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Appendix A: Historic Photographs of the Pacific Biological Laboratories Property

Appendix B: Treatment Plan for Concrete Specimen Tanks
1. INTRODUCTION & METHODOLOGY

At the request of the City of Monterey, ARG Conservation Services (ARG/CS) has completed a Historic Preservation Report for the Pacific Biological Laboratories property at 800 Cannery Row in Monterey, California. Built in 1937, the property, which is listed on the National Register of Historic Places, is the former laboratory and residence of Edward Ricketts, an innovative marine biologist and a prominent figure in the local arts scene. The property has also been zoned H-1 by the City of Monterey, indicating it is one of the city’s most important historic resources. The City of Monterey purchased the building in December 1993 and completed a seismic rehabilitation of the building in 1998. The property is maintained by the City of Monterey, which holds maintenance records for the building dating from 1998 to the present.

The purpose of the report is to provide guidance for proposed conservation treatments as well as future maintenance and preservation activities at the property, which retains a high degree of historic integrity. The Historic Preservation Report includes:

- A summary of the historical context of the property
- A description of the property’s historic elements and character-defining features
- An architectural condition assessment and recommendations for high-priority repair and conservation treatments
- Treatment guidelines for the property’s historic fabric
- A treatment proposal for the conservation of the concrete specimen tanks

ARG/CS staff, including two conservators and an architectural historian, visited the site on August 31, 2010 to examine and photograph existing conditions of the building and site features, and to review archival materials provided by the City of Monterey. ARG/CS also reviewed historic photographs and records pertaining to the property, as well as previous reports, assessments and drawings completed by Architectural Resources Group (ARG). Most of the historical photographs that ARG reviewed (including photographs 1, 3, 4, 5, 6, 7, 8, and 9 in Appendix A of this report) were drawn from photo archivist Pat Hathaway’s Historical Photo Collection of California Views.
2. PHYSICAL DESCRIPTION
The Pacific Biological Laboratories building is a two-story, wood frame structure that occupies a 25-foot-wide lot along the north side of Cannery Row. The building is rectangular in plan and has a concrete foundation. The building fronts directly onto the sidewalk, while the rear yard opens onto Monterey Bay. Constructed in 1937, the structure has exterior walls that are rough sawn vertical board and batten, except for the principal facade that faces Cannery Row, which has horizontal lap siding. The building nearly abuts the neighboring structures. The side walls are built to the property lines and have no windows. The flat roof is covered in tar and gravel and gently slopes to the rear of the building. With the exception of the replacement garage door and a rear porch and staircase added in the 1950s, the exterior has changed little since its original construction and retains its historic integrity.

The building’s principal (south) facade is simple and currently unpainted. Original whitewash has been allowed to weather off, exposing wood siding, windows and trim. On the ground story there is a garage opening at the west end of the facade and an open staircase at the east end that leads from the sidewalk to the second story entrance. This entrance consists of a double-panel door that differs from the original, one-light paneled door. The second story has five, six-over-six wood double-hung windows trimmed with flat 1x4-inch boards. A board that formerly supported a flower box runs between the westernmost three windows. The facade terminates with simple molding at the cornice line and is framed by corner boards.

The rear first floor elevation has one door at the west end that opens into the garage. Originally, a second garage door occupied this portion of the wall. In 1955 a straight reverse open staircase was constructed to replace the existing staircase. The original staircase, like the extant front staircase, had been attached to the exterior wall. The extant rear staircase leads to the second story where a porch spans the width of the building. At the east end of the second story is an entry into the building, and at the west end a door leads into the bathroom. Between the two doors are four, six-over-six wood windows. There is also one small six-light window west of the bathroom door. The windows are trimmed with flat 1x4-inch boards. The porch, also constructed in 1955, is covered with corrugated plastic.

An at-grade, concrete slab stretches from the rear of the lab toward the bay, where it terminates in two concrete holding tanks that span the width of the lot and are sunken below the slab level. Currently, there is a wood deck constructed over the tank. Near the middle of the yard are two rectangular concrete specimen tanks that sit approximately 38 feet behind the rear of the main building. The tanks are oriented across the width of the yard and each tank has 16 chambers in two rows of eight. The southern tank is 2.5 feet high and 3.75 feet wide, while the northern tank is 2 feet high and 5.5 feet wide. Both tanks are 15 feet long. Historically, there was a shed roof above the tanks that was supported by wood framing clad in corrugated metal (see Photograph 9). A metal reduction vat with brick masonry support is located south of these tanks. There is also a large barbeque grill in the yard dating from after Ricketts’ occupancy of the building.

The lab’s interior consists of four rooms above a garage space. The largest room occupies the front (southern) half of the second story. This room was formerly divided into separate living room and office spaces by an interior wall that has been removed. The northern half of the second story consists of a room with a bar and shelving, along with a small kitchen and bathroom along the west wall. The bar room was formerly divided into separate bedrooms by an interior wall that has been removed. A doorway formerly led directly from the kitchen into the bathroom. In 1955, this doorway was walled off and the bathroom entrance was moved to an exterior door accessed from the new rear porch. The walls
of the second story rooms consist of vertical boards, with surfaces on the southwest room covered by fiber wallboard, and the south wall of the northeast room covered with gypsum board. Ceilings at the second story have exposed beams and board sheathing.

The garage space is framed by 2x4 lumber with wood siding at the exterior, and includes a sloping concrete driveway at the south wall garage door. A concrete cheek wall with a 2x4 cap runs along the east side of the driveway, with wood steps and a landing next to the cheek wall. Two open spaces to the east have concrete floors and are separated by a single wood wall partition and open wood shelving. While nearly all laboratory equipment has been removed from the garage, shelving along the east wall is historic and some empty file drawers and jars remain. Exposed electrical conduit runs along the walls and several historic decorative outlet covers remain. Wood post and beam framing supports the second floor and plumbing and sprinkler pipes are exposed. Rigid insulation boards are visible at the southeast quadrant of the ceiling. A security system is mounted on the wall finish at the east end of the south wall.
3. Historical Context

3.1 Summary of Historic Significance
The Pacific Biological Laboratories property at 800 Cannery Row is primarily significant as the laboratory and residence of Edward Ricketts (1897-1948), an innovative marine biologist and a prominent figure in the local arts scene. The property is also significant as the gathering place for a local club that figures prominently in the recent history of the Monterey Bay community. The property was listed on the National Register of Historic Places in 1994 as both an individually-eligible property and a site-specific historic district consisting of the main building, two specimen holding tanks, and a metal reduction vat. The National Register of Historic Places Registration Form includes the following statement of significance for the property:

The Pacific Biological Laboratories is significant under Criterion A as Cannery Row’s “Doc’s Lab,” a literary icon in American fiction created by Pulitzer and Nobel prize-winning author John Steinbeck. It is also significant under Criterion B for its association with Edward F. “Doc” Ricketts, Steinbeck’s friend and mentor, who became the first, and only marine biologist to attain heroic status in American letters. Ricketts’ own pioneering studies of, and literary contributions to the understanding of, intertidal organisms produced the first definitive source book for studying marine life on the Pacific Coast. The Pacific Biological Laboratories was the physical locus where much of the literary vision of both authors germinated and grew. The lab still retains its historic appearance to a remarkable degree, evoking a particularly strong sense of time and place. It should be listed in the National Register at the national level of significance.1

In a 2001 survey of Cannery Row commissioned by the City of Monterey, the Pacific Biological Laboratories property was also found to be a contributor to the Literary Core Historic District, a National Register-eligible collection of commercial and industrial properties in Cannery Row that are representative of the area’s fishing and canning industrial past and that served as inspiration for many of John Steinbeck’s fictional works. As the most significant remaining resource associated with Edward Ricketts, the property has been zoned H-1 by the City of Monterey, indicating it is one of the city’s most important historic resources.

Though secondary to its association with Ed Ricketts, the Pacific Biological Laboratories building has also acquired significance in the last 50 years as the gathering space for a men’s social club. This club, which took the name of Pacific Biological Laboratories in honor of Ricketts, moved into the building in 1956 and continued the building’s use as a gathering space for artists, writers and intellectuals. Club members have included nationally known cartoonists and artists and were instrumental in establishing the Monterey Jazz Festival in 1957. Club members still meet at the Lab regularly.

3.2 Historical Background

Early Years of Pacific Biological Laboratories, 1923-1936
Edward Flanders Robb Ricketts came to California from Chicago in 1923. Upon arriving in California, Ricketts founded Pacific Biological Laboratories, a biological specimen supply company, with former

1 Seavey, Section 8, 1.
University of Chicago classmate Albert Galigher. Their first office was at 165 Fountain Avenue in Pacific Grove. By 1924, Ricketts had become the sole proprietor of Pacific Biological Laboratories. In 1928, Ricketts purchased the property at 800 Cannery Row, then 740 Ocean View Avenue, and relocated his biological laboratory there. He bought the property from Vicente Rodriguez, who had purchased the property in 1917. The property also included the lot immediately west of the current lot. After Ricketts purchased the property, the stucco-clad, single-story house on the site was lifted and the laboratory portion of the building was constructed underneath by Pacific Grove contractor Roscoe Wright. The concrete specimen holding tanks were in place when Ricketts purchased the property. The tanks had been built by the Rodriguez family and were originally contained in a covered shed. The Rodriguez family used the tanks as part of fish salting and sardine pressing operations.

Ricketts used the building strictly as a laboratory until 1932, when he separated from his wife Nan and began using the building as both home and office. On November 25, 1936, a fire that began at the adjacent Del Mar Cannery completely destroyed the Pacific Biological Laboratories building, along with Ricketts’ sizeable library and the most extensive collection of marine invertebrate biology research in existence at the time. Fortunately, he had already submitted the Between Pacific Tides manuscript to Stanford University Press.

As a marine biologist, Edward Ricketts collected specimens of sea life and sent them to museums and schools all over the world. Ricketts’ collection of marine tide animals was the most comprehensive on the West Coast. Specimens collected by Ricketts are still held today at museums and research institutions throughout the United States, including Hopkins Marine Station in Monterey, the Monterey Bay Aquarium, San José State University, the California Academy of Sciences in San Francisco, the Field Museum in Chicago, the Smithsonian Institution, the American Museum of Natural History, the Museum of Comparative Zoology at Harvard University and the Museum of Zoology at Lund University in Sweden.

Ricketts, though, was more than an accomplished collector of specimens. His book Between Pacific Tides, first published by Stanford Press in 1939, was a landmark work in the emerging field of marine ecology and is still in use as a college text today. The book, which was co-authored with writer friend Jack Calvin and illustrated by Ritchie Lovejoy, detailed the habits and habitats of approximately five hundred seashore invertebrates along the Pacific Coast of North America. Reflecting Ricketts’ holistic perspective, Between Pacific Tides was organized by ecological habitat (such as protected outer coast, open coast, bay and estuary, and wharf pilings) rather than by species, an innovative approach at the time. Ricketts furthered the field of marine biology by changing the field’s focus from species classification to an understanding of biological resources in their ecological context. Now in its fifth edition, Between Pacific Tides is one of the best-selling books ever published by Stanford University Press.
Ricketts at the Pacific Biological Laboratories Building, 1937-1948

Within a few weeks of the devastating fire, Ricketts began making arrangements for the construction of a new building to replace his former home and laboratory. According to a summary of building permits supplied to ARG by the City of Monterey, the new building was paid for by the sale of the western half of the lot to Yee King, along with a $3,600 bank loan and $3,000 in insurance money from the fire. The architectural simplicity of the replacement building reflects the limited funds available to Ricketts for reconstruction.8

The new building was similar in scale and floor plan to the structure that was destroyed. It featured a front and rear garage door, which enabled Ricketts to drive his car to the tanks to unload specimens after collecting expeditions. Ricketts used the second floor as a home, and as a gathering space for his many friends, while the garage was reserved for laboratory uses. Neal Hotelling, president of the Cannery Row Foundation, describes the operation of the laboratory:

Most of [Ricketts’] specimen preparation was done in the basement. There he had a large sink and work bench in the northeast corner. The western wall contains narrow shelves built between the open studding. These shelves were used for storing prepared specimens ready for shipping. The central shelves, which section off the work area, were used for storing materials he used in his work, such as the formaline tank still there, complete with a pipe spigot.9

Neither preserving and selling specimens nor conducting pioneering marine research proved commercially profitable, however, and Pacific Biological Laboratories was in danger of closing as World War II approached. To keep the lab in business and to enable Ricketts to pay off the bank loan that had helped finance the construction of the new building, Ricketts’ friend, John Steinbeck, bought half of Pacific Biological Laboratories’ stock in 1939 for $6,000, becoming the operation’s vice-president in the process.10

As a follow-up to Between Pacific Tides, Ricketts traveled with Steinbeck to the Sea of Cortez (now known as the Gulf of Baja) to study the biological species of the region. Their six-week voyage on the vessel the Western Flyer in the spring of 1940 entailed collection of over 600 species, sixty of which were previously unknown to science.11 Ricketts’ detailed journal of the trip later formed the narrative section of Steinbeck’s travel book, The Sea of Cortez, which was published in 1941. Ricketts and Steinbeck planned a second collaboration, to be called The Outer Shore, which would focus on the seashore life of the Bering Sea, the Gulf of Alaska, the Aleutian Islands, and other areas to the far north. In 1945 and 1946, Ricketts visited Vancouver Island and the Queen Charlotte Islands to conduct research for this study, and his journals from these trips were written as lengthy notes he hoped Steinbeck would develop into a book.12

In addition to serving as a laboratory, the Pacific Biological Laboratories property was also a haven for a bohemian community of Monterey area artists, writers, and intellectuals who congregated there regularly in the 1930s and 1940s. These individuals included Ricketts’ common-law wife Toni Jackson,

8 Hemp, 95.
9 Hotelling, 2.
10 Tamm, 49, 144. Ricketts met Steinbeck at a party at Between Pacific Tides co-author Jack Calvin’s Carmel home in 1930.
11 Tamm, 48.
12 Mangelsdorf, 178.
artist Bruce Ariss and his wife Jean, blacksmith and sculptor Francis Whitaker, illustrator Ritchie Lovejoy and his wife Tal, sculptor Remo Scardigli and his wife Virginia, writer Beth Ingels, writer Toby Street and his wife Peggy, mythologist Joseph Campbell, and John and Carol Steinbeck.

Steinbeck drew inspiration and ideas for many of his books from these friends and the conversations they shared at the lab. Ricketts was John Steinbeck’s closest personal and intellectual companion from soon after their meeting in 1930 until Ricketts’ untimely death in 1948. Over that time, Ricketts’ “passion for holistic and ecological thinking, his associational beliefs about the behavior of men and animals in groups, his doctrine of breaking through, and his disdain for the self-oriented acquisition of material wealth provided Steinbeck with many of his central thematic elements.” Characters based on Ricketts, to varying degrees, appear in several Steinbeck novels, including Slim in *Of Mice and Men* (1937), Doc Burton in *In Dubious Battle* (1936), Jim Casy in *The Grapes of Wrath* (1939), Dr. Winter in *The Moon is Down* (1942), and Lee in *East of Eden* (1952). Ricketts is most widely known, not as a marine biologist, but as the model for Doc in Steinbeck’s novella *Cannery Row*, which focuses on a series of parties or “get-togethers” that revolve around “Doc,” and his “Western Biological Laboratory.” Following publication of *Cannery Row* in 1945, a steady stream of tourists visited the Pacific Biological Laboratories building, hoping to catch a glimpse of the real Edward F. Ricketts. Indeed, the book was so popular that Ocean View Avenue was renamed Cannery Row in 1958.

**Post-Ricketts History of Building**

On May 8, 1948 Ricketts was struck by the evening Del Monte Express after his car stalled on the tracks at the corner of Drake and Wave Streets. Badly injured, Ricketts died on May 11. Following Ricketts’ death, John Steinbeck combed through Ricketts’ papers and destroyed much of his personal correspondence. Ricketts’ field notes, species index cards and related materials were sent to Hopkins Marine Station. In 1949, the Pacific Biological Laboratories building was sold to Yock Yee, a local grocer and land owner. Yock was proprietor of the nearby Wing Chong market which had been started by his father Won Yee.

Three years after Edward Ricketts’ death, high school literature teacher and jazz enthusiast Harlan Watkins began renting the Pacific Biological Laboratories building from Yock Yee and purchased it in 1956. Harlan Watkins regularly had friends over for beers and conversation, and talk frequently focused on starting a Cannery Row jazz label. In 1958, after Watkins had married and moved to Europe, friends of Watkins, including Frank Wright, Ed Haber, Joe Turner, Fred Fry and Ed Larsh, joined together to purchase the building under the name “Pacific Biological Laboratories.” The building served as a weekly meeting place for club members, many of whom were prominent Monterey artists and writers. Founding club members also included nationally known cartoonists Hank Ketcham (creator of *Dennis the Menace*), Eldon Dedini and Gus Arriola.

The Pacific Biological Laboratories building can also be considered the birthplace, at least in concept, of the Monterey Jazz Festival:

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13 Seavey, Section 8, 6.
14 Astro, quoted in Seavey, Section 8, 6.
15 Rodger, xi.
16 Tamm, 287.
17 Won was the basis for Steinbeck’s fictional Lee Chong in *Cannery Row*.
[O]ne Wednesday night [San Francisco jazz broadcaster] Jimmy Lyons and Hal Hallett came to the Lab as guests of Joe Turner and after an hour or two of listening to the new cool jazz of Charlie Parker, Dizzie Gillespie, and Miles Davis, we talked about the feasibility of a jazz festival. The idea was indeed born at the Lab, and the planning became serious later during a dinner at Neil DeVaughn’s restaurant. For the next three months our attention was on little else. ¹⁸

Several club members joined the Monterey Jazz Festival board and worked to promote the festival locally. The first festival was held in 1958, and the opening night included performances by Louis Armstrong, Gerry Mulligan, Max Roach, Dave Brubeck, Cal Tjader, the Modern Jazz Quartet, Harry James, Dizzy Gillespie, Sonny Rollins and, just nine months before her death, Billie Holiday. The annual Monterey Jazz Festival remains a significant cultural event.

The Pacific Biological Laboratories club sold their building to the City of Monterey in December 1993 for $170,000. The City completed a seismic rehabilitation of the building in 1998. The Pacific Biological Laboratories club retains use of the building until 2015.

3.3 Character-Defining Features
The Pacific Biological Laboratories building retains the following distinctive character-defining features. These features should be retained and preserved in future re-use of the building.

**Ricketts-era (1937-1948)**
- Two-story height
- Lap siding on front façade
- Garage opening at west end of front facade
- Wood stairs and front entrance at east end of front façade
- Simple molding at cornice and corner boards at front façade
- Six-over-six, wood windows with wood trim on front and rear façades
- Gently sloping roof
- Board and batten siding on side and rear elevations
- Ceiling in second-story rooms with exposed beams and tongue and groove board sheathing
- Wood shelving and electrical outlet covers in garage
- Wood board flooring
- Interior wall finishes including vertical tongue and groove boards and fiber wallboard
- Concrete specimen tanks in rear yard (these date from before 1928)
- Metal reduction vat with brick masonry support in rear yard

**PBL Club-era (1951-present)**
- Staircase and porch at rear façade (not including non-historic corrugated plastic roofing)
- Bar and shelving in rear second-story room

In addition, while they are not fixed features and are not addressed in the 1994 National Register nomination, some interior artifacts – including mementoes; photos and posters (many of well-known jazz artists); and drawings by club members—contribute to the social and intellectual character of the

¹⁸ Larsh, 118.
club by invoking a sense of cultural history and continuing the building’s longstanding, convivial atmosphere as a haven for visual, literary and musical artists.

### 3.4 Building Chronology

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1928</td>
<td>Construction of tanks by Rodriguez family for use in fish-packing</td>
</tr>
<tr>
<td>1928</td>
<td>Ricketts purchases 740 Ocean View Avenue (now 800 Cannery Row) property for $8,000 and relocates Pacific Biological Laboratories there</td>
</tr>
<tr>
<td>1932</td>
<td>Ricketts begins using property as his primary residence in addition to a lab</td>
</tr>
<tr>
<td>1936</td>
<td>Original building destroyed in Del Mar Canning Company fire</td>
</tr>
<tr>
<td>1937</td>
<td>Existing building constructed</td>
</tr>
<tr>
<td>c. 1939</td>
<td>Max Schaefer constructed metal reduction vat in rear yard for production of basking shark liver oil, which was thought to reduce the effects of arthritis</td>
</tr>
<tr>
<td>1946</td>
<td>Del Vista Packing Company plant constructed immediately west of building</td>
</tr>
<tr>
<td>1948</td>
<td>Following Ricketts’ death, building sold to Yock Yee, proprietor of the Wing Chong market</td>
</tr>
<tr>
<td>1951</td>
<td>Harlan Watkins begins renting building from Yee</td>
</tr>
<tr>
<td>1955</td>
<td>Addition of rear porch and staircase</td>
</tr>
<tr>
<td>1956</td>
<td>Harlan Watkins purchases the building</td>
</tr>
<tr>
<td>1958</td>
<td>Friends of Watkins, under the moniker “Pacific Biological Laboratories,” buy the building from Watkins and use it to host weekly club meetings</td>
</tr>
<tr>
<td>1993</td>
<td>City of Monterey assumes ownership of building with plans to convert the building for public access museum use</td>
</tr>
<tr>
<td>1994</td>
<td>Safety railing added to stairs</td>
</tr>
<tr>
<td>1998</td>
<td>Building undergoes rehabilitation, including roof replacement, weatherization, installation of fire sprinklers, and seismic stabilization</td>
</tr>
</tbody>
</table>
4. ARCHITECTURAL ASSESSMENT AND TREATMENT RECOMMENDATIONS

Original or historic building materials, also known as historic fabric, contribute to the significance of a building because they embody the degree of architectural integrity a building possesses. Historic fabric is tied to historic preservation criteria of “feeling” and “workmanship,” and often represents traditional materials or building techniques that are no longer part of common construction practice. Retaining historic fabric increases the authenticity of character-defining elements and serves broader preservation goals of advancing knowledge about the history of building design and technology.

Architectural treatments described in this section encompass both repairs and conservation measures. Repairs refer to procedures associated with routine activities such as cleaning and painting, but also address standard maintenance measures that nonetheless require specialized skills and materials to address the needs of the historic buildings. Conservation treatments refer to methods that save or preserve existing historic materials rather than replacing them. Before they are implemented on historic features, recommended treatment materials and methods should be tested for physical, chemical, and visual compatibility with historic materials.
4.1 Condition Assessment
Architectural and site features were examined to identify conditions visible from the ground and the second floor porch. No destructive investigation was undertaken, and the building roof covering was not available for inspection.

Structural Systems
Wood wall, roof and floor framing appeared to be in good condition overall. However, termite activity is apparent at the floor inside the rear door at the second story. Additionally, evidence of active termite infestation in the form of frass (i.e., waste products from the consumption of wood) is visible at the north wall window sill. Insect infestation potentially threatens structural wood members, which may have been damaged in concealed locations.

Termite-damaged floorboards are marked with caution tape at the rear doorway (ARG/CS, 2010).

Insect frass deposits are evident at the interior north wall window sill (ARG/CS, 2010).
**Exterior Walls**

Wood siding that covers visually accessible walls on the south, east and north elevations is in fair condition overall. However, the wood is weathered due to exposure to environmental conditions including visible light and ultraviolet radiation (from sunlight), as well as moisture and thermal cycling. Deterioration is evident in the form of raised wood grain and wood discoloration throughout, as well as limited areas of split, warped, and detaching boards, particularly at the south elevation.

Sheet lead flashing at the east elevation sidewalk exhibits small holes and tears that provide a path for moisture intrusion. This condition is likely due to an inadequate seam detail between individual sheets and a lack of a cant or other backing material where the lead curves at the building and sidewalk interface.

*Warped and detaching boards at the south elevation (ARG/CS, 2010).*

*Lead flashing at the east elevation sidewalk has holes and tears (ARG/CS, 2010).*
Windows and Doors
Failure to maintain coatings on historic windows has led to the deterioration of wood sashes and trim, which exhibit discoloration and raised grain. Cracked and missing glazing putty and poorly-installed header flashing allow water infiltration to the interior, particularly at the south elevation. Doors are in good to fair condition, with the main entry door exhibiting fading paint and delamination of the plywood veneer.

Detail of exposed wood sash with cracked and missing glazing putty at south elevation (ARG/CS, 2010).

Poorly-installed and corroding header flashing at the south elevation allows moisture infiltration (ARG/CS, 2010).
Roofs

Roof coverings of the main building and rear porch were not available for inspection. However, examination of second floor ceilings revealed only one apparent roof leak near the rear door, as evidenced by discoloration of ceiling boards in this area. Water damage is more prevalent at the rear porch roof: rafters show extensive water staining, particularly at outer edges and where they are fastened to the north wall of the building.

Water stains on the ceiling near the north wall indicate possible roof leaks (ARG/CS, 2010).

Rafters exhibit extensive water staining at the north elevation porch (ARG/CS, 2010).
Porch and Stairs

The stairs at the north elevation exhibit significant deterioration from insect activity and rot from moisture intrusion; the posts supporting the lower landing have shifted out of plumb and are inadequately connected to concrete footings. At the south elevation stairs and landing at the main entrance, wood framing elements are out of plumb; guardrails are loose and are not code compliant (they are lower than 42”). In addition, insect galleries visible on one fascia board indicate active insect infestation.

Framing elements of the north elevation stairs are rotting and have frass deposits, indicating insect activity (ARG/CS, 2010).

The stairs and landing at the main entrance are structurally compromised, and insect galleries indicate active infestation (ARG/CS, 2010).
Site Features
Concrete specimen tanks in the rear yard are in fair to poor condition. Accumulated dirt, debris and plant materials in the bottom of the cells attract and retain moisture. The presence of lichens and widespread detachment and spalling of parge material at concrete surfaces indicate moisture intrusion. Both tanks exhibit wide horizontal cracks concentrated at the west ends, and the southernmost tank has severe spalling and loss of concrete. The sheet metal reducing vat is heavily corroded, and areas of loss are evident at the base of the reservoir. The brick masonry support below the vat is in fair condition, exhibiting overall soiling and minor mortar deterioration.
**Interior**

Interior walls, ceiling and floors are generally in good condition, but a number of waterproofing issues have led to deterioration of selected features, particularly at windows. Window sashes and frames at the north and south walls are discolored by water damage, and frass deposits at the north windows indicate insect activity in that area. Moisture penetrating the wall at the window opening has damaged surrounding fiber wallboard finishes.

*Windows at the north wall have water damage and deposits of frass (ARG/CS, 2010).*

*Windows and wall finishes at the south wall are damaged by moisture (ARG/CS, 2010).*
4.2 High Priority Treatments
The following section describes recommended high priority treatments to correct deterioration, damage, or deficiencies in building systems and site features. These treatments address waterproofing and structural issues, and should be carried out as soon as possible to prevent further deterioration or loss of historic fabric.

Windows
Window sashes should be maintained, including replacing cracked and missing glazing putty and re-establishing a protective coating. Proper application and maintenance of coatings are essential to protecting the wood features from weathering and infestation. Coatings containing pigments such as paint, stain and limewash keep moisture from penetrating wood, and mitigate the damaging effects of the sun’s rays. Weatherstripping should be added to all sashes to prevent air and moisture intrusion.

Properly designed sheet metal flashing should be installed at window openings. The purpose of the flashing is to direct water away from joints and prevent moisture from seeping through the walls. Flashing at window headers should extend at least 6” beneath the wood siding and contain a drip edge to prevent migration of moisture underneath the flashing. Additional flashing should be installed around the window perimeter, and building paper should extend over all flashing.

Deteriorating windows require maintenance of coatings and waterproofing features (ARG/CS, 2010).
Exterior Walls

Most wood deterioration is the result of moisture penetration that leaves the wood vulnerable to fungal attack and insect infestation. Wood that undergoes wet/dry cycling will swell and shrink, causing cracks, splits, and checks that result in gradual sloughing and loss of wood fibers and provide avenues for water penetration. Intense ultraviolet (UV) and visible light radiation from sunlight damages wood surfaces and intensifies moisture and thermal cycling. Proper application and maintenance of coatings is essential to protecting the wood features from weathering and infestation. Coatings containing pigments including paint, limewash and stain keep moisture from penetrating wood, and mitigate the damaging effects of the sun’s rays. Water repellents and wood preservatives containing water repellents inhibit moisture absorption and minimize swelling and shrinkage cycles, and depending on their formulation they can provide minimal protection from UV radiation. Penetrating oils reduce water absorption, but do not provide UV protection. Varnishes, polyurethanes, and other transparent film-forming coatings generally provide no UV protection, are not as durable in exterior applications as paint coating systems, and require frequent re-application. All protective coatings require re-application, the frequency of which is affected by the severity of the weathering conditions including UV exposure and moisture levels.

Exposed wood siding should receive a protective coating to minimize water absorption and UV damage. Historic photos suggest that the south elevation siding was originally painted or whitewashed, and fragments of an opaque coating are still evident on siding boards. In addition, analysis of finishes previously conducted by ARG confirms that the building was coated with limewash (also known as whitewash). Limewash formulations are typically thin, and this treatment can be applied to the walls to achieve a semi-transparent, weathered appearance while still providing substantial moisture and UV protection. Alternately, a clear wood preservative coating containing a biocide can be applied.

Other recommended wall treatments include re-fastening detaching siding boards, and repair of the sheet lead sidewalk flashing at the east elevation.

Weathered siding boards are in need of a protective coating (ARG/CS, 2010).
**Stairs**

Though most wood deterioration stems from fungal attack of wet wood (with a smaller percentage of damage from subterranean termite infestation), wood with relatively low moisture content may be attacked by drywood termites. Drywood termite infestations are characterized by the accumulation of fecal pellets at the base of wood members, known as frass. Repair methods to wood elements include plastic patches, where moldable fillers such as epoxy or putty are placed in voids created by material loss, or Dutchman repairs where material loss is replaced with wood cut to size. Plastic repairs may be strengthened with non-corroding rods or plates inserted into boards. Repair methodologies depend on the function of the wood component (e.g., structural elements vs. trim) and the extent of damage. If a wood component is to be repaired, all rotten or damaged material must be removed and the exposed surfaces treated with a fungicide/insecticide wood preservative. Both plastic patches and Dutchman repairs must fit tightly to the existing wood to prevent moisture intrusion and further deterioration of the wood. Plastic repairs have the potential to prevent evaporation of moisture, trapping it at wood surfaces and accelerating deterioration, and therefore their use should be avoided in subsurface areas or other high moisture locations. Sealants or caulks are particularly impermeable, and will trap moisture where they are not well-adhered to wood surfaces.

Structural components of stairs at the north and south elevations should be stabilized, wood elements repaired, and the assemblies treated for insect infestation. Loose guardrails at the south stair and landing should be secured. Leaning and settling at the north stair should be corrected and posts should be properly fastened to footers. Rotten framing elements should be patched or replaced, as necessary. Termite infestations should be treated by a certified pest control professional in collaboration with an architectural conservator, who can identify appropriate methods for treating historic fabric.
**Specimen Tanks**

Reinforced concrete is prone to cracking and spalling, particularly if metal bars are not embedded deeply in the concrete. This deterioration is caused by moisture penetrating the concrete and corroding the embedded metal reinforcing bars. The bars expand as they rust, exerting pressure on the concrete leading to cracks, spalls, and loss. Reinforcing metal exposed during this process corrodes even faster, creating an accelerating cycle of deterioration.

Mortars and patching materials for concrete substrates are well-established in the construction industry, and architectural specifications for these materials exist along with product data sheets issued by manufacturers. Concrete patch material can be a mix of typical mortar constituents including Portland cement, lime and sand (often conforming to a Type N mortar, with a ratio of 6:1:1 sand:Portland cement:lime). The advantage of using conventional cement mortar is that an accurate match of the color and particle size distribution of the aggregate can be achieved. Some proprietary pre-mixed patching materials are also based on Portland cement, but contain additives such as acrylics, lightweight fillers, or fibers that increase the workability of the paste as well as the strength of the patch, and minimize shrinking. Certain additives including acrylic decrease the permeability of patching materials, and fiber additives can adversely affect the visual match to historic concrete. Pre-mixed patching compounds require the use of bonding agents at the concrete surface, which reduce water vapor permeability. Specially-developed restoration mortars have been formulated to match the characteristics of historic substrates including strength and permeability. Concrete patches can be toned with stains or pigments to match the surrounding concrete; colorants must be chemically compatible with the patching material, and be resistant to alkaline environments and UV radiation.

The specimen tanks should be cleaned of soiling and biological growth before the concrete and parge coatings are repaired and patched. Exposed reinforcing metal should be treated with a rust-inhibitive coating before patches are installed. Blocked weeps should be cleared to allow water to drain from the cells of the tanks.

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*Specimen tanks should be cleaned and repaired (ARG/CS, 2010).*
4.3 Treatment Guidelines
In 1996, ARG developed Guiding Principles for possible uses, treatments, repairs and alterations of the property at 800 Cannery Row. The following comments and responses to the Guiding Principles, as enumerated in the 1996 report, address present conditions at the property and may be regarded as Treatment Guidelines for the purposes of planning future work including repairs and maintenance.

1. **When considering uses of the building or parts of the building, seek uses that require the least possible alteration.**

   Anticipated changes in use for the property include possible public interpretation of the site when the Pacific Biological Laboratories club ceases its use of the building (as of this time, in 2015). Public visitation and use of the site would trigger fire and life safety requirements related to maximum building occupancy and egress, as well as disabled access considerations. Development of the property or part of the property as a museum or visitor attraction should be preceded by an analysis of the potential impacts to the historic fabric of the property.

2. **Preserve and maintain original materials on the building as long as possible by using good maintenance practices.**

   Good maintenance practices include the regular renewal of protective coatings on exterior wood surfaces. These coatings are the first line of defense against weathering, and their timely re-application extends the life of historic fabric. Failure to maintain these coatings leads to accelerated deterioration and loss of original materials.

3. **Where historic materials are damaged or decayed, the preferred alternative is repair of the existing material. Where repair is necessary, use the least degree of physical intervention first. Retain the parts that are serviceable, replacing only those portions that are deteriorated. Repair is often less expensive than replacement with a new or non-historic element. (Example: If a portion of a door or window is deteriorated beyond repair, splice a duplicate of the original material in the deteriorated portion only. Deteriorated or split wood can often be repaired with an epoxy treatment designed especially for preservation of historic buildings.)**

   Split siding boards may be re-fastened in place, or the split may be repaired with a moldable patching material. Rotten wood in historic windows may be repaired using consolidant treatments, or by replacing the rotten area with a Dutchman repair.

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4. If deterioration cannot be repaired, the piece should be replaced with an exact duplicate of the original. (Example: When a wooden window is damaged beyond repair, it should be replaced with a wooden window fabricated to match the original design and materials. It should not be replaced with a manufactured stock-type window.)

Siding boards that are beyond repair should be retained and stored, in the event that a portion of the board can be used in a later repair. Create a stockpile of replacement siding boards and allow them to weather for possible future replacement. Replacement boards should be the same length, width, profile and thickness as the original board it is replacing.

5. Where deterioration has occurred, repair or replace the deteriorated part only. (Example: When one window is deteriorated, repair only that window. Do not replace all of the windows in the building. When a section of siding is deteriorated and the balance is satisfactory, repair only the deteriorated portion. Do not replace all of the siding on the building.)

This and all other Guiding Principles apply to all historic fabric on the interior and exterior of the building, as well as to site features (concrete holding and specimen tanks) and artifacts such as the reducing vat.

6. Any work on the building or site shall comply with the Secretary of the Interior Standards for the Treatment of Historic Properties (the Standards). Contact the Planning Department for information on how to follow the Standards.

More information and guidelines on the Standards are available online at http://www.nps.gov/hps/tps/standguide/.
5. BIBLIOGRAPHY


Photograph 1. Ricketts bought this building at 740 Ocean View Avenue in 1928 and had the one-story house lifted to allow construction of a laboratory space underneath. The building was destroyed in the 1936 Del Mar Cannery fire. (Photographer: Fred Strong, included in Hemp, 94)
Photograph 2. View of Pacific Biological Laboratories building, 1945. (Photographer: Peter Stackpole, Stanford University Archives)
APPENDIX A: HISTORIC PHOTOGRAPHS OF THE PACIFIC BIOLOGICAL LABORATORIES PROPERTY

Photograph 3. View of Lab building during 1946 construction of Del Vista Packing Company immediately west of the building. (Photographer: Ed Ricketts, Jr., included in Hemp, 95)
Photograph 4. View of Lab building from the 1950s. (Source: Pat Hathaway Collection, included in Mangelsdorf, 168)
Photograph 5. 1947 view of living room with fold-down table and bookshelves. (Photographer: Ed Ricketts, Jr., included in Hemp, 96)
Photograph 6. 1947 view of Ricketts’ sleeping area in southwest corner of front room. (Photographer: Ed Ricketts, Jr., included in Hemp, 96)
Photograph 7. Undated view of specimen jars and equipment in downstairs laboratory space. (Photographer: Fred Strong, included in Hemp, 100)
APPENDIX A: HISTORIC PHOTOGRAPHS OF THE PACIFIC BIOLOGICAL LABORATORIES PROPERTY

Photograph 8. Undated view of Ricketts with illustrator Richie Lovejoy and a ray in the laboratory space. (Source: Pat Hathaway Collection, included in Hemp, 100)
Photograph 9. Undated view looking south of the shed that formerly covered the specimen tanks. The former rear staircase is also visible. (Photographer: Harlan Watkins, included in Hemp, 107)
Specimen Tanks, Pacific Biological Laboratories Property
Conservation Treatment Plan

Historical Description and Significance
The concrete specimen holding tanks on the Pacific Biological Laboratories property pre-date the existing two-story structure and were already in place when Ed Ricketts purchased the property in 1928. The tanks were built by the property’s previous owners, the Rodriguez family, and were originally contained in a covered shed. The Rodriguez family used the tanks as part of fish salting and sardine pressing operations. Ricketts used them to store marine specimens. The garage door at the front and rear of the lab building enabled Ricketts to drive his car directly to the tanks to unload specimens after collecting expeditions.

Fabrication Materials Description
The two sets of cell tanks appear to have been formed from poured reinforced concrete. Iron rebar of 3/8-inch diameter was used as reinforcement. The west tank has 3 boards in height, each about 8 inches high, while the east tank has 4 boards in height. The cement mixture is pink with angular aggregate up to 1/2-inch diameter that appears to be crushed granite; smaller aggregate appears as rounded pink-to-buff-colored sand. The top and interior surfaces have a grey cement parge about 1/8-inch thick. Drainage holes exist for each cell through the exterior walls and are lined with 1-inch iron pipe.

Condition
Conditions are well documented in previous photographs and in the 1996 ARG drawings. Cracks exist through the pink concrete walls, largely from corrosion jacking of the internal rebar. The walls are about 3 to 4 inches thick and the rebar is less than 2 inches from each exterior surface. Exposed rebar remains in original location where pieces of concrete have fallen away. Other pieces of exposed rebar are bent and dislodged from their original orientation. The grey parge coat is loose and missing in areas.
APPENDIX B: TREATMENT PLAN FOR CONCRETE SPECIMEN TANKS

Treatment Plan
Recommended treatment objectives are to stabilize the holding tanks and to provide sufficient reconstruction, to allow a holistic visual read of the tanks. The post-treatment objective is to retain some aesthetic historic character. Existing broken pieces of the cell walls will be re-used in reconstructing the cell walls whenever their original location can be identified. A full restoration of the surface and parge coat “to look like new” is to be avoided. The City’s Department of Cultural Arts will advise on the aesthetic decisions as to the extent of restoration.

Treatment steps will be as follows:

1. Submittals
   - Patching sample for pink concrete
   - Patching sample for grey parge

2. Mobilization
   - The site will be cordoned off with caution tape. Tarps will be attached to the fence to shield the alley from possible overspray during washing. Water will be contained. No harsh chemicals will be used.
   - ARG/CS will off load supplies in the garage using the garage door, lay a tarp on the floor and store tools and equipment on the tarp during the project.
   - Hours of operation for noise is between 9:00 am (preferably 10:00 am) and 5:00 pm.
   - Client will provide:
     - Weed removal prior to start of work
     - Parking permits near site. 2 vehicles
     - Electricity
     - Water

3. Cleaning
   - Clean tank surfaces using potable water with a low pressure washer (less than 400 psi).
   - Clear drain holes.

4. Stabilization
   - Remove loose and unstable grey parge.
   - Remove protruding iron rebar by cutting. Document location, label and submit to client for archiving.
   - Clean remaining exposed rebar using wire brush and/or air abrasives.
   - Coat rebar with an epoxy type coating by brush.
   - Reattach broken wall pieces using ¼” diameter fiberglass pins and epoxy.
   - Patch missing areas of pink concrete with matching concrete mortar.
   - Selectively patch missing parge on top and interior surfaces with matching concrete mortar as directed by client. Selected surfaces may be left uncoated to show historic character and wear as directed by City Cultural Arts representative.
   - Fill cracks with injection grout to match surface color.