cabin-Unit 23/24 garden	Y <mark>?</mark>	Y <mark>?</mark>	Fair	Good	No significant change	
Vehicular gate across entry from PCH parking area	N	N	Good	NA	No significant change	
Corrugated metal roof between Cabin 1 and Cabin 2	N <mark>?</mark>	N <mark>?</mark>	Fair	NA	Remove	
Hot tub and surrounding deck	N	N	Good	NA	Remove	
8. VIEWS & VISTAS						
Vista from SW corner of site at PCH to E of the south-facing row of cabins with entry in middle	Y	Y	Fair to Good	Fair to Good	No significant change	
Vista from central spaces approximately between Cabin-Units 20 and 31, to W-NW, with vegetation behind row of cabins giving a dark backdrop.	Y	Y	Fair	Fair	No significant change	
9. SMALL SCALE FEATURES						
Topanga Ranch Motel Sign in parking area - freestanding	Y <mark>?</mark>	Y <mark>?</mark>	Fair	Fair	No significant change	
Topanga Ranch Motel Sign mounted on Office	Y	Y	Fair	Fair	No significant change	
White-painted curbs at some Cabin entries	Y	Y	Fair	Fair to Good	Moderate change	
Rock edging	Y <mark>?</mark>	Y <mark>?</mark>	Good	Good	No significant change	
Brick edging	Y <mark>?</mark>	Y <mark>?</mark>	Fair	Good	No significant change	
Tree trunks as barrier, painted white. Located at N edge of parking area	N	N	Good	NA	Remove	
Parking signage and pay station	N	N	Good	NA	No significant change	
Site lighting, on telephone poles and buildings	N	N	Fair	NA	Significant change (Phase 2: replace)	
Abandoned telephone poles along N edge of parking area	N	N	Fair	NA	Remove	



LANDSCAPE ARCHITECTS

Feature	Date within POS							
		Contributing						
			Condition					
				ty				
					Project Impact			
10. NO LONGER EXISTING								
Arched entry portal spanning entry driveway with "TOPANGA BEACH AUTO COURT" sign	Y	NA	NA	NA	No change			
Approximately four cabins-units at the northwest extent of the site	Y	NA	NA	NA	No change			
Approximately four cabins-units at the northeast extent of the site	Y	NA	NA	NA	No change			

Conceptual Design

The Phase 1 scope for the project encompasses an interim solution to stabilize, partially upgrade, and weatherize the buildings in order to protect them from further decay. The landscape items to be included in the Phase 1 scope include interim protection of landscape features, both hardscape and planting. The goal is to minimize impacts on hardscape and softscape features to the extent possible, in order to achieve the work of other disciplines. For hardscape features this will mean ensuring the extant security lighting remains in functioning order and an annual removal of the buildup of leaf litter to preserve the white concrete curbs and their historic relationship with adjacent grade. For plantings this will entail minimal pruning to control potential negative impacts of planting on the buildings, and monthly soaker watering during the dry months to maintain the health of the plants. Many plantings pictured in photos from 2005 that were provided by State Parks no longer exist at the site. As plants are character-defining features, the remaining plants should be maintained so that they can continue to prosper during the interim period when the buildings are closed to use and so they can continue to convey their integrity.

An Alternate Site Scope has been identified for further consideration when the Phase 1 scope is implemented. This consists of the removal of Cabin-Unit 22, the Barn and Shop, and only limited stabilization of the receding embankment with fencing off of this area.

The Phase 2 scope includes full rehabilitation of the site as a motel. Utilities will be upgraded and the buildings restoration will be completed. Most of the landscape improvements listed below fall into this phase of work.

Work encompassed in the various phases and alternate described above are outlined below.

Phase 1 Scope

Paving, Stairs, Handrails, Planter Wall, Landscape Trellis

- 1. Protect hardscape elements from damage associated with work by other disciplines, where feasible.
- 2. Remove corrugated iron roofing/trellis covering the space between Units 1 and 2.
- 3. Remove concrete entry stairs at buildings in South Row West and East groups.

LANDSCAPE ARCHITECTS

Vegetation

- 1. Retain exiting mature eucalyptus trees and provide arboricultural care to each. Prune canopies with a focus on tree health and shaping the crown as suited to the species. This should be performed on a three- to five-year cycle for a minimum of four cycles after which time the arborist will reassess the condition and shape of the canopies of the trees. This work to be performed by a licensed arborist.
- 4. Protect all planting in place unless directly impacted by the work of other disciplines. Provide soaking with a soaker hose, or equivalent, run for 4 to 8 hours for deep root watering, one time each month during the dry months of the year. This may be overseen by the State Parks employee resident in Unit 23/24.
- 5. Retain trees where feasible along the western embankment, though some may need to be removed due to the substantial site retaining wall that is required along the top of the embankment.
- 6. Relocate 1 Butia capitata (palm) approximately 6 feet to the west-southwest of its current location near Unit 17 and the Office. This will require a suitably-sized vehicle-mounted tree spade and a crew experienced with the successful transplanting of large specimens. Retain clear passage for fire trucks to enter the court.
- 7. Remove buildup of duff and leaf litter at all buildings, and especially those with white-painted curbs. Today, the tops of the curbs appear to be flush with the adjacent soil, historically they were exposed approximately 6 inches above adjacent grade.

Alternate Site Scope

- 1. Only partially stabilize the western embankment at its northern and southern extents. Some trees may need to be removed, but trees near Unit 22, the Barn and Shop can likely be retained. Tree roots likely contribute to slope stability.
- 2. Remove Unit 22, the Barn and Shop, provide new paling fencing on the west edge of the site to limit access to the steep slope to Topanga Creek.

Phase 2 Scope

Paving, Stairs, Handrails, Planter Wall

- 1. Rebuild entry stairs to cabins slated for relocation. Match existing stair construction methods and materials. Comply with applicable codes.
- 2. Provide hand rails at all stairs. Where feasible match existing wood hand rails. Adjust design to comply with applicable codes.
- 3. Provide ADA-compliant parking, pathways, ramps and accommodations for two guest units, and to the Office, as described in the Existing Building section below.
- 4. Repair white-painted curbs site-wide.
- 5. Construct new white-painted curbs at planter areas to in-fill gaps at cabin entries where the South Row West and East groups of cabins have been relocated by 2 feet. Match existing historic curbs. Where existing curbs are beyond repair, replace curbs to match historic curbs.
- 6. Relay dry-laid terracotta paving at Units 8 and 9 approximately 2 feet to the north to maintain the relationship of the patio to the (relocated) building.
- 7. Provide new seal coat and gravel (+/- 1/2-inch diameter gravel) to all driveway areas within the court and to the south of the South Row buildings.
- 8. Resurface and stripe asphalt parking area between cabins and PCH.
- 9. Repair stone planter wall at east end of Unit 24.

Fencing

- 1. Remove non-historic fencing and gates that currently enclose a private yard on the north and northwest sides of Units 23 and 24.
- 2. Remove lattice fencing in front of Unit 22.
- 3. Remove non-historic post and rail fencing around the garden area of Units 23 and 24.
- 4. Replace or repair 6-ft high wood lattice or paling fencing between cabins, match in-kind.
- 5. Remove fencing with surfboards as palings.

Vegetation

- 1. Retain exiting mature eucalyptus trees and continue ongoing arboricultural care described in the Phase 1 scope above.
- 2. Retain other existing trees unless specifically noted otherwise.
- 3. Supplement existing plants or replant vines and/or flowering shrubs adjacent to entries at all cabins. Provide wood support structure for vines that front the cabins facing the interior court.
- 4. Remove volunteer Phoenix canariensis on south side of Unit 16 (palm with approximately 12' of brown trunk).
- 5. Retain existing plantings along the west edge of the plateau as far as feasible, as described in the Phase 1 and Alternate Site scope above.
- 6. Revegetate the plateau embankments where exposed after stabilization efforts. Revegetation to consist of hydroseeding all slopes with a native seed mix. Time seeding so that it occurs at the onset of the autumn rains. Slopes steeper than 3:1 require protection with jute mesh and fascines or equivalent.
- 7. Rejuvenate, aerate, oversow and topdress the lawn at south side of Units 23 and 24.
- 8. Continue to remove buildup of duff and leaf litter annually, as described in the Phase 1 scope above.

Signs

- 1. Restore / repaint the hotel sign on roof of the Office.
- 2. Restore the freestanding illuminated sign located in the parking area.

Miscellaneous

1. Remove telephone poles no longer in use on north side of asphalt parking lot.

Remove abandoned equipment and furniture located throughout the site.

- 3. Remove hot tub and decking installed by State Parks resident at Unit 24.
- 4. Supplement new building-mounted lighting with discrete site/security lighting that ensures sufficient light levels on the property while retaining its historic character.

Assumptions

- The period of significance is 1933 to the mid-1950s.
- Code upgrades will be integrated into the rehabilitation of features where required.
- The majority of landscape work will occur during Phase 2 when the site is to be rehabilitated for occupancy as a motel.
- Structural, geotechnical, civil, mechanical, electrical, plumbing, and architectural work is by others.
- Demolition of items other than landscape items is by others.
- Slope stabilization conceptual design is by others.



Existing Buildings

The following sections discuss the buildings according to their similarities and groupings, highlighting typical characteristics and features, and some of the more significant differences. There is significant variation between many of the buildings, and between units within individual buildings. The Building Summary Matrix in Appendix A describes the individual characteristics and variations of all of the buildings.

Description

There are currently 26 individual buildings at the site, and at one time there could have been as many as 34 judging from historic aerial photos. As discussed in the Site and Landscape section above, the cabins are generally arranged in a triangle on the periphery of the graded plateau with one cabin within the courtyard. We have organized the buildings into six main groups that are similar, to some extent, in their configuration and construction, and are generally aligned with one another. Refer to *Figure 19* below for a representation of the six main building groups, and *Figure 20 through Figure 34* in the Existing Floor Plans section below for existing floor plans of each building. Other figures referenced in this section are included in the main Figures section at the end of the entire Existing Buildings section.

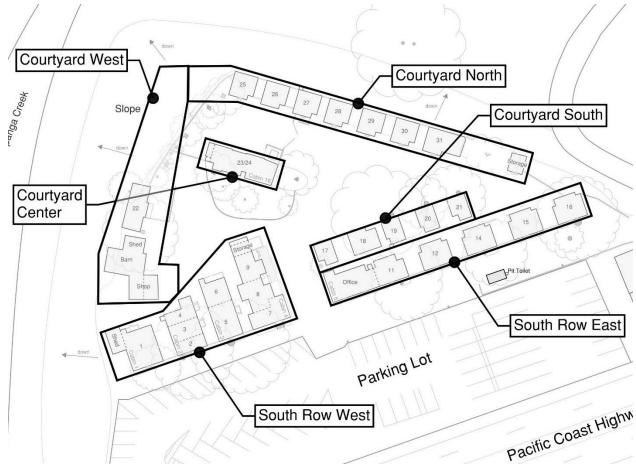


Figure 19. Site plan showing the 6 main building groups.



Building Groups

The buildings situated along the southern extent of the courtyard are organized into three groups. The South Row West and South Row East groups are both aligned along the southern boundary of the building site, at the north edge of the paved parking area, along a bearing of approximately 71° relative to true north. These two groups are bisected by the main entry driveway to the courtyard (Figure 35). The buildings in the third group in this area, Courtyard South, are also aligned along a ling bearing approximately 71° relative to true north, and are located to the north of the South Row East group, facing the courtyard to the north.

The buildings at the western extent of the building site along the top of the earthen embankment are aligned along a bearing of approximately 10° relative to true north, forming the Courtyard West group. While there are only three buildings remaining in this group, historic aerial photos suggest there may have been as many as five separate cabin-units in addition to the Barn and Shop buildings aligned along this edge of the building site (Figure 36).

The row of buildings along the northern boundary of the building site form the Courtyard North group, which is aligned along a bearing of approximately 106° relative to true north along the top of the earthen embankment. Finally, Cabin-Unit 23/24 is the sole building located in the Courtyard Center group.

South Row West

The four cabins at the southwest extent of the property are generally oriented with their long axis in the north-south direction, and are aligned along their south facades along the front of the motel property. These four buildings are the largest and have the most complex plan layout of all of the buildings at the site. Refer to *Figure 20 through Figure 22* for floor plans of Cabin 1 through Cabin 4. The buildings vary in size, with those towards the east of this group being the longest (in the north-south direction). Although these four buildings have some similarities, such as multiple units in each building (except for Cabin-Unit 1), similar framing configurations and cement plaster (stucco) cladding on their south facades, they are varied in their specific configuration, layout and general styling. Cabins 1, 3 and 4 have concrete entry steps at their south facades (see Figure 10 previously), and there are a variety of wood-framed steps (Figure 37), porches and decks at the entries to the other units at the rear of the South Row West group buildings.

The western-most building in this group, Cabin-Unit 1 contains just a single unit and has an additional storage shed attached to the west side of the building. There is a small covered entry porch at the north of the building (Figure 38) and a large sun room at the south of the building that extends across the full building width. There are entry doors into Unit 1 at both the north and south. Unit 1 is one of the larger units, including a full galley kitchen, two guest rooms and a bathroom that is contained within (internal to) the overall unit footprint.

The second building from the west, Cabin 2, contains three units (Units 2, 3 and 4). Unit 2 is accessed from the south, and Units 3 and 4 are accessed from the east. These three units are simple in their layout, consisting of just a rectangular guest room and a bathroom in each. In Units 2 and 3, the bathroom is internal to the main unit footprint, while in Unit 4, the bathroom projects outside of (attached to) the main rectangular unit footprint. There is also a water heater shed at the northwest corner of the building, attached to Unit 4.

The third building from the west, Cabin 3, contains two units (Units 5 and 6). Unit 5 is accessed from the east and Unit 6 is accessed through a small covered porch at the north which has a small exterior closet to



its west (Figure 39). These two units are generally square, with internal bathrooms. Unit 5 has an additional guest room to the south, and Unit 6 has a kitchenette.

The fourth building from the west, Cabin 4, contains three units (Units 7, 8 and 9), however Unit 9 was reportedly being used for storage, and not as a guest unit when State Parks acquired the property. Unit 7 is entered from the south and Units 8 and 9 are accessed from the east, with a covered entry porch at Unit 8 and an uncovered entry deck at Unit 9 (Figure 40). All three units have rectangular guest rooms with attached bathrooms. Unit 8 also has an exterior closet at the entry porch, and a second guest room and kitchenette. There is a large storage room at the north of the building, with an additional storage closet at the north facade.

South Row East

The main entry driveway separates Cabin 4 from Cabin 5. Cabin 5 is one of five buildings (including Cabin-Units 12,⁷ 14, 15 and 16) that are aligned along their south facades with those of the South Row West group. These five buildings are generally similar to one another in plan, containing one unit each, with the exception of Cabin 5, which is discussed below. Refer to *Figure 23 and Figure 24* for floor plans of Cabin 5 through Cabin-Unit 16. The typical floor plan for these units has an entrance provided by concrete steps from the south (see Figure 10 previously) into the living room where there is typically a sink or small kitchenette (Figure 41). A narrow attached bathroom extends across the rear of each unit (Figure 42), and the sleeping room is to the east of the living room.

Cabin 5 contains both Unit 11 and the Office. Unit 11 has a similar floor plan to the other typical units in this group except that Unit 11 does not have a partition wall separating the living and guest rooms, and it shares the same building as the Office to the west. The Office contains both a two-room motel office, and an attached studio apartment, presumably used as a residence for the motel proprietor. The plan of the apartment is somewhat similar in size and shape to the typical unit plan for this group, with an additional closet at the rear. The bathroom of the Office apartment extends farther west than the typical unit plan where it interfaces with the rear of the attached Office, which also has a second entry at the northwest corner of the building (Figure 43). There is a water heater shed at the northeast corner of the Office within the recessed space created between the Office and Unit 11.

Courtyard South

The Courtyard South group consists of five small single-unit cabins (Cabin-Units 17, 18, 19, 20 and 21) aligned along their north facades, and parallel to the other southern groups. All five buildings have similar floor plans entered via wood steps from the north with a single guest room and attached bathroom. Refer to *Figure 25 through Figure 28* for floor plans of Cabin-Unit 17 through Cabin-Unit 21. The western four buildings have similar shed roof forms (see Figure 9 previously), and Cabin-Unit 21 has a gable roof (Figure 44). Cabin-Unit 18 also has a shed-roofed addition to the east that expands the main guest room (Figure 45) and Cabin-Unit 17 is smaller than the typical units in this group. Finally, Cabin-Unit 19 has a water heater closet at the southwest corner.

⁷ Historical documents do not indicate a Unit 13 at the motel. The number 13 is commonly omitted from building floor and room numbers due to superstition and phobia. It also appears that Cabin number 13 was omitted from the designations.



Courtyard West

The Courtyard West group comprises what remains of the western extent of the site, three buildings at the south end of the original group. Refer to *Figure 29 and Figure 30* for floor plans of the Barn, Shop and Cabin-Unit 22. Based on historic aerial photos, the original group appears to have contained as many as six separate buildings along the top of the western embankment (four cabin-units, the Barn and Shop; see Figure 7 previously and Figure 36). Cabin-Unit 22, apparently created by combining two original single-unit cabins, is all that remains of these four cabin-units. Significant collapse of the earthen embankment and plateau at the northwest of the site has caused the removal of the other three original cabins, and may have also contributed to the combination of individual buildings to create Cabin-Unit 22.

In addition to the four original (two remaining, combined into Cabin-Unit 22) cabins at the west of the courtyard, a Barn with an attached shed, and an adjacent Shop building are located to the south of Cabin-Unit 22, and roughly aligned with it. Aerial images suggest that all of the original buildings in this group were relatively aligned at one point, and collapse of the earthen embankment to the west, and the combination/relocation of buildings to create Cabin-Unit 22 may have disturbed this original alignment.

The Shop building has just two rooms which are not connected to each other. The room at the east of the building is accessed from the exterior through a door at the north facade, in front of the barn. The room at the west is connected to the Barn through a doorway to the north, and also has a door to the exterior at the south. The Barn is approximately 13 feet tall, with a simple shed roof and exposed wood-stud framing. THe barn had a small shed-roofed room to the north that has collapsed. Cabin-Unit 22 appears to have originally been two separate cabins with gable roofs that were combined into a single unit with a low-sloped peaked roof connecting them the middle (Figure 46).

Courtyard Center

Although only a single building, and currently a single unit, Cabin-Unit 23/24 will be considered the Courtyard Center group. This building is located in the center of the overall courtyard, aligned parallel to the buildings in the Courtyard North group. This building also appears to be comprised of what were likely two separate original single-unit cabins. Refer to *Figure 31* for a floor plan of Cabin-Unit 23/24. Historic aerial photographs suggest that a single cabin was originally located in the center of the courtyard, aligned with Cabin 4 along the edge of the entry driveway. This single cabin is visible in the aerial photo from 1940 (Figure 36). Two separate cabins aligned parallel to the Courtyard North group are visible in the 1946 aerial photo (Figure 47), which were presumably combined some time later. Unfortunately, the image quality of the later aerial photos is poor, and it is not clear at what time these two buildings were combined.

Courtyard North

Seven similar units (Cabin-Units 25, 26, 27, 28, 29, 30 and 31) are aligned along the northeastern boundary of the site, situated at the top of the embankment with small concrete patios between them (Figure 48). Refer to *Figure 32* for a typical floor plan of Cabin-Unit 25 through Cabin-Unit 30 and *Figure 33* for a floor plan of Cabin-Unit 31 which is similar, but with a shed-roofed addition and kitchenette to the east (Figure 49). A large shrub has overtaken the former site of several additional original (pre-plumbing) units. A Storage Shed, which may have been an original, one-room pre-plumbing unit remains near the eastern extent of this group. Refer to *Figure 33* for a floor plan of the Storage Shed. The Storage Shed has beaded tongue-and-groove board wall and ceiling finishes (Figure 50), which were also observed behind damaged gypsum finishes in other Courtyard North buildings.

Historic aerial photos suggests that as many as four additional cabins may have once been located at the eastern extent of this area where the shrub and Storage Shed are now located. Historic aerial photos also



suggest that another similar cabin within this group may have been located at the northwest extent of the site, but has been removed due to collapse of the embankment there.

All of the units along the north of the courtyard have similar floor plans, which are entered via wood steps from the south (Figure 48) with a single guest room and attached bathroom at the north. The units also have a vestibule area at the northeast that is lowered one step from the main floor (Figure 51). A narrow counter separates part of the vestibule from the guest room, and an exterior door connects the vestibule to the adjacent patio located to the east of each building. In Cabin-Unit 31, which has been expanded with a shedroofed addition to the east, the vestibule contains a narrow "pass-through" kitchenette (Figure 52). The typical buildings have asymmetrical gable roofs in the front, and the vestibule and bathroom roofs are more modern with a complex shed roof and clerestory window arrangements at the back of the buildings (Figure 53 and Figure 54).

Existing Floor Plans

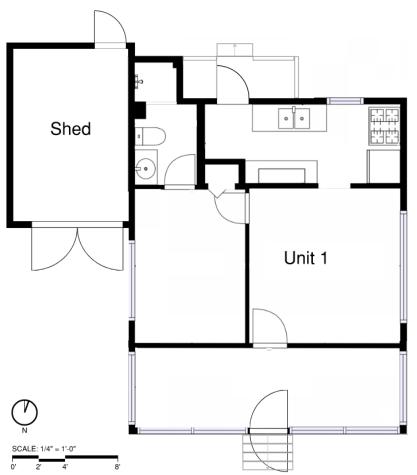


Figure 20. Cabin 1 floor plan.



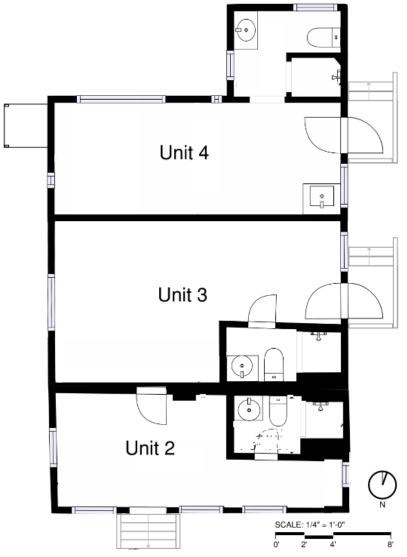


Figure 21. Cabin 2 floor plan.



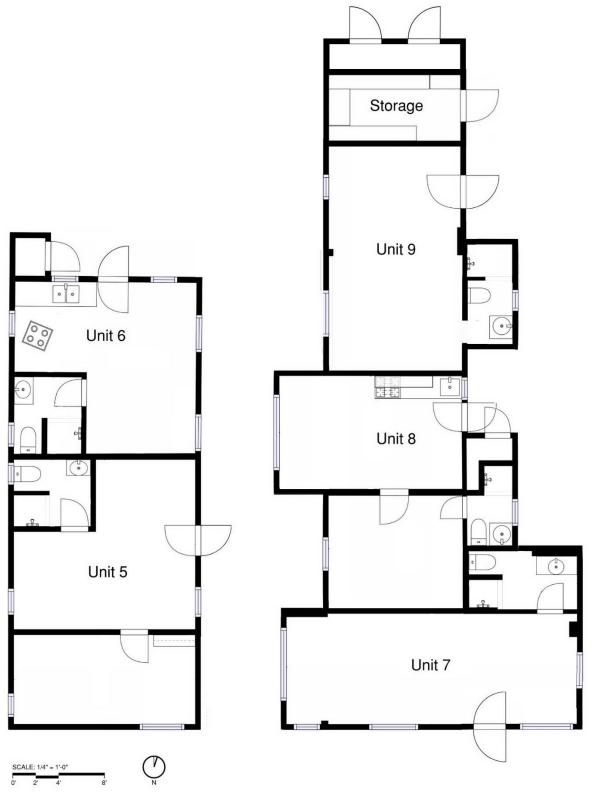


Figure 22. Cabin 3 and 4 floor plans.



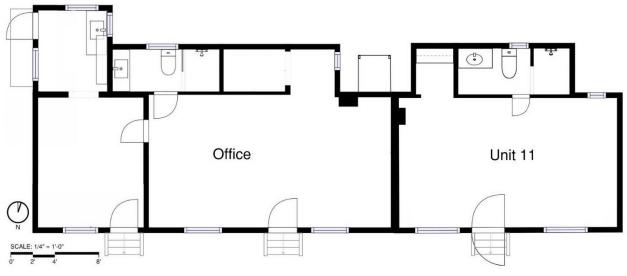


Figure 23. Cabin 5 floor plan

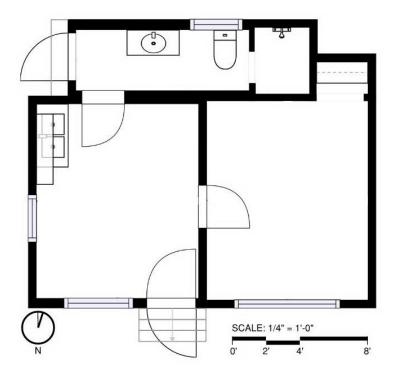


Figure 24. Cabin-Unit 12 through 16 floor plan.



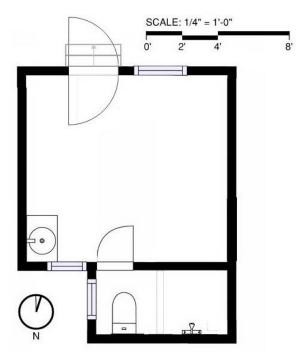


Figure 25. Cabin-Unit 17 floor plan.

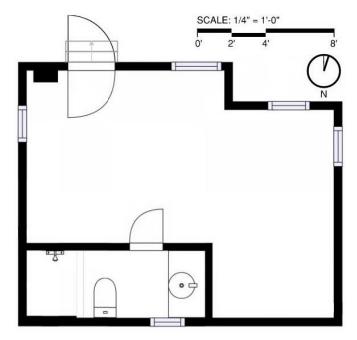


Figure 26. Cabin-Unit 18 floor plan.



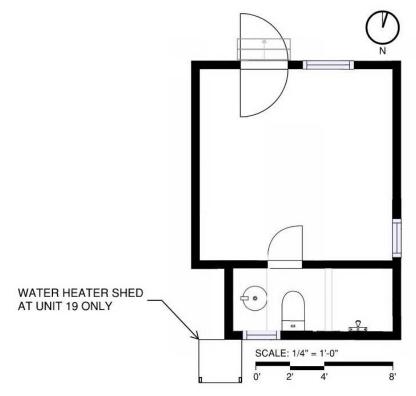


Figure 27. Cabin-Unit 19 and 20 floor plan.

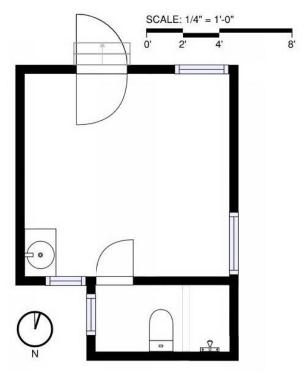


Figure 28. Cabin-Unit 21 floor plan.



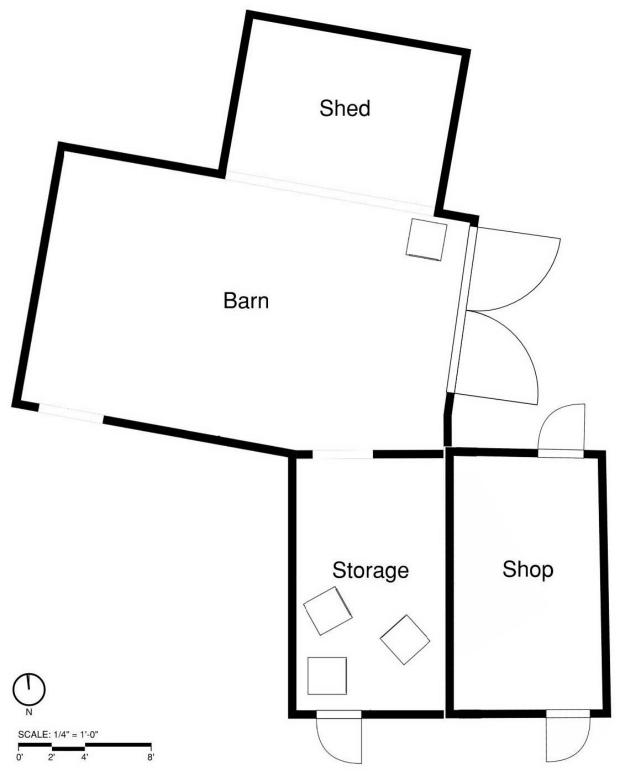


Figure 29. Barn and Shop floor plan.



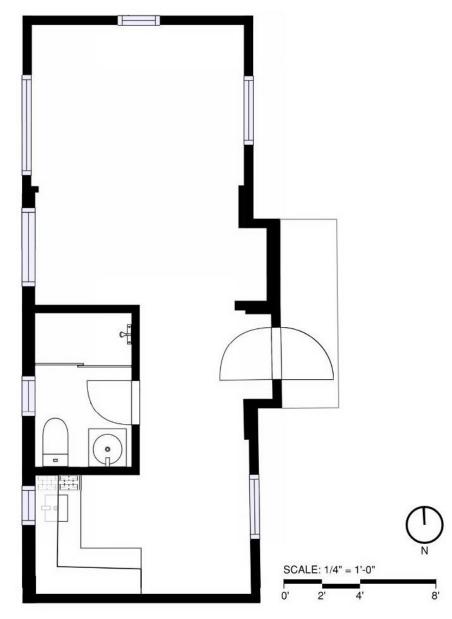


Figure 30. Cabin-Unit 22 floor plan.

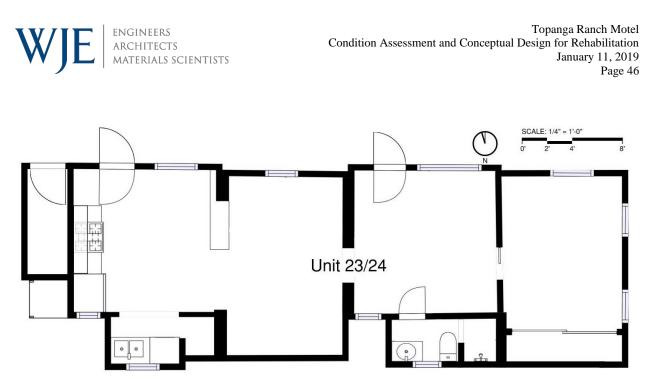


Figure 31. Cabin-Unit 23/24 floor plan.

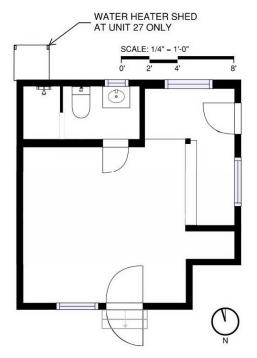


Figure 32. Cabin-Unit 25 through 30 floor plan.



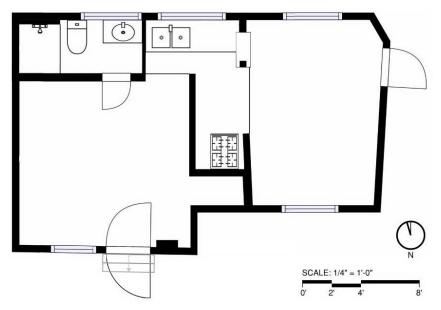


Figure 33. Cabin-Unit 31 floor plan.

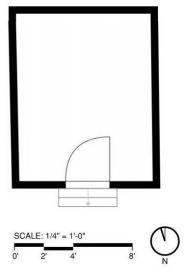


Figure 34. Storage Cabin floor plan.



Building Construction and Configuration

Building Enclosure

Exterior cladding includes a mixture of board-and-batten siding, clapboard siding, plywood siding, and smooth cement plaster (stucco). Exterior cladding is typically painted white, with red trim and accents. The buildings typically have asphaltic sheet (roll) roofing, often in multiple layers with both green and red colors. What is assumed to be the original wood shake roofing is visible beneath the asphaltic roofing in multiple locations at several buildings in the South Row groups (Figure 55). The buildings typically have roof overhangs with exposed rafter tails, except for the smaller shed-roof buildings in the Courtyard South group which do not.

The windows at the buildings also vary in both their materiality and configuration. Wood single-pane windows, in a variety of configurations, appear to have been originally installed in most of the buildings. Wood window configurations present at the site include double-hung, multi-lite fixed, single-lite fixed, casement, and sliding windows (Figure 56 through Figure 60). Many of the buildings also have aluminum single-pane sliding windows which are assumed to have replaced original wood windows (Figure 61). Two double-hung vinyl windows are located on the north elevation of Cabin 23/24, which are also assumed to have replaced original wood windows (Figure 62).

Exterior doors at the buildings are typically solid wood panel entry doors, and the units all had wood screen doors at one time (Figure 63), though most of these are heavily deteriorated, or no longer exist. Most units have wood entry steps, which may include a small deck or landing. Several units have concrete entry steps, and the Unit 7 entry steps are tiled (Figure 64). A few of the units in the South Row West group have covered entry porches.

Interior Finishes

The units are typically finished at the interior with gypsum board, particle board and plywood paneling which sometimes includes wood battens (Figure 65). Interior casing and trim is generally smaller, and rectangular in profile. Although the walls and ceilings of all of the buildings were generally finished at the interior, a few units were observed to have roof framing and sheathing above the ceiling finishes that were painted white, suggesting these areas may have been exposed at some point.

The interior finish materials vary both between buildings, and within buildings. Original floors appears to have been sheathed with 1x4 tongue-and-groove decking (Figure 66), though multiple areas were observed with plywood floor sheathing. Flooring in the units typically includes linoleum, vinyl and carpet. The Barn, Shop and a portion of the Office apartment have concrete floors.

The bathrooms in the buildings are typically small, and contain only a shower, lavatory and water closet. Plumbing is generally exposed at the exterior of the buildings and appears to have been added after their original construction.

Structural Framing and Foundations

All of the buildings at the motel are typically wood-framed, with a mixture of 1x4 tongue-and-groove decking, 1x board decking and plywood sheathing. The configuration of the stud walls vary, with many of the larger buildings constructed with a more traditional wood stud wall, with regularly spaced 2x4 studs. The smaller buildings tend to be more lightly framed, with 2x3 studs spaced less frequently, or with a



single-wall configuration which has even fewer studs. Some of these variation are described in the Building Summary Matrix in Appendix A.

Most of the buildings are supported on rudimentary wood foundations that are supported directly on the ground (Figure 67). The building floors are generally located close to grade, and in many cases the foundations and framing are concealed by cladding or lattice skirting. Where the foundations and floor framing could be observed, they generally consist of 2x4 or 2x6 floor joists spaced between 16 and 24 inches, supported by approximately 6x posts and beams, or 2x4 cripple walls. In most observed locations, the foundation posts are supported by wood sleepers or blocks laid flat on the ground, though the buildings in the Courtyard North group are supported on precast concrete surface-bearing pedestals and have concrete masonry units exposed along the base of their north facades.

Current Condition

Overall, the buildings are in poor, to fair, condition. The primary exception is Cabin-Unit 23/24, which was more-recently restored as a residence after State Parks acquired the property, and is generally in good condition. Many buildings are deteriorated in some areas due to long-term water intrusion and resulting wood decay and termite damage, and several have areas of significant deterioration to wood framing and finishes. The Barn is on the verge of collapse due to failure of the earthen embankment supporting its west wall. The buildings are typically finished at the interior, inhibiting direct observation of most of the framing, sheathing and the interior face of the cladding for evaluation.

Primarily roof leaks, and leaks around doors and windows, have caused water damage in many locations throughout the buildings (Figure 68). Many interior finishes are damaged, and limited areas of framing, sheathing and cladding are also damaged in these locations. Many of the original wood windows are deteriorated, with open or failed sash joints, damaged glazing putty, broken glass and decayed wood (Figure 69). Exterior doors are also relatively deteriorated, especially towards the bottom, and many screen doors are significantly damaged or completely missing.

The condition and apparent age of the exposed roofing materials varies among the buildings. Additionally, there appear to be numerous roofing repairs, patches, coatings, partial-reroofing, over-roofing, and other signs of haphazard maintenance and repair. Several buildings appear to have had new roofing installed more recently, and exhibit only minor distress or damage (on the visible, uppermost layers). Most of the buildings have worn and weathered roofing with open holes and tears that can readily admit water directly into the building (Figure 70). Many of the buildings in the Courtyard North group have a newer roofing membrane on the eastern roof pitch, and large areas of exposed roof sheathing with an older, heavily deteriorated roofing membrane on the western roof pitch (Figure 71) with evidence of significant water intrusion at the wall below (Figure 72). Several other buildings have limited areas of roofing that is missing, exposing the underlying wood sheathing or wood shakes.

At the exterior, the wood cladding is weathered and the paint is failing in some areas, exposing bare wood. Areas of the cladding are decayed, or otherwise damaged due to proximity to soil or exposure to moisture (Figure 73). The areas of stucco cladding are in fair condition, with limited cracks and distress (Figure 74), possibly due to differential settlement or heaving caused by tree roots.

Differential settlement has occurred in many of the buildings, causing the floors to be sloped, irregular, and displaced, and causing walls and doors to tilt and rack. Some of this may also be the result of thrust caused by large tree roots growing beneath the buildings, or from decay of supporting wood framing or sheathing.



Large, and offset, cracks in limited areas of the stucco cladding are also an indication of movement within the buildings (Figure 75).

Termite activity is evident throughout the buildings, and significant termite damage may be concealed by the building finishes. Rodent activity is also evident in all of the unoccupied buildings, and the on-site park staff resident reports widespread rodent activity at the site.

The buildings and site are not currently accessible to the disabled. There are no compliant pathways serving the exterior doors, and the doors themselves are not accessible as the building floors are typically raised above the adjacent grade.

Conceptual Design

Treatment of Historic Resources

As discussed in previous sections, the Topanga Ranch Motel is eligible for listing on the National Register of Historic Places as one of the few remaining examples of a locally owned and operated 1930's-built vernacular style automobile tourist court motel. The existing motel buildings, and their configuration on the site are all contributing features. As contributing features, the buildings should be maintained with their original materials, and in their original configuration and location on the site, as they related to the POS.

The mature eucalyptus trees planted in close proximity to the buildings which date from the POS are significant contributing features as well. The eucalyptus trees should also be preserved and maintained in their current configuration as they relate to the buildings, and the POS. The proximity of the large trees to the buildings presents a significant challenge to their rehabilitation. It is likely prohibitively complicated, costly, and damaging to the trees and site, to construct modern concrete building foundations in the buildings' current locations. Additionally, the proximity of many of the buildings to the top of the sloped embankments at the northeast and west will likely require these buildings to be temporarily relocated to allow construction of a retaining structure.

Fire Protection

The 2016 California Building Code (CBC) requires fire alarms and sprinkler systems in all new Group R construction, which includes existing buildings that are relocated on a site. While the buildings that will be rehabilitated in their original locations are not specifically required to have fire sprinkler systems installed, State Parks indicated that all of the buildings should have fire sprinkler systems to be consistent with modern life-safety practices in the state.

The CBC also requires new buildings to maintain various levels of fire protection of doors, windows and walls, when buildings are in close proximity to one another. Evaluation of the building layout at the site, and a preliminary review of relevant portions of the CBC suggest that the South Row groups and the Courtyard South group of buildings can be relocated approximately 4 feet closer (2 feet per group) to one another to provide separation from the historic eucalyptus trees without significant modification. CBC Section 705.3.1 allows all of the buildings to be considered as a single building, therefore eliminating the required fire protection and limitations on doors, windows and walls.⁸

⁸ *CBC Section 705.3.1* allows multiple buildings on the same lot to be considered as portions of a single building if the total aggregated area does not exceed a maximum area, for the purpose of determining the code-required wall and



The provisions of CBC Section 508.2.4⁹ require a 1/2-hour fire separation between *motel units*, but the language does not clarify the requirements for motel units that do not physically share a building (and are separated by several feet), but are considered as a single building according to CBC Section 705.3.1. Providing a 1/2-hour fire separation on *one* of the two building walls in close proximity appears to meet the intent of the code, and is generally feasible for the buildings at the motel site with the use of an appropriate gypsum finish at the interior. The other facing wall would then be allowed to retain a historic wood door or window that is not fire-rated.

Wildland-Urban Interface

Chapter 7A of the CBC outlines the provisions for materials and methods for exterior wildfire exposure, also referred to as Wildland-Urban Interface (WUI). The WUI provisions include, among other things, requirements to use non-combustible or fire-resistant materials for the building envelope (i.e. roofing, roof vents, roof eaves, cladding, porch ceilings, doors, windows, decks and under-floor areas). The California Existing Building Code (CEBC) Section 409 requires that the buildings that will be permanently relocated comply with the provisions of the code for new structures. As the motel is located in a Very High Fire Hazard Severity Zone as defined by CalFire, the WUI requirements generally apply to the buildings that will be permanently relocated. There is an exception, allowing local ordinances or regulations to permit the retention of existing materials and methods of construction, provided the building foundations comply with the requirements for new construction. Additionally, the motel buildings are historic, allowing use of the California Historical Building Code (CHBC), which provides for the use of alternative methods and materials in qualified historic buildings.

We understand that for historic rehabilitation projects like this one, State Parks often serves as the Authority Having Jurisdiction (AHJ) for code interpretations and enforcement. Given the historic status of the buildings, the stated exception allowing local ordinances or regulations to permit the use of original materials and methods of construction with new-code-compliant foundations, and that State Parks will likely serve as the AHJ, we expect that WUI requirements that would negatively affect the historic character of the buildings will likely be waived. WUI requirements should be included in the rehabilitation design where they can be reasonably incorporated without negatively impacting the historic character of the buildings, such as providing a WUI-compliant roof.

Building Materials

There is localized damage due to water leakage, wood decay, and termite and rodent activity in many locations throughout the buildings. Almost all of the framing and sheathing is concealed by finishes, preventing direct observation. All of the damaged finishes within the buildings should be removed to allow observation of the framing and sheathing. In most cases, this will include all wall, ceiling and floor finishes. Samples of underlying flooring, and other finishes should be documented and collected, and undamaged trim, casings, fixtures and other historic materials should be salvaged for reuse. See the Demolition Site

opening protection, projections and roof-covering requirements. The code-required maximum area far-exceeds the total of all of the building areas, allowing any combination of buildings at the motel site to be combined in this manner. This essentially eliminates the general requirement to provide fire separation between any buildings that are in close proximity at the site.

⁹ *CBC Sections 508.2.4* and *708.3.2* require that the motel units at the site have a 1/2-hour fire separation between *units*. This requirement of the CBC appears to be written specifically for interior partitions, and does not clarify the requirements for two separate exterior walls facing one another in close proximity, or separate motel units considered as a single building according to CBC Section 705.3.1 (per *Footnote Error! Bookmark not defined.*).



Plan in Figure 77 as well as the Building Summary Matrix, and the Conceptual Drawings in Appendices A and B, respectively, for additional information.

Based on their general dates of construction, the buildings are likely to contain hazardous materials. An industrial hygienist should conduct a survey of materials that are suspected to contain asbestos, lead, PCB's or other hazardous substances, and will be affected by the rehabilitation work. For the purpose of the conceptual cost estimate, we have included remediation of hazardous materials for items or materials that commonly contain hazardous substances, based on our experience with similar buildings.

Foundations

To address existing differential settlements of the buildings observed at the site, and to mitigate the risk of future, ongoing settlement of the buildings due to soil or root movement, competent concrete foundation systems should be included in the planned rehabilitation of the site.

Based on informal discussions with geotechnical engineers, and our experience with similar rehabilitation projects, we have made some basic assumptions about the likely soil conditions at the site and the approximate size and types of foundation elements that may be required. To accommodate the uncertainty of the soil conditions at the site, we have included two possible options for foundations. These options are more fully described in the Conceptual Drawings included in Appendix B.

If soil conditions are favorable, we expect that robust strip foundations may be adequate to support the buildings. These should be designed with sufficient rigidity to withstand some differential settlement within each building that may still occur due to the underlying soil fill and tree roots. If soil conditions are poor, it may be necessary to construct pier-and-grade-beam foundations to support some, or all of the buildings. These would use deep piers to overcome poor bearing capacity of the soil and reduce differential settlement that may otherwise occur.

In addition to the two possible foundation systems described above, significant field adjustment, and associated engineering may be necessary to configure the new foundations to accommodate the large tree roots that likely exist beneath many of the buildings.

Conceptual Design Scope

Phase 1 Scope: Stabilization and Enclosure (no Occupancy)

- Temporarily relocate buildings to provide access for construction of retaining structure
 - Disassemble and store the Barn. Reassemble in original location from salvaged material, supplemented with new replacement material
 - Temporarily relocate the Shop, Cabin-Unit 22 and the Courtyard North buildings as needed
- Permanently relocate buildings to create space for eucalyptus trees to grow
 - o Relocate South Row West and South Row East buildings two feet north
 - Relocate Courtyard South buildings two feet south
 - Maintain alignment of building groups, reconstruct entry stairs in new location and in-fill planter curbs to fill the gap
- Building Foundations
 - Install strip foundations at building perimeters and below interior walls that separate units
 - o Install new concrete spread foundations down the middle of each building
 - *Alternate Foundation Scope*: If required by soil conditions (to be determined by future geotechnical investigation)



- Install new concrete grade beam and pier foundations at building perimeters (in place of strip foundations)
- Install new transverse beams to span the width of the buildings to avoid needing transverse grade beams or piers beneath the middle of the buildings
- Install new concrete slab floors at the Shop and Barn
- Account for large tree roots beneath buildings with foundation *root bridges* (Figure 78), and creative field engineering adjustments
- Install buildings on new foundations with level floors and plumb walls
- Building Framing
 - Repair localized damage to building floor, wall and roof framing and sheathing in-kind
 - Incorporate salvaged materials where possible
 - Add new straps and framing connectors where needed based on structural analyses
 - Add strengthening elements to vulnerable structural members:
 - Small moment frame at sun porch at south wall of Unit 1
 - Supplement gable roofs with additional rafter ties
 - Improve the interconnectivity between buildings that have been modified or combined (Cabin-Units 22 and 23/24)
 - Install new plywood diaphragm over roof sheathing
 - Install new plywood shear panels at interior face of exterior walls, and at interior walls where interior finishes will conceal them
- Building Enclosure
 - Rehabilitate doors and windows, repairing in place where possible, and replacing in-kind where necessary
 - Replace aluminum and vinyl windows with wood windows to match the original historic windows
 - Roofing
 - Install new WUI-compliant (fire-treated) wood shake roofing at South Row West and South Row East buildings
 - Install new WUI-compliant granule-surfaced roof membrane at all other buildings
 - Rehabilitate building cladding, repairing in place where possible, and replacing in-kind where necessary
- Interior Finishes
 - Remove all interior finishes to provide access for evaluation and repair of building structure and cladding
 - Salvage undamaged trim, fixtures and other historic materials that can be reused

Phase 2 Scope: Motel Occupancy

- Accessibility Improvements
 - Remodel two motel units to include accessibility features
 - Install accessible bathrooms and other required in-unit features
 - Install ADA-compliant ramps at each accessible unit
 - Alter the entry doors to provide accessible entry
 - Install ADA-compliant ramp at front entry to the motel Office and alter the entry door to be ADA-compliant
 - Install ADA-compliant parking and decomposed granite pathways from the accessible parking to the Office and the two accessible guest units
- Interior Finishes
 - Replace interior finishes in-kind



- Incorporate salvaged materials where possible
- Historically (and currently) exposed wood framing should remain exposed where possible
- Previously (historically) exposed wood framing may be exposed to match the original condition in areas that do not require a fire separation between motel units. If areas of the buildings that require a fire separation between units¹⁰ are to have exposed wood framing, conceal a layer of appropriate gypsum sheathing between finishes to satisfy fire separation requirements
- Install fiberglass batt insulation in roof/ceiling cavity, where insulation will be concealed by future interior finishes. Do not install insulation in wall cavities¹¹
- Restore or replace fixtures, including kitchenettes
 - Incorporate salvaged fixtures where possible
 - Use non-functional electric stoves

¹⁰ Our preliminary evaluation of the CBC suggests a 1/2-hour fire separation may be required between the South Row East and Courtyard South building groups. If required, one of the two facing walls between these groups will need an appropriate layer of gypsum sheathing in the wall assembly, and cannot have unrated (historic) doors or windows facing the adjacent building.

¹¹ New weather-resistive barriers (WRBs) will not be installed as part of this rehabilitation project. Installing insulation without a functioning WRB increases the risk of condensation, water damage and mold growth within the concealed wall cavities.



Figures



Figure 35. Main entry driveway bisecting the South Row West and South Row East groupings. Photo taken facing northwest.



Figure 36. Aerial of the site from the 1940. (Source: Rosi Dagit, permission pending)





Figure 37. Wood framed entry decks at the South Row West group (steps at Units 3 & 4 used as an example). Photo taken facing south.



Figure 38. Covered entry porch at north side of Unit 1. Photo taken facing south.





Figure 39. Covered entry porch at Unit 6 with adjacent exterior closet. Photo taken facing south.



Figure 40. Covered (left) and uncovered (right) entry porches for Units 8 and 9, respectively. Photo taken facing southwest.





Figure 41. Typical kitchenette found within the South Row East units in the living rooms (Unit 14 used as an example). Photo taken facing northwest.



Figure 42. Typical narrow attached bathroom extending across the rear of each unit in the South Row East group (Unit 12 used as an example). Photo taken facing northeast.





Figure 43. Northwest (rear) entry to the Office. Photo taken facing southeast.



Figure 44. North elevation of Unit 21. Photo taken facing south.





Figure 45. Shed roof addition to the east of Unit 18. Photo taken facing southwest.



Figure 46. East elevation of Unit 22 with low-sloped roof connecting what were originally two separate cabins. Photo taken facing west.





Figure 47. Aerial of the site from 1946. (Source: Rosi Dagit, permission pending)



Figure 48. Typical entrance and side patio (right) at Courtyard North units. Photo taken facing east at Unit 28.





Figure 49. Unit 31 with eastern shed-roof addition and adjacent large shrub. Photo taken facing west.



Figure 50. Beaded tongue-and-groove board used as the Storage Shed's walls and ceiling finishes. Photo taken facing southeast.





Figure 51. Typical vestibule area at the Courtyard North grouping is a step lower than the main floor. Photo taken facing southwest in Unit 26.



Figure 52. Vestibule with narrow "pass-through" kitchenette (out of frame to left) in Unit 31. Photo taken facing northeast.





Figure 53. Typical roof form of typical Courtyard North unit. Orange arrow indicates location of clerestory window, shown in Figure 54. Photo taken facing southwest at Unit 28.



Figure 54. Typical clerestory window found on most of the Courtyard North buildings. Photo taken facing southeast at Unit 28.





Figure 55. Original wood shakes beneath red asphaltic sheet roofing at Unit 12. Photo taken facing north.



Figure 56. Typical double-hung wood window in Unit 23/24. Photo taken facing south.





Figure 57. Typical multi-lite fixed wood window. Photo taken facing north at Office.



Figure 58. Typical single-lite fixed wood window. Photo taken facing southwest at Unit 2.





Figure 59. Typical casement wood window. Photo taken facing west at Unit 19.



Figure 60. Typical sliding wood window. Photo taken facing east at Unit 1.





Figure 61. Typical single-pane sliding aluminum windows. Photo taken facing northeast at Unit 21.



Figure 62. Typical casement steel window. Photo taken facing northwest at Unit 12.





Figure 63. Typical wood screen door. Photo taken facing northwest at Unit 8.



Figure 64. Tiled entry steps at Unit 7. Photo taken facing north.



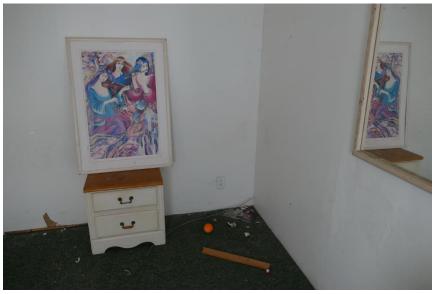


Figure 65. Typical interior gypsum board finish. Photo taken facing north in Unit 14.



Figure 66. Original 1x4 tongue-and-groove floor decking with vinyl flooring at the interior of Unit 6. Photo taken facing north.





Figure 67. Typical surface-bearing wood foundations. Photo taken facing east at Unit 2.



Figure 68. Typical damage to wood framing and finishes resulting from a roof leak at Unit 8. Photo taken facing east.





Figure 69. Example of deteriorated wood window. Photo taken facing southeast at Unit 11.



Figure 70. Weathered roofing with open holes and tears susceptible to admitting water directly into the building at Unit 11. Photo taken facing southeast.





Figure 71. Areas of exposed roof sheathing and heavily deteriorated roofing membrane on the west roof pitch of Unit 28. Photo taken facing northeast.



Figure 72. Water intrusion from the exposed roof sheathing into the wall below at Unit 28. Photo taken facing northwest.





Figure 73. Deteriorated wood cladding in proximity to soil at Units 7 and 8. Photo taken facing south.



Figure 74. Typical stucco cladding with limited cracks. Photo taken facing northeast at Unit 14.





Figure 75. Typical cracks in stucco cladding. Photo taken facing north at Unit 2.



Figure 76. Damaged stucco cladding next to the entry stairs of Unit 15. Photo taken facing northwest.



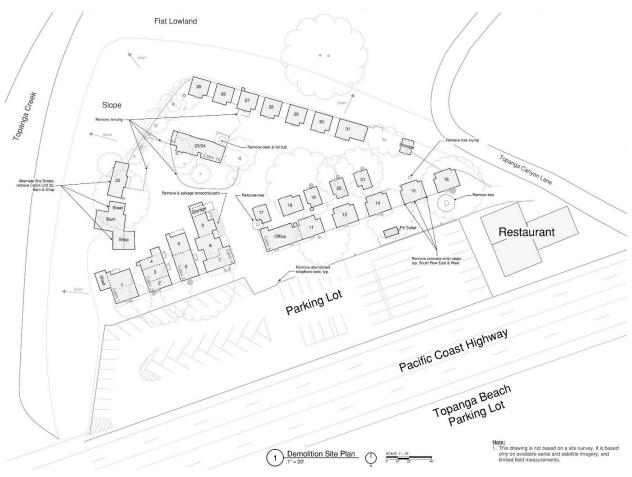


Figure 77. Demolition Site Plan of Topanga Ranch Motel.

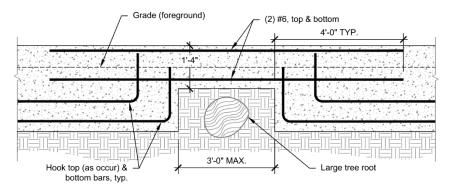


Figure 78. Conceptual "root bridge" detail where concrete foundations pass over large tree roots.



Mechanical System Evaluation

Current Conditions

- 1. The buildings currently have wall mounted gas furnaces controlled by manual thermostats. The flue vent of each furnace is routed thru the wall and terminates above the roof. Each cabin has at least one furnace.
- 2. The buildings do not have air conditioning, except the current Cabin-Unit 23 /24 building which has a window mounted heat pump.
- 3. Ventilation is achieved by manually opening windows.

Analysis & Deficiencies

- 1. The current gas furnaces are original to the buildings and are estimated to be past the recommended equipment lifespan.
- 2. The buildings have some insulation on the ceilings and walls that is not original to the buildings. The building envelope and insulation are generally in poor condition and exhibit air and water leakage.

Conceptual Design

- 1. The minimum requirement by the California mechanical code is to provide heating. The cabin furnaces can be removed and replaced with gas wall mounted furnaces with modern temperature controllers, and new gas piping. The best option for this space is to replace the existing gas furnaces with new gas furnaces with modern controls, and new gas piping and valves.
- 2. Due to the mild climate in close proximity to the coast, air conditioning is not necessary except for 1 or 2 months out of the year during summer. Air conditioning is not desired as well to keep the historic character of the buildings.
- 3. If air conditioning is desired in the future, a larger electrical service and infrastructure would be required than that required without air conditioning. Split DX systems with a preliminary recommendation of 2-3 Tons of cooling could be installed in each unit.



Figures



Figure 79. Gas Furnace Interior.



Figure 80. Furnace Thermostat



Plumbing System Evaluation

Current Conditions

- 1. The site has 28 units arranged in different configurations with several additional buildings for storage, equipment and maintenance. Each unit has a restroom, lavatory, and shower. Some units also have a kitchenette with a stove and sink.
 - a. Domestic Cold & Hot Water:
 - i. Water is supplied by three service lines with two meters located in the parking lot. There is one meter currently in use, the second meter is locked and not used, and the third meter has been removed. Each service line is 1-inch (diameter) with the meter size at 3/4-inch.
 - ii. The water meter currently in use has a cold water line routed through the parking lot to Cabin-Unit 23/24.
 - iii. There are domestic water heaters located around the property with a single water heater serving multiple cabins. The domestic water heater uses natural gas. They are located in exterior water heater closets or enclosures.
 - b. Natural Gas:
 - i. Natural gas is supplied by a single gas meter located in front of the South Row West group of buildings. The gas is supplied from Southern California Gas and the meter is 1-inch and 425 cubic feet per hour (CFH) in capacity. The meter number is 3588248.
 - ii. Gas routed through the site for the unoccupied cabin furnaces and water heaters is disconnected from the gas utility service and the piping remains abandoned in place.
 - c. Sewer:
 - i. The site has a septic tank near the Shop and Barn and the Facilities Overview Report indicates that it is 3,000 gallons. From discussion with Mr. Rick Matsuo there are two maintenance access lids, but they are only able to access one lid. The system is only connected to a single residence for Unit 23/24. The leach field is apparently clogged due to the fact that the system needs to be pumped once or twice a week. The frequency is significantly higher than normal which is usually quarterly to once a year for high frequency single residences.
 - ii. There is another septic tank in the parking lot with size unknown. The lid was opened for the tank and there did not appear to be sewage in the tank as there was no smell. The tank was full of water. It is not certain whether this is ground water, run off water, or possibly tied to a grey water system. From quick observation of physical size, it appears to be a 2,000-3,000 gallon tank.

Analysis & Deficiencies

- 1. Domestic Cold & Hot Water:
 - a. The cold water line appears to be the original water line serving the building and is steel instead of copper. Copper is used almost exclusively in modern plumbing as well as plastic Polyethylene pipe. Steel piping can leach rust into the water supply and corrode which is the predominant reason it is not currently used in domestic water systems.
 - b. The water demand from the buildings including showers, water closets, toilets, lavatories and sinks is around 200 water supply fixture units (WSFU). With landscaping, the WSFU could reach up to 220 WSFU. Per CMC Table 610.4, the maximum for a 1-inch line is 39 WSFU. With 3 water meters, that is a total of 117 WSFU. That is significantly short of the water demand requirements of the site.



- c. The site does not have a central boiler for hot water but does have existing tank type water heaters in the range of 40-80 gallons that appear to be shared among groups of buildings. The water heaters are past their useful life with many in poor condition with significant signs of deterioration and rust. Many of the water heaters enclosures are damaged and no longer waterproof which leaves all of the equipment exposed to the elements.
- 2. Natural Gas:
 - a. A preliminary load calculation estimates the heat load for space heating by natural gas to be about 10 CFH per cabin. However, typically the smallest units require about a 25 CFH minimum. The space heating load for the cabins would be a total of 775 CFH.
 - b. For the Domestic Hot Water, the cabins are estimated to be a total of 300 CFH input to the water heaters.
 - c. The combined space heating and domestic hot water heating natural gas load is an estimated 1,075 CFH. This exceeds the gas meter's maximum capacity. A larger gas meter will need to be installed to accommodate the new equipment as well as possibly a new service line.
 - d. The gas piping is old, rusted and past the useful lifetime for piping.
- 3. Sewer:
 - a. The current site and surrounding buildings are not tied to a sewer system operated by a sanitation district.
 - b. The proposed conceptual design contains 29 separate units. Each unit is estimated to produce 60 gallons per day of sewer discharge. This yields a total discharge of 1,740gallons per day for the site, or approximately 2,000 gallons per day with a safety factor. Per California Plumbing Code (CPC) 2016, the site is estimated to produce approximately 207 drainage fixture units (DFU). This would require a minimum 4-inch sewer pipe per code, but due to nearing the maximum capacity on a 4-inch pipe, it is recommended to use a 6-inch sewer pipe.

Conceptual Design

- 1. Domestic Cold Water & Hot Water:
 - a. The water service lines will need to be upgraded. It is best practice to have two water meters, with one side serving the East side cabins and one meter serving the West side cabins.
 - b. With a single water meter, the service line and water meter would need to be at least 2-inch with a 2-inch main to the site. With two water meters, the service line and water meter will need to be at least 1-1/2-inch with 1-1/2-inch main to the site. The cabins with 2 or 3 units would require a 1-inch water line each and single-unit cabins would require a 3/4-inch water line each.
 - c. Since the piping is rusted and past the useful life, it is recommended to replace it with all new copper piping from the meter and inside the cabins.
 - d. Since the site does not have a central boiler or mechanical room, it is acceptable to replace the water heaters and exterior closet/enclosures. Commercial type water heaters come in discrete sizes of 60, 80, 100, and 120 gallons. The site requires 10 water heaters spread out around the site. A single water heater can serve a cabin with multiple units with the piping internal to the building or can serve multiple individual cabins with the hot water piping routed underground. (Figure 81).

TAG	SERVICE (UNIT #)	TANK SIZE (GAL)
WH-1	1, 2, 3, 4	120
WH-2	5, 6	60



WH-3	7, 8, 9	80
WH-4	Office, 11	60
WH-5	12, 14	80
WH-6	15, 16	80
WH-7	17, 18, 19, 20, 21	120
WH-8	22, 23, 24	80
WH-9	25, 26, 27	80
WH-10	28, 29, 30, 31	100

- 2. Natural Gas:
 - a. It is recommended to use the gas on site and to upgrade the meter and possibly the service line. Natural gas is less expensive to provide space and water heating than electricity due to local utility rates.
 - b. Install new gas piping for the site for water heating and space heating. It is recommended to install plastic polypropylene (PP) pipe that is resistant to corrosion. Due to the location by the high humidity ocean air, steel rusts at a higher rate due to the salt in the air.
 - c. The on-site sanitary sewer system will need to be evaluated more with utility tracing/verification but it is estimated that it will need a full upgrade. The site could require a sump and sewage ejectors based upon future analysis and design. The sump can be located away from the buildings and include a duplex-type sewage ejection system with automatic float controls with an alarm system.
- 3. Sewer:
 - a. It is assumed that a traditional septic system with leach field similar to what was originally located at the site, is infeasible to construct due primarily to the proximity to Topanga Creek on the west side of the property. Most jurisdictions have requirements that leach field are a minimum of 100 feet away from rivers, streams, or creeks due to the risk of contamination. Another challenge is the sizing of the leach field, which will require a geotechnical analysis to determine the percolation rate, which is the rate that the ground can absorb the septic tank effluent. Using a range for common soils of 0.2 to 0.8 gal/SF/day, the septic field could range from 2,300 to 9,300 square feet in area. With such a large range for sizes, it is difficult to know whether this method is feasible at this stage
 - b. It is assumed that a traditional septic system with leach field similar to what was originally located at the site, is infeasible to construct due primarily to the proximity to Topanga Creek on the west side of the property. Most jurisdictions have requirements that leach field are a minimum of 100 feet away from rivers, streams, or creeks due to the risk of contamination. Another challenge is the sizing of the leach field, which will require a geotechnical analysis to determine the percolation rate, which is the rate that the ground can absorb the septic tank effluent. Using a range for common soils of 0.2 to 0.8 gal/SF/day, the septic field could range from 2,300 to 9,300 square feet in area. With such a large range for sizes, it is difficult to know whether this method is feasible at this stage.
 - c. There are two options for the current site for removal of sewage:
 - i. Phase 2 (base scope): On-site storage:
 - 1. Installation of a local sewage storage tank in the parking lot to collect and store sewage from the site.
 - 2. In consulting with many local agencies, no agency has objections with on-site storage of sewage from the site. This would need to be pumped out on a regular basis.
 - 3. The tank(s) can be located in the parking lot with traffic rated lids. The size of the onsite storage tank could be various sizes, but the first requirement is to determine how frequently the septic storage tank must be pumped out. From discussions with local



businesses, the most common maximum size septic vacuum pump truck is 2,500 gallons. The tank should also be sized to be filled to about 80% of capacity. A summary of pumping frequency and tank sizes is provided in Table 1.

		Table 1	
Tank	Frequency of Pumping	Cost (\$) per gallon	Cost (\$) per truck in
Size	in days (Based on 2,500	disposal in one week	one week (estimated
	gallon truck)	(estimated at \$0.15/gal)	\$600/each visit)
2,500	1	\$2,100	\$4,200
7,500	3.5	\$2,100	\$3,600
16,000	7	\$2,100	\$3,600

Local septic pumping contractors charge per gallon and per truck. In comparison with both cost methods, it appears that having an oversized tank does not save more money as you are still limited by the size of the pump truck. Having an oversized tank such as the 16,000 gallon tank reduces the daily frequency of the pump truck to the site which is easier on the staff and guests to the motel, but does not reduce service costs, or the total number of individual trips by the pumping truck. It is more cost effective to pay per gallon pumping than per truck.

- ii. Alternate Sewer Scope: Sewer system operated by a sanitation district.
 - 1. Connection to a sewer system operated by a sanitation district is the most desirable option in terms of ease of use and reduction in long term operation costs.
 - 2. In reviewing local sewer maps it appears that the nearest sewer for connection is approximately 4,850 feet from the site on Pacific Coast Highway. (Figure 82).
 - 3. The sewer district connection would be to the local LA County Sanitation District 27. Permits would need to be obtained from, but not limited to the LA County Sanitation District 27, LA Department of Public Works, and CalTrans. Capacity Studies and Will Serve Agreements will need to be obtained from the departments to obtain necessary permits. See Figure 83 below for area map of sewer systems.



Figures

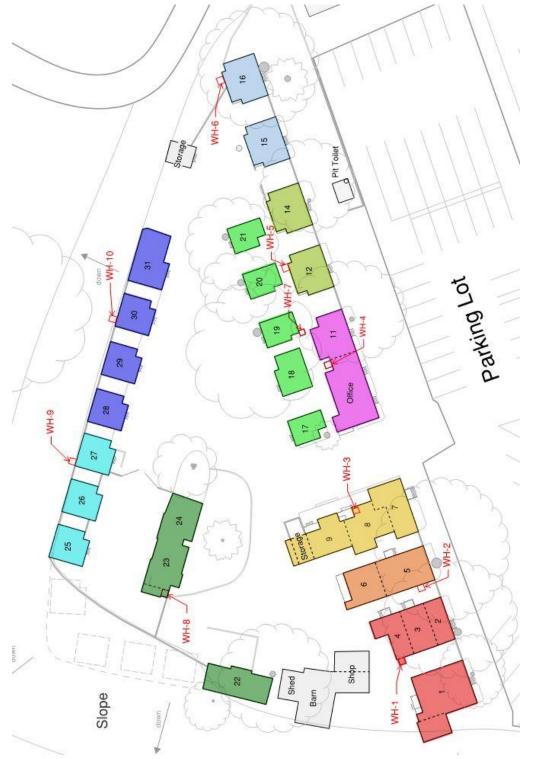


Figure 81. Proposal water heater locations and service.





Figure 82. Aerial map showing nearby sewers and connections.

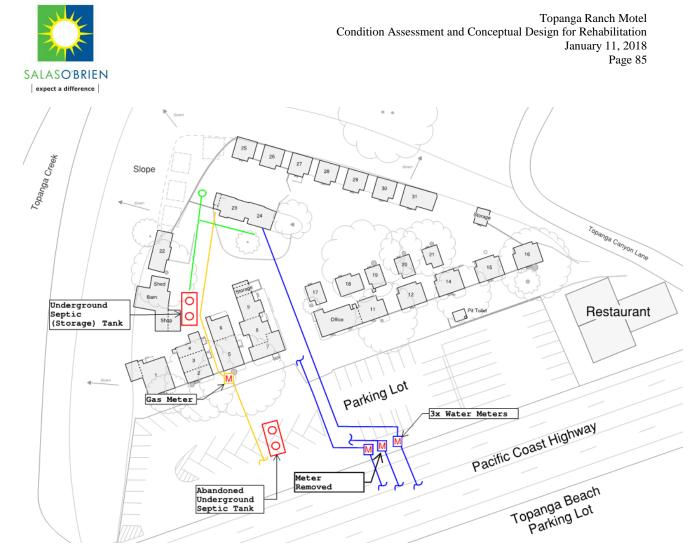


Figure 83. Existing utility site map.





Figure 84. Water meter.



Figure 86. Water heater.



Figure 85. Natural gas meter.



Figure 87. Water heater and enclosure.





Figure 88. Sewer storage (septic) tank.



Figure 89. Sewer storage (septic) tank.



Electrical System Evaluation

Current Conditions

- 1. The main 240V 1Ph 3W electrical service of Topanga Ranch Motel is served by Southern California Edison (SCE) and fed from a wooden utility pole at the west side of the main entrance. The utility meter and main disconnect switch are installed in a Wooden Electrical Cabinet, which is wall-mounted to Unit 7. (Figure 84 and Figure 85)
- 2. The only electrified connections are at Unit 23/24 and Unit 30 for radio equipment.
- 3. Incoming Electrical Service Detail:
 - a. There is a <u>Wooden electrical cabinet</u> containing:
 - i. Electrical incoming service
 - ii. Main service disconnect switch
 - iii. Electrical Panel 'X1' with 12 circuit breaker spaces
 - iv. Circuit breaker enclosure with (1) 60amp 240V 1Ph circuit breaker
 - v. Abandoned-in-place circuit breaker enclosure with (2) 20amp 240V 1Ph circuit breakers
 - vi. Telephone network interface box
 - vii. The Gas Company meter terminal box
 - viii. Abandoned-in-place Pay Phone terminal box
 - b. The <u>Wooden Electrical Cabinet</u> is in bad condition. The double-swing wooden doors were locked by padlock and did not have any water penetration sealant. Furthermore, there were gaps where water could penetrate the cabinet. (Figure 84).
 - c. <u>Incoming electrical service</u> was served by SCE with meter #222014-021268. It is 200amp 240/120V 1Ph 3W service. The electricity service is fed directly from wooden utility pole next to meter cabinet. The SCE meter is in good working condition. (Figure 87).
 - d. <u>Main service disconnect switch</u> was in rusty condition. Nameplate was rusted out, so the amperage could not be identified. Per on-site California State Park maintenance crew, the electrical equipment/devices were NOT SAFE to touch. Therefore, no further physical investigation was done. SOBE has requested additional information from SCE and is awaiting a response (Figure 88).
 - e. <u>Electrical Panel 'X1'</u> enclosure was in partially rusty condition. There were few openings to electrical buss bar, which could cause safety issue. There was no nameplate to identify the specification of Panel 'X1' (Figure 101). Per hand-written tag, this electrical panel was serving:
 - i. Main Office
 - ii. Door lights
 - iii. Motel Sign
 - f. <u>Circuit Breaker Enclosure</u> with (1) 60amp 240V 1Ph circuit breaker was in bad condition. The enclosure was partially rusted. And the back mounting was loosened. Per handwritten marker, this was serving Unit #23 & 24 (Cabin #16). (Figure 102).
 - g. <u>Abandoned-in-place Circuit Breaker Enclosure</u> with (2) 20amp 240V 1Ph circuit breakers. Both circuit breakers were in off position. The condition of circuit breaker enclosure was in bad condition. It was rusty and the side lock-out did not have cover. (Figure 100).
 - h. <u>Telephone Network Interface Box</u> was constructed of plastic, and in fair condition. Functionality of this network box is unknown. (Figure 103).



- i. <u>The Gas Company meter terminal box</u> was constructed of plastic, and in fair condition. Functionality of this terminal box is unknown. (Figure 104).
- j. <u>Abandoned-in-place pay phone terminal box</u> was constructed of plastic, and in fair condition. Functionality of this terminal box is unknown. (Figure 104).
- 4. There are a total of 23 Cabins, the Barn, the Shop, and a Storage Cabin. Each building has an individual exterior circuit breaker enclosure, which was installed under eave or shelter (except Cabin-Unit 23/24). The amperage of the existing cabin circuit breakers is unknown because there was no nameplate or identification. Based on educated guess, it should be (2) 20Amp 120V circuit breakers. (Figure 102) Most of the exterior circuit breaker enclosures had been disconnected and abandoned in place. The existing cabins (except Cabin-Unit 23/24) typically had:
 - a. 2-10 indoor light fixtures
 - b. 1-4 exterior light fixtures
 - c. 4-15 receptacles
 - d. 1-3 phone outlets
- 5. Cabin-Unit 23/24 was the only cabin in good condition, but there was no access to the building at the time of site visit. Therefore, existing electrical could not be identified.
- 6. The existing electrical distribution at the site uses overhead drops at wooden poles. Per onsite California State Park maintenance crew, most of the power distribution wiring was removed or abandoned in place.

Conceptual Design

- 1. Electrical Incoming Service:
 - a. This shall be upsized because the electrical demand load will be increased substantially with the proposed electrical system for each unit.
 - b. Recommendation:
 - i. Coordinate with SCE for available upsized electrical service.
 - ii. Demolish existing electrical service.
 - iii. Install new upsized electrical switchboard with meter at location provided by SCE.
- 2. Wooden electrical cabinet:
 - a. Because the existing service will be upsized, this shall be removed.
 - b. Recommendation:
 - i. Remove existing wooden electrical cabinet.
 - ii. Install new upsized electrical switchboard with meter in NEMA-3R enclosure.
- 3. Main service disconnect switch:
 - a. Because the existing service will be upsized, this shall be removed.
 - b. Recommendation:
 - i. Remove existing main service disconnect switch.
 - ii. Install new upsized electrical switchboard with main circuit breaker and meter in NEMA-3R enclosure.
- 4. Electrical Panel 'X1'
 - a. Because existing motel office and door light are not in use, existing Electrical panel 'X1' shall be removed for safety reasons.
 - b. Recommendation:
 - i. Remove Electrical Panel 'X1'.



- 5. Circuit Breaker Enclosure with (1) 60amp 240V 1Ph circuit breaker:
 - a. Because the existing 60amp 240V 1Ph circuit breaker is serving Unit 23/24, the power source of Unit 23/24 shall be reconnected from the new main switchboard.
 - b. Recommendation:
 - i. Intercept and extend power connection from 60amp 240V 1Ph circuit breaker to new main switchboard.
 - ii. Remove circuit breaker enclosure.
- 6. Telephone Network Interface Box/the Gas Company meter terminal box:
 - a. This shall be coordinated with the Telephone Company and the Gas Company if these devices shall be relocated to new location.
- 7. Proposed Electrical System Requirement:
 - a. Per proposed design approach, each unit will have:
 - i. Indoor and exterior building façade light fixtures
 - ii. Convenience receptacles
 - iii. Air conditioning (included only for the purpose of sizing the electrical service upgrade to accommodate potential future needs for air conditioning)
 - iv. Exhaust fan
 - v. Gas Heater
 - vi. Water heaters (total of 10 located at Units 4, 6, 8, 12, 15, 19, 23, 27, 29 and Office, see Figure 86)
 - vii. Electric Cooking Stove (at some units)
 - b. Site development will have:
 - i. 120V weatherproof convenience receptacles with while-in-use enclosure
 - ii. LED pathway lights: bollards and pole lights
 - c. Based on the proposed design approach above,
 - i. With Air Conditioning: the new electrical service shall be upsized to either 1200Amp @ 240V 1Ph or 800Amp @ 208V 3Ph. Please see load estimate calculation below.
 - ii. Without Air Conditioning: the new electrical service shall be upsized to either 800Amp @ 240V 1Ph or 600Amp @ 208V 3Ph. Please see load estimate calculation below.
- 8. Proposed Electrical Distribution System:
 - a. Per estimated load calculation (Figure 94 and Figure 95), new electrical service will be required. New electrical service size will depend on the available voltage at the site. Per calculation above, a 240V 1Ph or 208V 3Ph system will be required. From previous experience with SCE, when the electrical service is over 400amp, SCE will provide 208V 3Ph 4W service.
 - b. Exact location of the incoming service is currently unknown, pending a response from SCE. Assume that there will be a new utility transformer and main switchboard with utility meter. The main switchboard will be located in the center of the motel site for better power distribution efficiency. Radial power distribution will be used because of the size of site. Underground pullboxes shall be installed within 250 feet of underground conduit runs.
 - c. Each unit shall have between 70amp and 100amp electrical panels, depending on the demand load. Feeders will be underground.
 - d. Each unit shall have separate low voltage conduit (3-inch min.) with underground pullbox every 250 feet. This low voltage conduit will be joint-trenched with the power



conduit with acceptable spacing. (See Figure 96, Proposed Electrical Distribution Map for Reference).



Figures



Figure 90. Wooden electrical cabinet exterior.



Figure 91. Wooden electrical cabinet interior.



Figure 92. Utility pole



Figure 93. SCE Meter



Group	Cabin	Unit	ņ	Lights	Receptacles	A/C	Exhaust Fan	Gas Heater	Boiler	Elec Stove	Total kW	Total Amp@240V 1Ph	Total Amp@208V 3Ph
	1	1		0.28	1.44	2.5	0.1	1	0.1	5.85	11.27	46.96	31.31
	1	Shed		0.08	0.36		0	0	0		0.44	1.83	1.22
		2		0.12	0.9		0.1	1	0	0	4.62	19.25	12.83
	2	3		0.16	0.9		0.1	1	0		4.66	19.42	12.94
South Row		4		0.12	0.0		0.1	1	0.1	0	4.72	19.67	13.11
West	c	5		0.24	1.08		0.1	1	0		4.92	20.50	13.67
	n			0.16	0.9		0.1	1	0.1	5.85	10.61	44.21	29.47
		2		0.16	1.08		0.1	1	0		4.84	20.17	13.44
	4	8		0.2				1	0.1	2.2	10.83	45.13	30.08
		6		0.24	1.26	2.5	0.1	1	0	0	5.1	21.25	14.17
	L	Office		0.36				1	0		5.58	23.25	15.50
	ņ	11		0.16	0.9		0.1	1	0.1	0	4.76	19.83	13.22
South Row	9	12		0.24	1.26		0.1	1	0.1	0	5.2	21.67	14.44
East	7	14		0.24	1.26			1	0.1		5.2	21.67	14.44
	∞	15		0.24	1.26		0.1	1	0.1	0	5.2	21.67	14.44
	6			0.24	1.26	2.5		1	0.1		5.2	21.67	
	10	17		0.12	0.9		0.1	1	0.1	0	4.72	19.67	13.11
	11	18		0.16	1.08			1	0.1	0	4.94	20.58	13.72
courtyard	12			0.12	0.9			1	0.1	0	4.72	19.67	13.11
UINOS	13	20		0.12	0.9		0.1	1	0.1	0	4.72	19.67	13.11
	14			0.12	0.9			1	0.1	0	4.72	19.67	13.11
	1	doyS		0.16	0.9		0	1	0	0	4.56	19.00	12.67
Courtyard	Chon	Barn		0.36	1.08			1	0.1	0	5.04	21.00	14.00
West		Shed		0.08	0.36		0	0	0		0.44	1.83	
	15	22		0.24	1.44	2.5	0.1	1	0.1	0	5.38	22.42	14.94
Cabin-Unit	U 7	23		0.24	1.44			1	0	2.2	11.13	46.38	30.92
23/24	qτ	24		0.2	1.26		0.1	1	0.1	0	5.16	21.50	14.33
	17	25		0.2	1.08		0.1	1	0.1	0	4.98	20.75	13.83
	18	26		0.2	1.08	2.5	0.1	1	0.1	0	4.98	20.75	13.83
	19	27		0.2	1.08		0.1	1	0.1	0	4.98	20.75	13.83
Countries of	20	28		0.2	1.08		0.1	1	0.1	0	4.98	20.75	13.83
courtyard Noth	21	29		0.2	1.08		0.1	1	0.1	0	4.98	20.75	13.83
	22	30		0.2	1.08		0.1	1	0.1	0	4.98	20.75	13.83
	23	31		0.32	1.44	2.5	0.1	1	0.1	5.85	11.31	47.13	31.42
		Storage		000					C		0		
		Cabin		0.08	0.18	0	0	D	D		0.26		
										Subtotal	190.13		L.
										Site lighting	5	20.83	
										Sewage Ejector	8.16	34.00	22.67
										20% Spare	78.684	327.85	218.57
										Total Estimated Load	281.974	1174.89	783.26
										Total New Service		1200Amp @ 240V 1Ph	800Amp @ 208V 3Ph

Figure 94. Proposed electrical requirement's calculation - with air conditioning.



Group	Cabin	Unit	Lights	Receptacles	A/C	Exhaust Fan	n Gas Heater	Boiler	Elec Stove	Total kW	Total Amp@240V 1Ph	Total Amp@208V 3Ph
		1	0.28		0	0.1	1 1	0.1				24.36
	1	Shed	0.08	3 0.36	0		0	0				
		2	0.12	0.9	0	0.1	1 1	0				5.89
	2	3	0.16		0	0.1	1 1	0		2.16		6.00
South Row		7	0.12	0.9	0	0.1	1 1	0.1	0	2.22	9.25	6.17
West	C	5	0.24		0	0.1	1 1	0		2.42	10.08	6.72
	n	9	0.16	0.9	0	0.1	1 1	0.1	5.85	8.11	33.79	22.53
1		2	0.16	1.08	0	0.1	1	0		2.34	9.75	6.50
	4	80	0.2		0	0.1	1 1	0.1	5.85		34.71	23.14
		6	0.24	t 1.26	0	0.1	1	0		2.6	10.83	7.22
	L	Office	0.36		0	0.1	1	0	0		12.83	8.56
	n	11	0.16	0.9	0	0.1	1	0.1			9.42	6.28
South Row	9		0.24		0	0.1	1	0.1				
East	7	14	0.24		0	0.1	1	0.1			11.25	7.50
1	80	15	0.24		0	0.1	1	0.1	0		11.25	7.50
	6	16	0.24		0	0.1	1 1	0.1				
	10	17	0.12	0.9	0	0.1	1 1	0.1		2.22	9.25	6.17
	11	18	0.16		0	0.1	1 1	0.1				6.78
courtyaru south	12		0.12		0	0.1	1 1	0.1				6.17
2001	13	20	0.12		0	0.1	1 1	0.1			9.25	6.17
	14		0.12		0	0.2	1 1	0.1	0	2.22		6.17
	/ urca	Shop	0.16	0.9	0	0	1	0		2.06	8.58	5.72
Courtyard	Chon	Barn	0.36		0	0	1	0.1	0			7.06
West	doile	Shed	0.0		0	0	0	0			1.83	1.22
	15	22	0.24	1.44 I.44	0	0.1	1 1	0.1		2.88	12.00	8.00
Cabin-Unit	16	23	0.24	t 1.44	0	0.1	1 1	0	5.85		35.96	23.97
23/24	qT	24	0.2	2 1.26	0	0.1	1	0.1		2.66	11.08	7.39
	17	25	0.2	1.08	0	0.1	1 1	0.1	0	2.48	10.33	6.89
	18	26	0.2	1.08	0	0.1	1 1	0.1	0	2.48	10.33	6.89
	19		0.2	1.08	0	0.1	1	0.1	0			6.89
() () () () () () () () () () () () () (20		0.2	1.08	0	0.1	1 1	0.1	0	2.48	10.33	6.89
	21	29	0.2	1.08	0	0.1	1 1	0.1	0	2.48	10.33	6.89
	22		0.2	1.08	0	0.1	1 1	0.1	C	2.48		
	23	31	0.32	1.44	0	0.1	1	0.1	5.85	8.81	36.71	24.47
		Storage										
		Cabin	0.08	0.18	0		0	0				
									Subtotal	110.13		
									Site lighting	5		
									Sewage Ejector	8.16	34.00	22.67
									20% Spare	46.684		129.68
									Total Estimated Load	169.974	708.23	472.15
									Total New Service		800Amp @ 240V 1Ph	600Amp @ 208V 3Ph

Figure 95. Proposed electrical requirements calculation - without air conditioning.



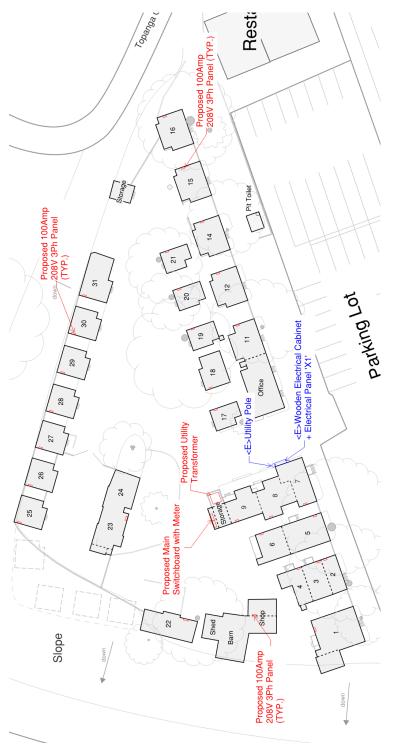


Figure 96. Proposed electrical site upgrades.





Figure 97. Utility pole



Figure 98. SCE Meter



Figure 99. Main disconnect switch.



Figure 101. Panel 'X1'.



Figure 100. Circuit breaker enclosure (2) 20 amp.



Figure 102. Circuit breaker enclosure (1) 60 amp.





Figure 103. Telephone network interface



Figure 104. Pay phone and the gas company boxes.



Figure 105. Site lighting.



Figure 106. Indoor lighting.





Figure 107. Indoor receptacle.



Figure 108. Facade light.



Figure 109. Unit circuit breaker enclosure under shelter.



Figure 110. Under circuit breaker enclosure under eave.





Figure 111. Electrical / Telephone Distribution Pole.



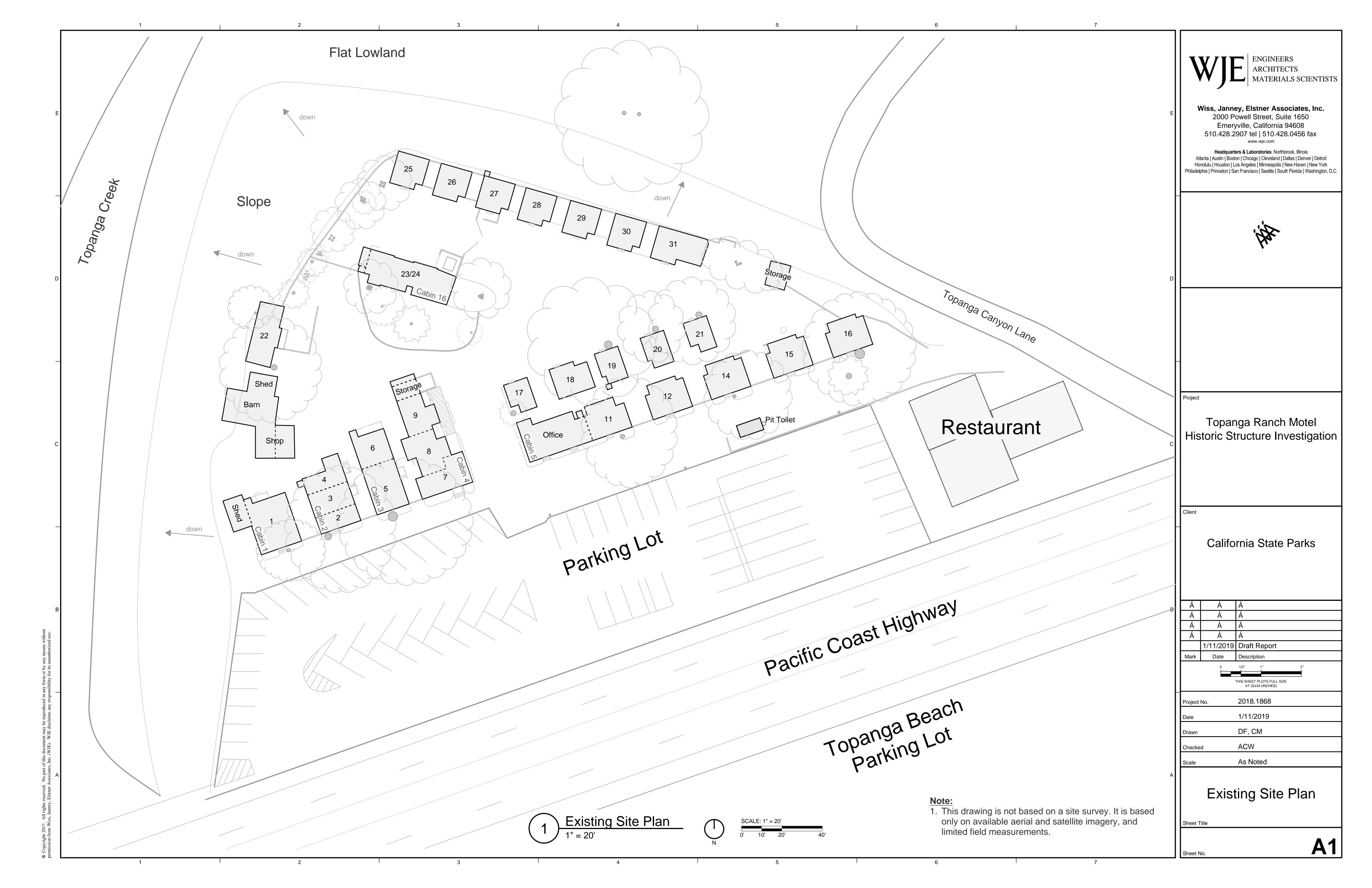
APPENDIX A: BUILDING SUMMARY MATRIX



APPENDIX B: EXISTING AND CONCEPTUAL DESIGN DRAWINGS

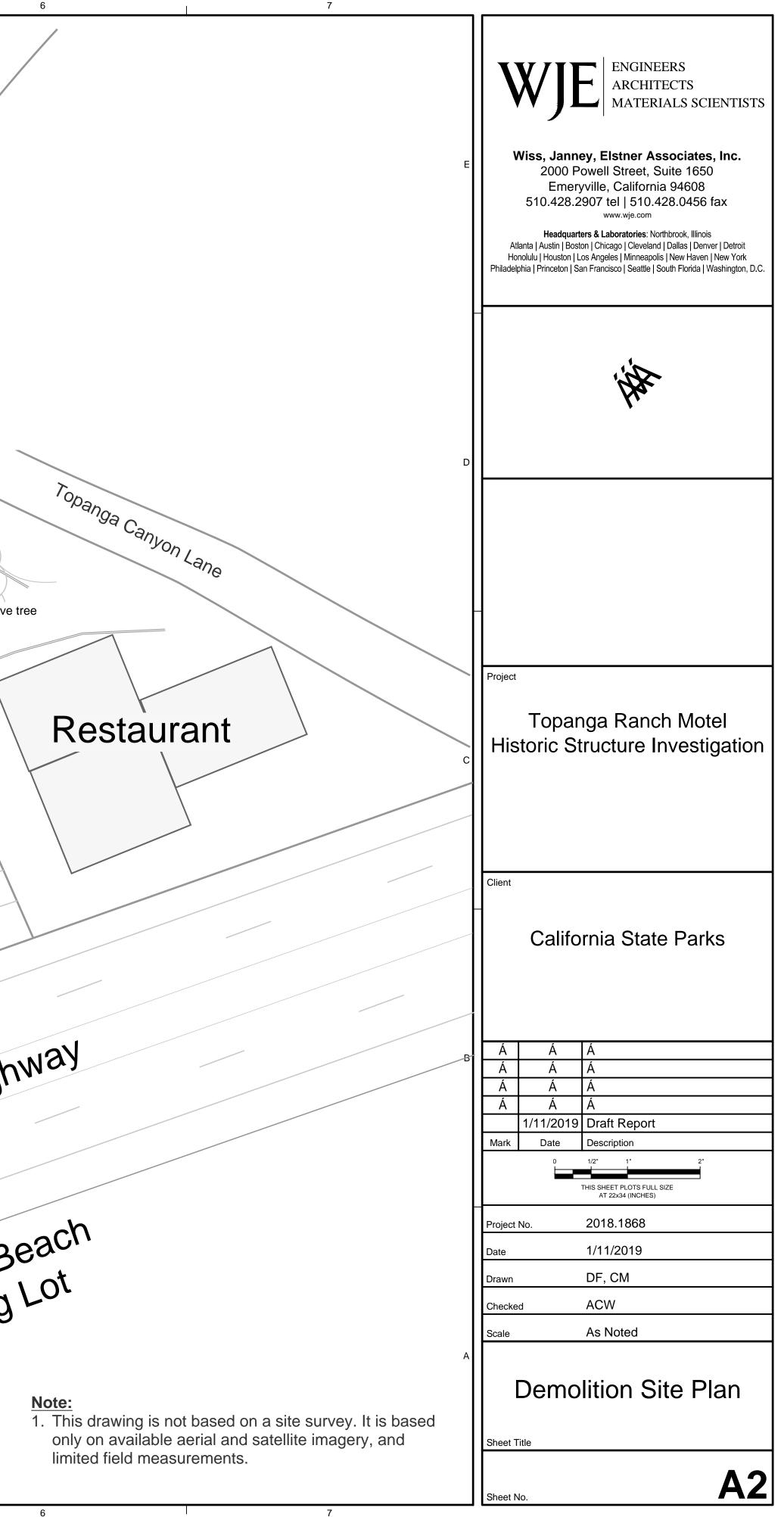


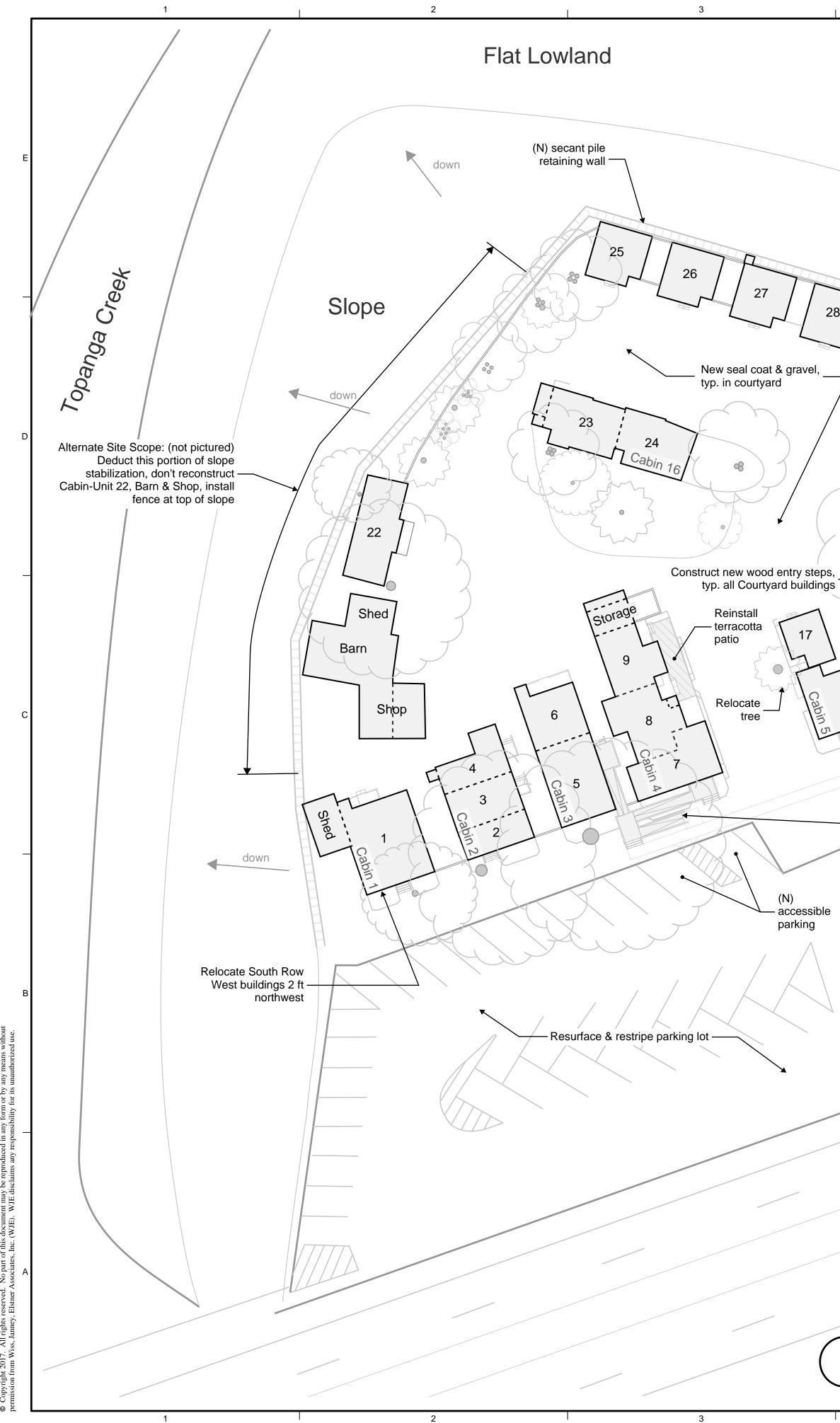
APPENDIX C: CONCEPTUAL COST ESTIMATE



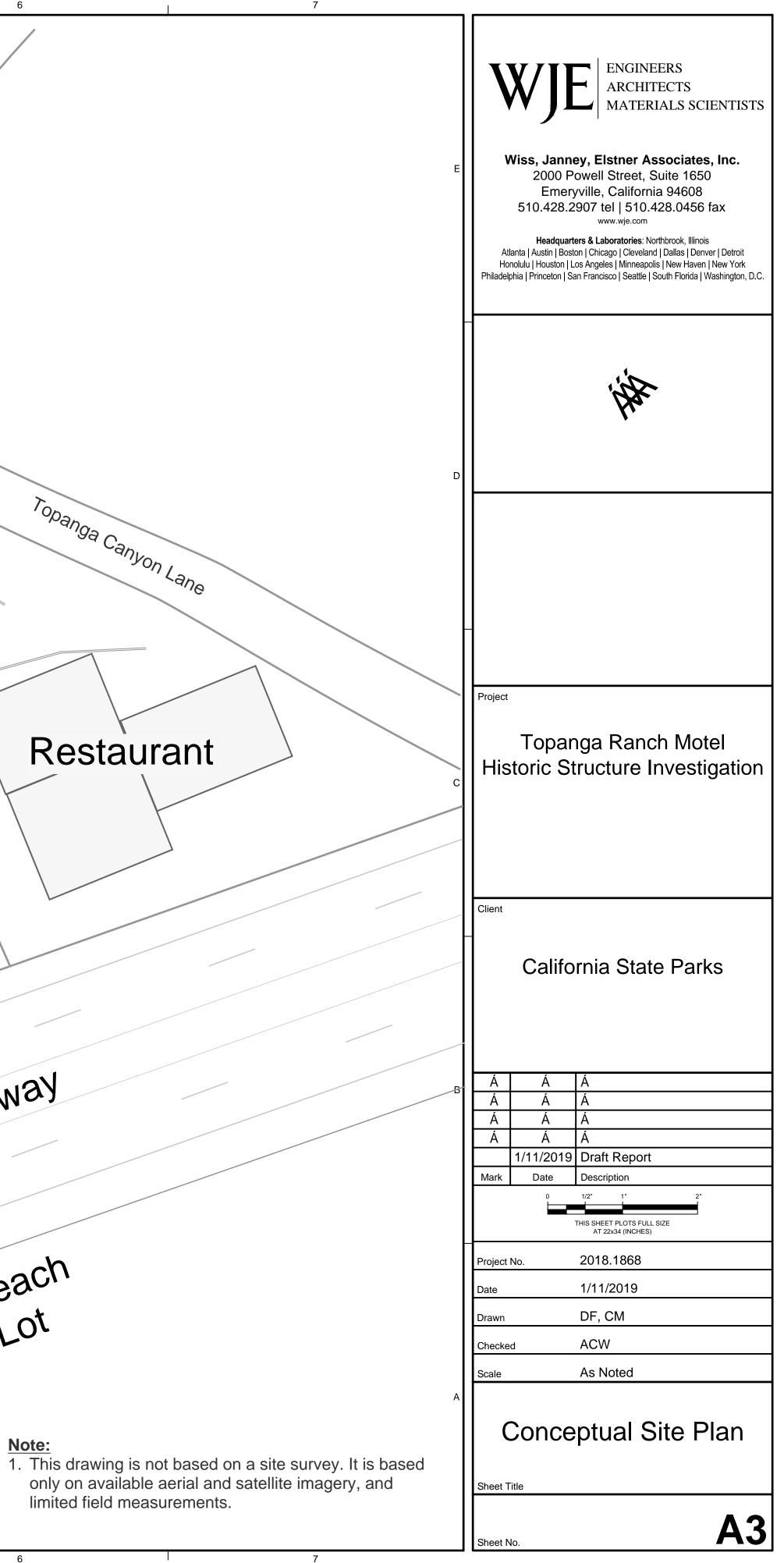


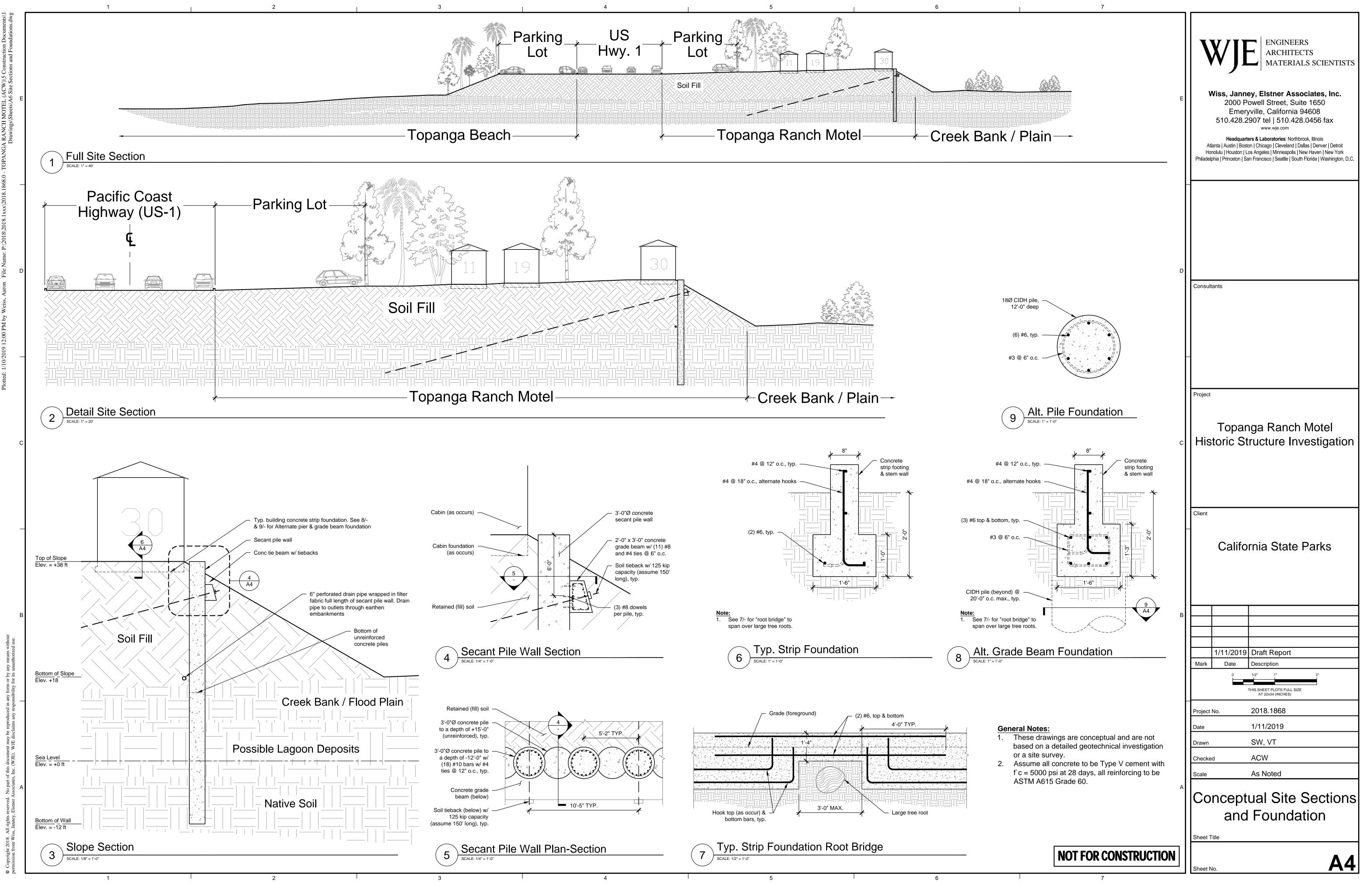
4 0 28 29 30 31 Remove tree stump Storage - Remove deck & hot tub Topanga Canyon Lane 21 16 20 15 — Remove tree \bigcirc 14 18 12 Restaurant Office Remove concrete entry steps, typ. South Row East & West Remove abandoned - telephone pole, typ. Parking Lot Pacific Coast Highway Topanga Beach Parking Lot Demolition Site Plan 1" = 20' SCALE: 1" = 20' 4 5 6

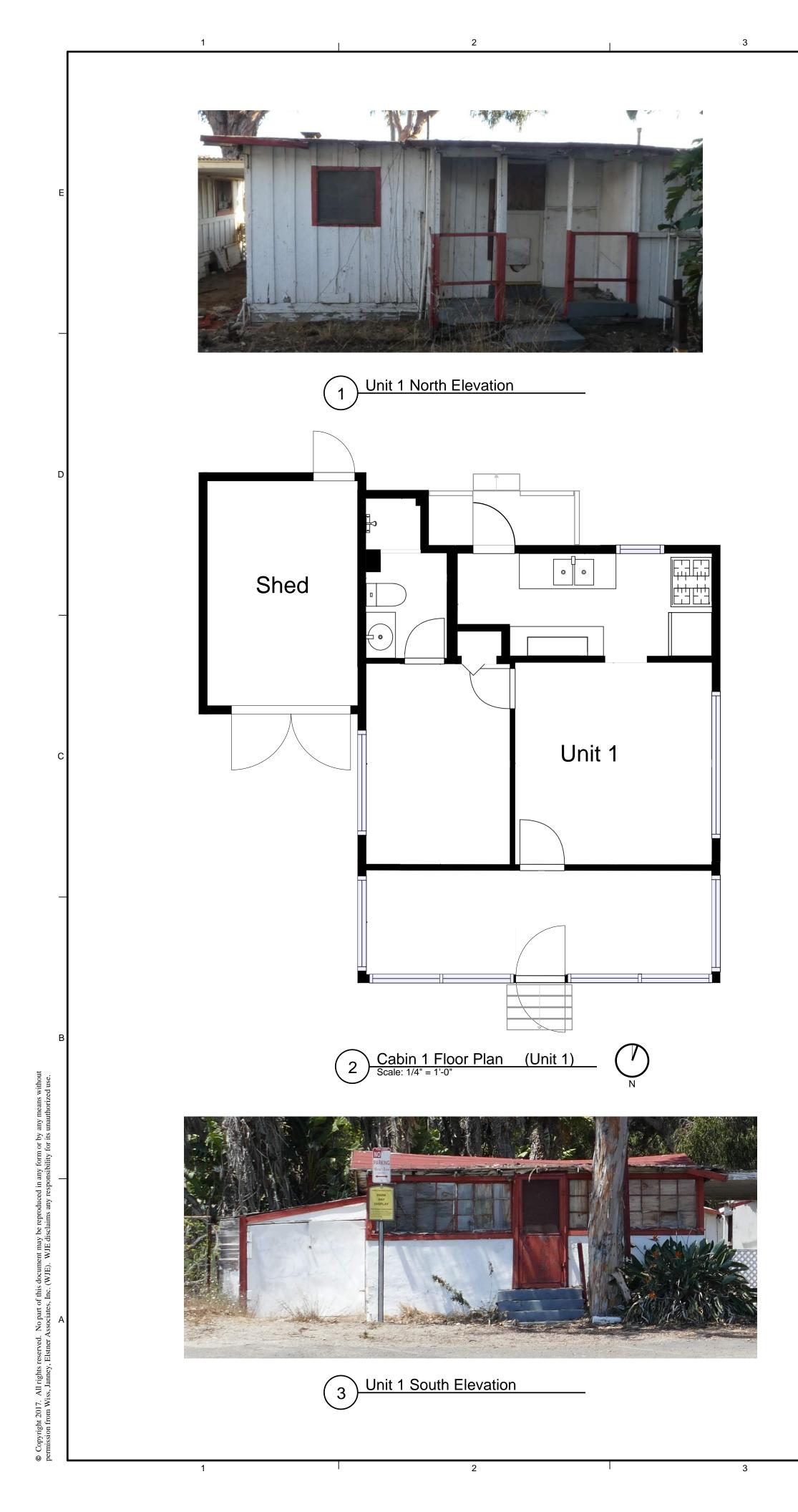


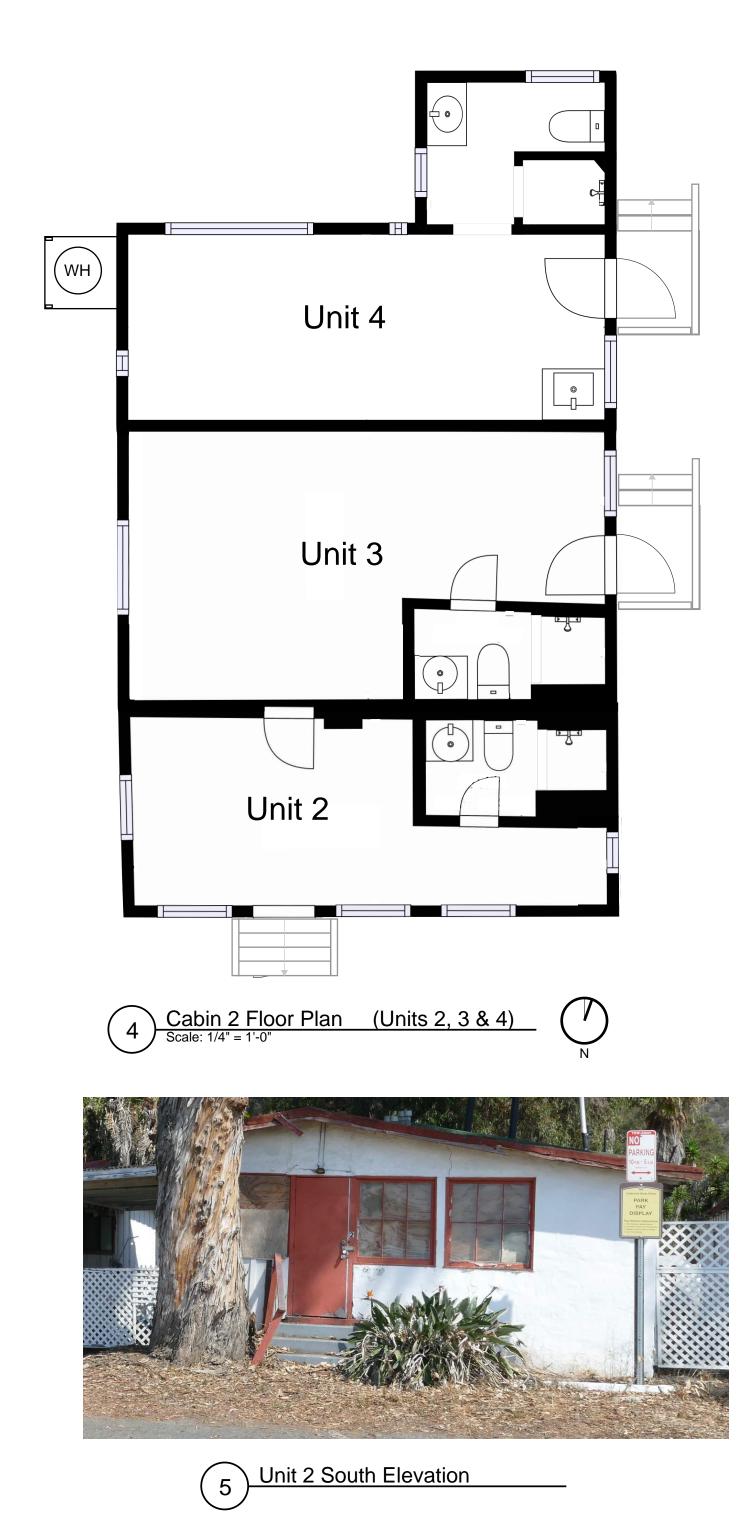


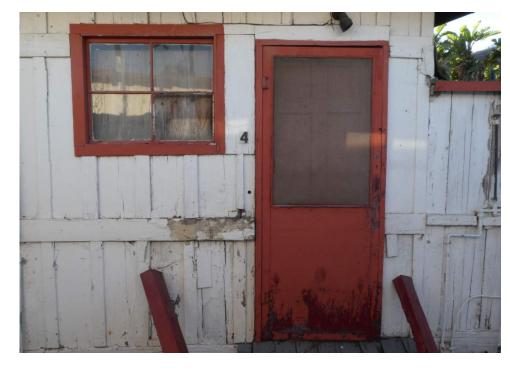
4 6 0 (N) water heater shed down 28 29 30 31 Storage Topanga Canyon Lane Relocate Courtyard - South buildings 2 ft (N) water southeast heater shed 16 21 20 15 19 14 12 17 11 Pit Toilet Restaurant Office Reconstruct concrete entry steps in new location & construct (N) concrete - Relocate South curbs to infill gaps in (E) concrete curbs, typ. South Row East & West - Row East buildings 2 ft northwest — (N) accessible paths & ramps Parking Lot (N) - accessible parking Pacific Coast Highway Topanga Beach Parking Lot Note: Conceptual Site Plan SCALE: 1" = 20' limited field measurements. = 20' 4 5



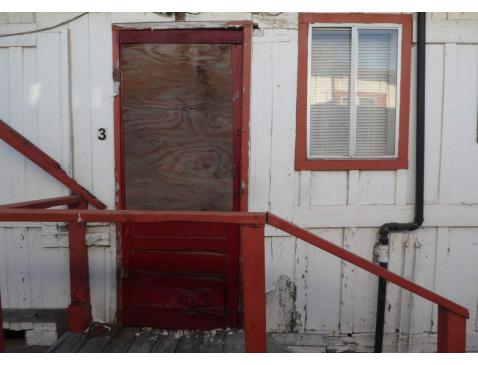




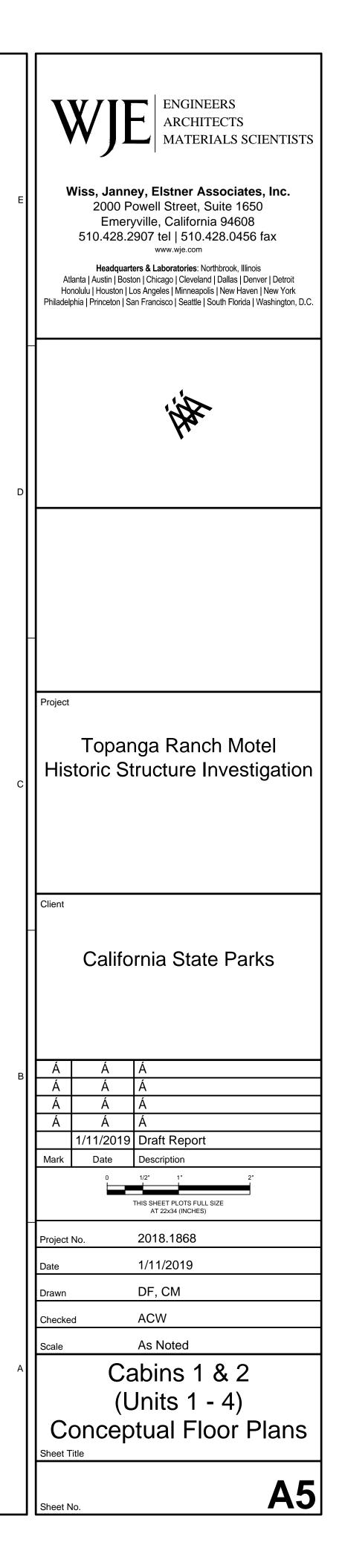




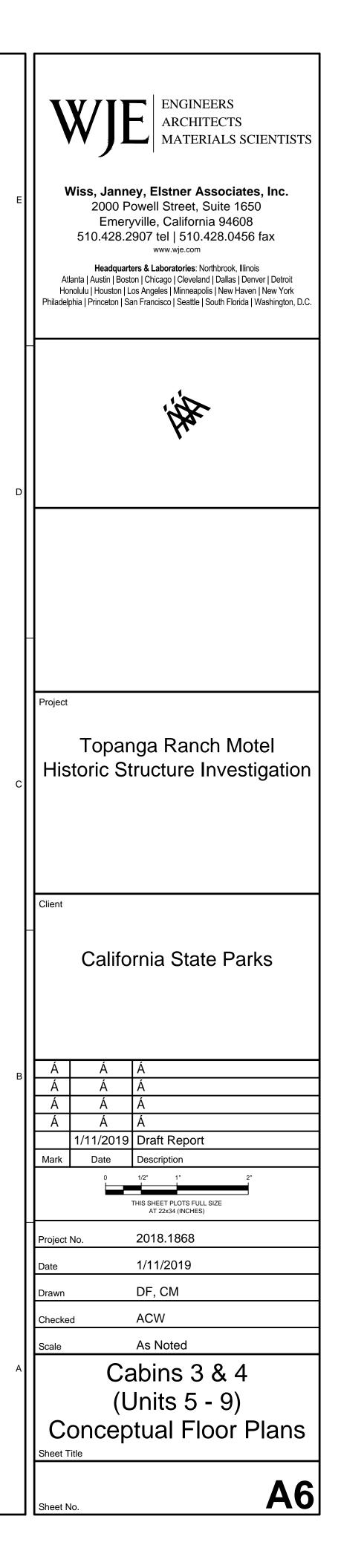
6 Unit 4 East Elevation



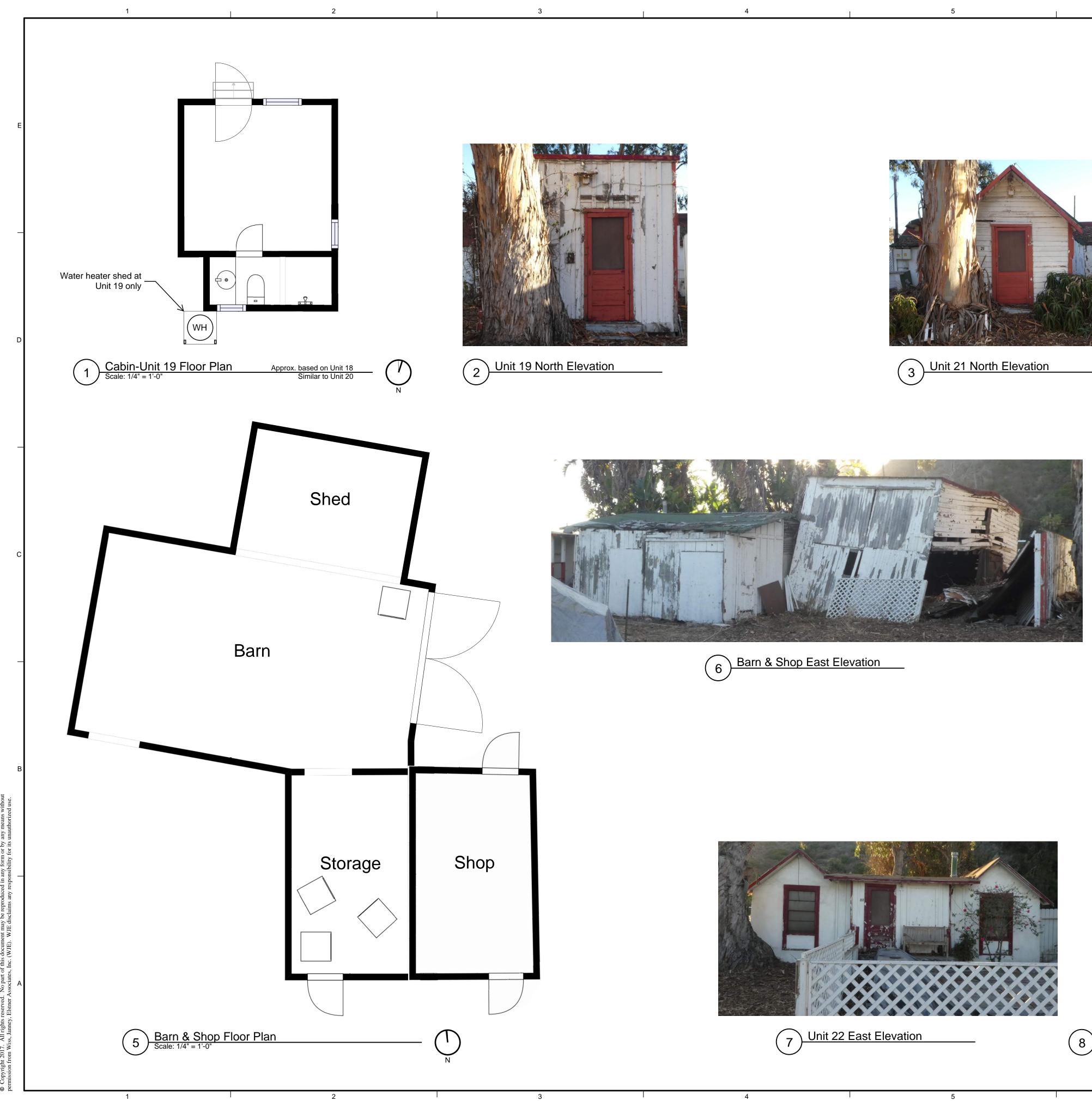
7 Unit 3 East Elevation



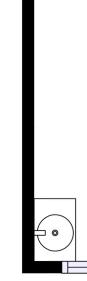


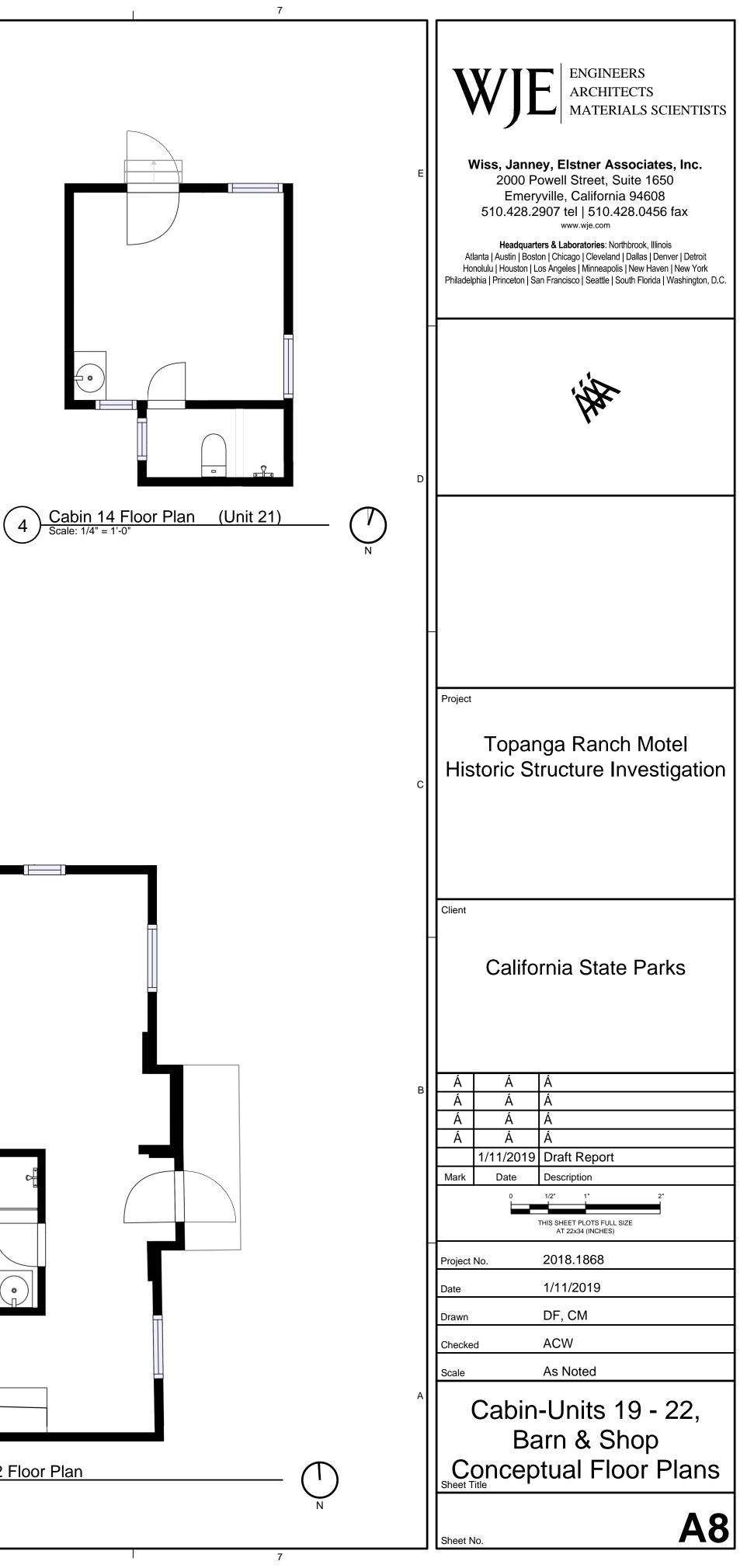


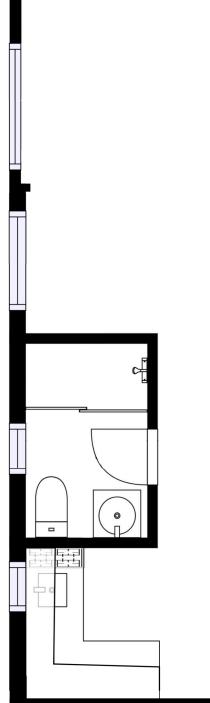




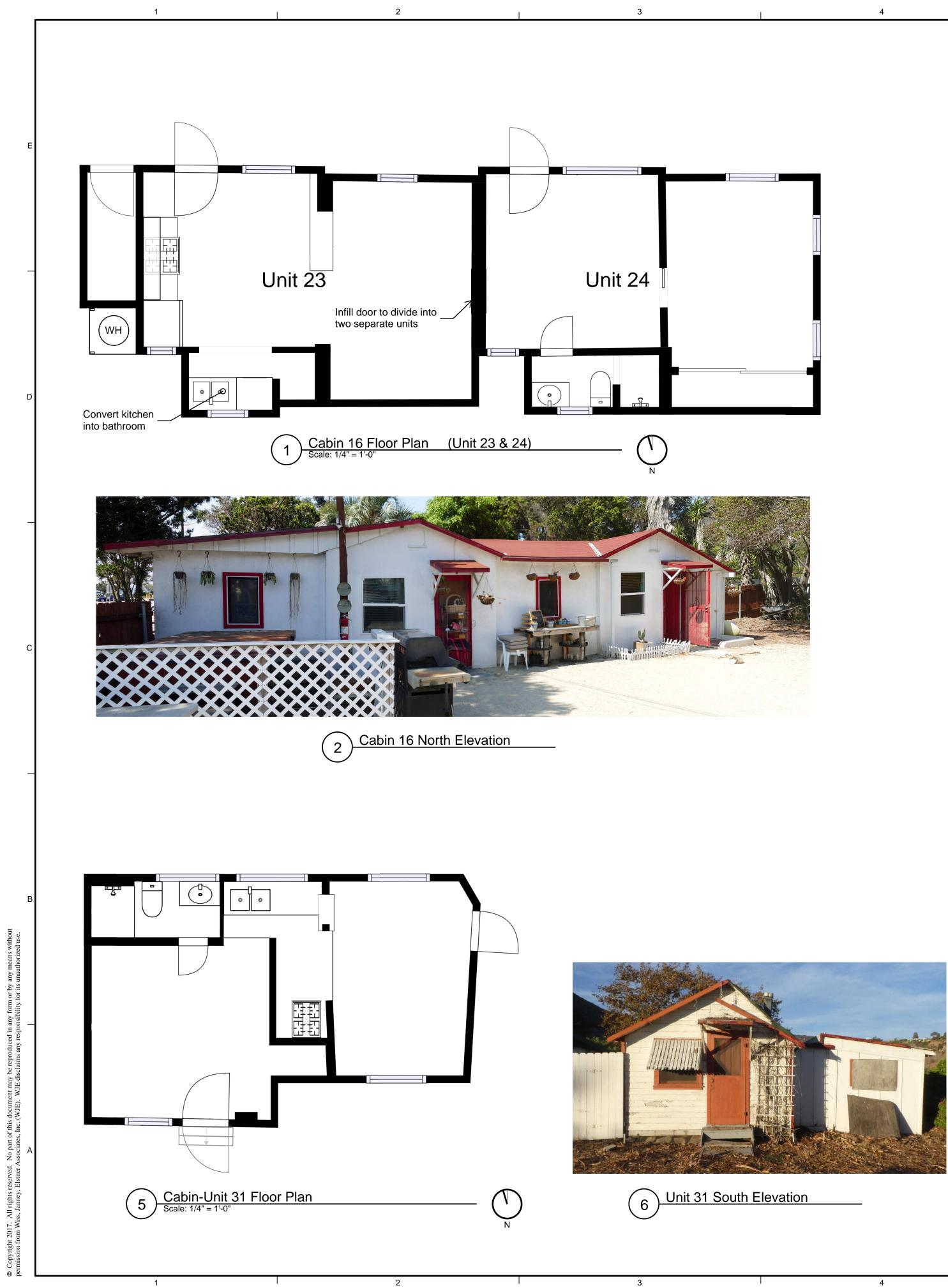


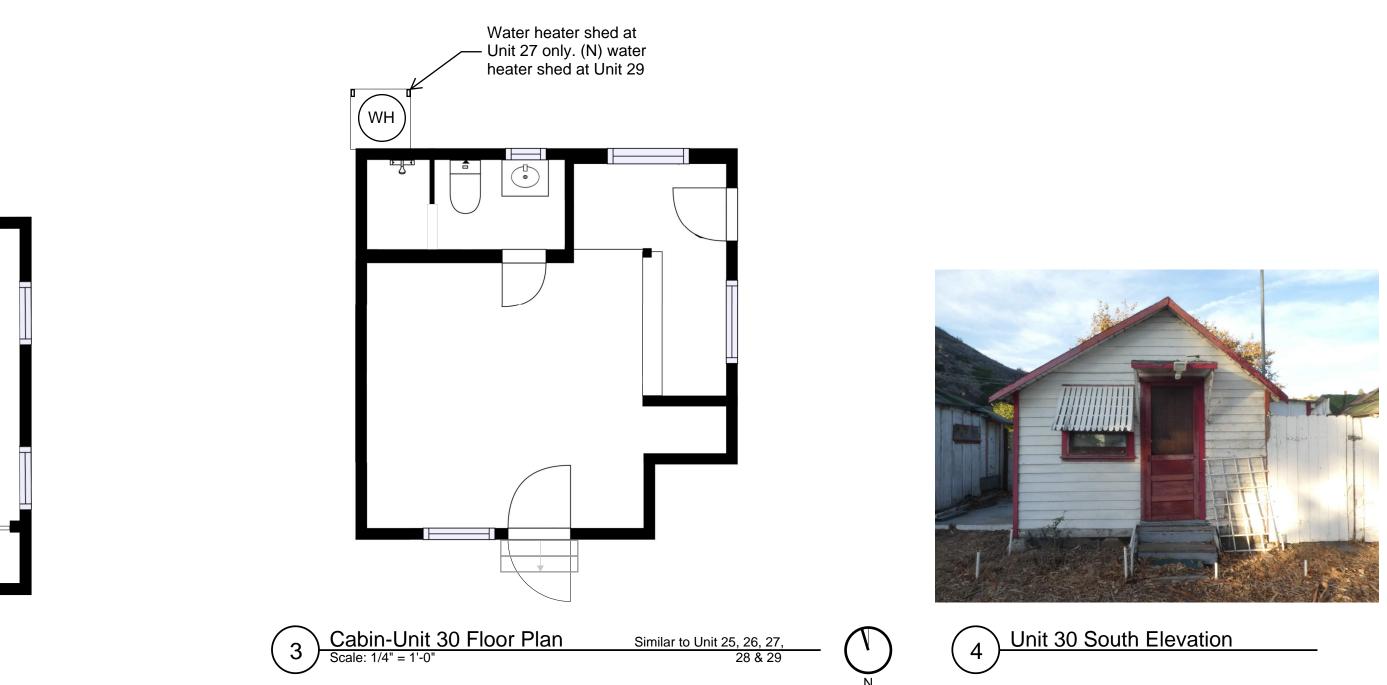






8 Cabin-Unit 22 Floor Plan Scale: 1/4" = 1'-0"







7 Storage Cabin South Elevation

