HISTORIC STRUCTURE REPORT

UNIVERSITY OF CALIFORNIA BERKELEY

CALIFORNIA MEMORIAL STADIUM

23 SEPTEMBER 1999

PREPARED FOR

THE UNIVERSITY OF CALIFORNIA
OFFICE OF PLANNING, DESIGN, AND CONSTRUCTION

PREPARED BY

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fig. 1. (ca. 1924) Man posed standing in one of the large arched openings at the concourse level on the west side of the stadium. Note: there is no floor providing safe access to where the man is standing. (Courtesy of the University Archives Picture Collection.)

cover. (ca. 1923) California Memorial Stadium viewed from Panoramic Hill, looking northwest. (Courtesy of the University Archives Picture Collection.)
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## Historic Value and Sensitivity to Change
California Memorial Stadium is a historically significant structure that is in need of seismic strengthening and general rehabilitation. The purpose of this report is to provide information during the design process that will facilitate compliance with state historic preservation standards. Although the University of California is constitutionally exempt from state preservation law, the university complies with the Secretary of the Interior Standards to the extent feasible.

California Memorial Stadium is a large elliptical structure located at the southeast corner of the campus of the University of California at Berkeley. It is situated at the mouth of Strawberry Canyon near a densely populated residential district. In addition to its 70,000-seat arena, underneath the seats the stadium houses locker rooms, athletic facilities, and offices of the Department of Intercollegiate Athletics. Historically, the stadium grounds included a landscaped area around the structure for ticket sales, pedestrian and vehicular access, and views.

The University of California, Berkeley, Office of Planning, Design and Construction is addressing the needs of the stadium with the assistance of consultants in architecture and engineering. The impact of proposed changes on a state-owned historically significant structure is subject to review under the California Environmental Quality Act (CEQA). The CEQA process offers the opportunity to examine the potential impacts of the project on the historic structure, with review by the Office of Historic Preservation (OHP). In addition, if federal licenses or money should be involved, proposed changes to the structure would be subject to review under Section 106 of the National Historic Preservation Act.

In an effort to comply with applicable laws and guidelines, the University of California Office of Planning, Design and Construction has commissioned this Historic Structures Report (HSR) to establish a thorough knowledge of the character-defining and significant features that give the structure its historic value. This report provides information needed by architects; engineers; Planning, Design and Construction; and the OHP to develop designs that comply with the Secretary of the Interior’s Standards for Rehabilitation. The information needed includes a history of the site and the structure including changes that have taken place, historic contexts that will make it possible to evaluate the significance of the structure, and an evaluation of the structure that identifies the areas of significance and the periods of significance. On the basis of the history and evaluation, character-defining features will be identified.
Altogether, the HSR will serve as a basis for guiding design decisions to minimize the impact of proposed construction on the historic character of significant features of the stadium and its site.

California Memorial Stadium is a historically significant structure under CEQA because it is eligible for the California Register of Historic Resources (CRHR). Properties may be eligible for the CRHR in several ways. The most common of these, and the one which best applies to the stadium, is eligibility to the National Register of Historic Places (NRHP). Although a previous evaluation found the stadium eligible for the NRHP, its status with respect to the NRHP is less than definitive. In a 1977 to 1979 survey of the City of Berkeley, California Memorial Stadium was evaluated as eligible to the NRHP, and as a result of this it is classified "3S" ("appears eligible for separate listing" in the NRHP) in the Historic Properties Directory of the OHP—it appears eligible, but is not listed in the NRHP. On the other hand, in a 1981 Multiple Resource Nomination of the University of California to the NRHP which resulted in the listing of 17 buildings and other features, California Memorial Stadium was not included. This report expands upon previous studies and clarifies the significance of California Memorial Stadium, as summarized below.

Significance

California Memorial Stadium appears eligible for the NRHP under criteria A and C at the state level of significance. The period of significance under criterion A is 1923 to 1948. The period of significance under criterion C is 1922 to 1923. When referring to the stadium as a significant entity, the stadium and the surrounding land including roads that were designed and landscaped at the same time are included.

Under criterion A (events and patterns of history), the stadium represents the nationwide boom in intercollegiate athletics—especially football—in the early 20th century. It was among the first dozen major stadiums built in the United States. The stadium also represents an important moment in the history of Town-Gown relations in Berkeley—its location and construction caused an early, serious, breach between the university and the city and community.

California Memorial Stadium is significant in the area of recreation for its association with the football program and its many distinguished athletes and teams, and for the many outstanding performances in the stadium. In addition to functioning as an athletic facility, the stadium

has hosted significant non-athletic events, among these the 1962 Charter Day address by President John F. Kennedy.

Under Criterion C (architecture), the stadium is significant as an example of a collegiate sports stadium -- with 70,000 seats, it was among the largest in the country when built, as an element in an important campus plan, as an example of Roman classicism, as the work of distinguished designers including the architect John Galen Howard. The design is stylistically related to other campus buildings and contributes to a distinguished larger group. In its stylistic relationship to other buildings, the design expresses the relationship of various aspects of university education and life to an ideal of education. In addition the stadium is the result of "the most spectacular constructive undertaking in the history of Berkeley," according to the author of a detailed report on its construction, referring both to the preparation of the site and the building of the structure.¹

California Memorial Stadium possesses a high degree of integrity of location, materials, workmanship, feeling, and association. It has suffered some loss of integrity of design in the addition of the modern press box at the west rim, additions under the seating, and alterations to the original wood seating. It has suffered some loss of integrity of setting through changes to the surrounding site. Replacement of the original grass playing field with artificial turf in 1981 represented a loss of integrity of materials, workmanship, and feeling. Restoration of the grass surface in 1995 has restored integrity of feeling.

fig. 3. (1923) Memorial Arch or North Tunnel Entry at north end of stadium.
HISTORIC CONTEXTS

Athletics and University Life

Athletics at the University of California had long been conceived of as an important part of the collegiate experience. In addition, it was realized early on that intercollegiate athletics could be an important source of revenue.

From the 1880s through 1960 (when a University of California Department of Intercollegiate Athletics was created), intercollegiate sports and teams at Berkeley were controlled by the Associated Students of the University of California (ASUC), the student government organization at the Berkeley campus. The ASUC included the sports in its annual budget, managed the teams and programs, and received the revenue. For decades profits were sufficient not only to operate the sports programs themselves but to provide surplus income to support the ASUC’s general budget and capital to build major athletic facilities for the campus. California Field for football and Edwards Stadium for track and field were constructed with revenues from the ASUC’s sports programs, and additional funds were contributed to the construction of Harmon Gymnasium.

In the late 19th and early 20th centuries, track and field, baseball, and football were the major sports. An early form of football was played informally from the time the university opened in Berkeley in 1873. There were not enough players to form a team until the classes of 1880 and 1881. The first university team to face outsiders was organized in 1882. For the first few years, the only available opponents were high schools and club teams in San Francisco and Oakland. In 1886, American football rules were adopted with eleven players on a team. From 1889 to 1891, interest in football declined and there was more interest on the campus in track and field.

The possibilities for football both as a focus of student life and as a revenue producer began to emerge with the first games between California and Stanford in 1892. Fifteen thousand people attended the first game in the spring of 1892. For the fall 1892 season, the bleachers at the practice field west of North and South Halls were filled for every practice and 20,000 people attended the second Big Game that year. From the beginning, the California-Stanford game was one of the major events of the school year. The Big Game was usually played in the third week of November and was often played in the rain, notably in 1912 which was long remembered as the Mud Game. The possibility of wet weather for this
game would later have a bearing on the design of the new stadium.

College football was at the center of a nationwide controversy over the brutality of the sport as it became routine each season that players around the country were badly injured or killed. There were several serious injuries among California players. In 1905, Benjamin Ide Wheeler, President of the University, said, "The game of football must be made over or go." As a result, from 1906 to 1914, football was banned at California, in favor of rugby.

Through the years, California gradually acquired other university opponents. By 1899, Nevada, Oregon, Carlisle, and the State Normal School were on the schedule. Over the next several years, the Naval Academy, Willamette, St. Mary's, and Santa Clara were played. From 1915 to 1917, California did not play Stanford in a dispute over freshman eligibility and the Big Game was with Washington. By 1920, the schedule looked much as it does today, with Oregon, Washington, Washington State, USC, and Stanford.

In its early years, California had a winning football team, but was not well regarded outside of the west. This began to change with the 1921 Rose Bowl when California beat Ohio State 28 to 0, and with the "Wonder Teams" of 1920 to 1924 when California did not lose a game. Later, from 1947 to 1952, California lost only one regular season game. By 1968, five California players and coaches were named to the National Football Hall of Fame.

The achievements of the football team provided the background for the solicitations made by the university to fund the new stadium in 1921. Robert G. Sproul, later President of the University, wrote of the value of football to students: "The intercollegiate contests. . . more than any other single factor, bind them to their Alma Mater." David P. Barrows, President of the University, linked the football stadium to broader educational purposes: "It will represent the physical and moral basis which our education seeks to lay for the intellectual training that is superimposed."

In addition to its primary purpose for football, according to Sproul the use of the stadium was also to be "the center of government functions and celebrations of the community and the state." Since it opened it has been used for graduation exercises, Charter Day ceremonies, and other events. Commencement exercises in 1948 in California Memorial Stadium were attended by President Harry Truman. In 1962, a Charter Day speech was
given by President John F. Kennedy before 88,000 people, said to be the largest crowd ever assembled in person to hear Kennedy speak.

Currently, the only large spectator events or gatherings in Memorial Stadium are the six home football games per year. Other intercollegiate athletic activities occur there, but do not draw large crowds. The Chancellor of the Berkeley campus has the authority to make policy for the use of the Stadium. During the 1970s, 1980s and early 1990s, three Chancellors—Bowker, Heyman, and Tien—reaffirmed in public statements that it was the policy of the campus not to use the stadium for commercial rentals or other large non-campus events. An exception was a one-time concert series by Paul McCartney that helped raise funds for local homeless service programs. The issue of commercial use of the Stadium has not yet formally arisen during current Chancellor Berdahl’s tenure. Community issues regarding the Stadium remain consistent with its earlier history; nearby neighborhoods are concerned about the noise, traffic, and other impacts of large spectator events there, and they and the City of Berkeley remain concerned about limiting use.

Large stadiums for mass sporting events are primarily a product of the 20th century, although there are many models for such structures from the ancient Olympics in Greece; from the circuses, amphitheaters, and coliseums of ancient Rome; from the bullrings of Spain since the 18th century; and from grandstands built in England and America in the 19th century for horse racing. The modern era for mass sporting events and stadium building began with the revival of the Olympics in 1896 in Athens.

One of the most important areas for the development of modern stadiums was American intercollegiate competition. Intercollegiate competition began in England between Oxford and Cambridge in the late 19th century and came quickly to the United States. The first college stadiums were built for Notre Dame in 1899, Harvard in 1903, and the University of California in 1904 (California Field). California Field was expanded to 25,000 seats in 1906. By 1912 there were only six large stadiums for football in the United States, including Harvard’s second stadium in 1909, Palmer Memorial Stadium at Princeton in 1914, the Yale Bowl in 1914, and Lewisohn Stadium at the College of the City of New York in 1915. In 1920, there were only nine stadiums in the United States. In 1920 to 1922, planning and construction began for university stadiums throughout
the country, including Ohio State, Stanford, the University of Chicago, the University of Washington, the University of California, and municipal stadiums in Seattle, Pasadena, Tacoma, and Chicago.

fig. 4. (Jan. 1914) John Galen Howard, Phoebe Apperson Hearst Plan for the University of California. Note location of large stadiums in the general location of the Women's Gym. (Courtesy of the Bancroft Library.)
Through the 1930s, most stadiums were classical in style, recalling the Roman Coliseum, or Gothic or Classical to harmonize with the adjacent buildings on a campus. Although Gothic or Classical, many were designed with a festive character, with exuberant ornament, flagpoles, triumphal arches, and other gestures to an atmosphere of competition and entertainment. In the 1920s and 1930s, stadiums were common problems given to architectural students in Beaux-Arts courses of design. In California, early notable stadiums were the Rose Bowl, the Los Angeles Coliseum, Stanford Stadium, and California Memorial Stadium.

1873-1903, Old West Field, or the old football field. West of North and South Halls (site of Life Sciences Building). As late as 1885 there were no grandstands or bleachers but by 1892, bleachers were built. This was the practice field only. Games were played off-campus at various sites including the following:

- Recreation Grounds. 25th and Folsom Streets, San Francisco. 1884.
- 14th and Center Street, Oakland. 1886.
- Central Park. 8th and Market Streets, San Francisco. 1892. Second California vs. Stanford Game.
- Recreation Park. 8th and Harrison Streets, San Francisco. 1897.


1923-present. California Memorial Stadium.

University of California - Planning

The new Berkeley campus of the University of California and the adjacent College Homestead neighborhood were laid out in a plan by Frederick Law Olmsted in 1865. In 1897, an international competition sponsored by Phoebe Apperson Hearst was held for a new campus plan. This was to create a monumental City of Learning which would accommodate a much larger and more ambitious university than previously existed. The competition was won by a French architect, Emile
fig. 5. (1917) John Galen Howard, Perspective View of the Proposed University of California. (Courtesy of the Bancroft Library.)

fig. 6. (Jan. 1922) John Galen Howard, Study for a Theater, Administration Building, Men's Gymnasium, Armory and Stadium in the area of the Life Sciences Buildings, Jan. 1922. (Courtesy of the CED Documents Collection.)
Bénard. The fourth place finisher, John Galen Howard, was appointed Supervising Architect for the campus and made revisions to the Bénard plan. The revised plan became known as the Hearst plan and formed the basis for the enormous expansion of the university during Howard's tenure (1900-1924) and afterwards. The result was one of the great examples of Beaux-Arts planning and architecture in America.

Among the ideas in Bénard’s plan which survived was the creation of thematic groups of buildings in a hierarchical arrangement. For example, the library was located at the center of the campus with the humanities buildings, science and engineering buildings were in another group, and a gymnasium was on a lower site on the south side of the campus. Howard's several revised plans retained the gym and other athletic facilities on the south side of the campus. Over the years, several such facilities have come and gone, including the original Hearst Gym designed by Bernard Maybeck; California Field for football from 1904 to 1923 on the site of the present Hearst Gym for Women; a cinder track on the site of the present Life Sciences Building from 1886 to 1916; and a second cinder track, called the California Oval, west of California Field from 1915 to 1932.

Among the most prominent features in John Galen Howard’s 1914 revised plan were two stadiums located between College Avenue and Telegraph Avenue, north of Bancroft Way (the Hearst Gym for Women was built in this area in 1925). The larger of the two stadiums, for football, was shown on the east side of this area, on higher ground. The smaller stadium, for track and field, was shown on the west side, below the football stadium.

In January 1922, when proposals were being made for a new football stadium, Howard’s most elaborate proposal was a “Study for a Theater, Administration Building, Men’s Gymnasium, Armory and Stadium” stretching from the vicinity of the present Life Sciences Building to the southwest corner of the campus. Through all these plans, Howard proposed two separate stadiums, for football and for track and field, on generally flat land on the south side of the campus. Later in 1922, the Board of Regents chose a different site, on much higher ground southeast of the campus, for the new California Memorial Stadium. Although Howard’s site was overruled, the long-held ideas that separate stadiums would be built for football and for track and field were maintained. Howard’s objections to the Strawberry Canyon site apparently contributed to tensions that already existed between him and the Regents. By late 1924, these were to result in his dismissal as the University’s Supervising Architect after more than two
fig. 7. (1923) View of the Stadium from the Campanile, looking southeast. Note the large private houses along Piedmont Avenue. (Courtesy of the University Archives Picture Collection.)
decades of service. Memorial Stadium was thus not only his largest commission completed for the University, but among his last for the Berkeley campus. Other permanent buildings designed by Howard and completed on campus in the same general period were Haviland Hall for the School of Education, and LeConte Hall for the Department of Physics.  

In all of the planning for the university's expansion for athletic facilities, the sites proposed were actually south of the existing campus and required the purchase and clearance of land.

In the 1920s, the booming population and economy of California generated a big growth in the university population and big fund-raising campaigns to build new campus facilities. More academic buildings were needed, and the preferred locations of these buildings, close to the library and to buildings for related purposes, displaced existing athletic facilities. By 1929, the combined building programs at UCLA and Berkeley were said to be as large as for any university in the world.

Tensions arose between the university and the city in the planning of California Memorial Stadium. This was one of the early occasions when a significant "town-gown" disagreement occurred in Berkeley. Among the four sites considered for the stadium, one was located on the campus (at the northwest corner), two were located in the city of Berkeley (the southwest corner where Edwards Stadium stands today, and south of University Avenue between California and Sacramento Streets) and would require the purchase and demolition of many pieces of private property, and one was located at the southeast corner of the campus (the Strawberry Canyon site) on land partially owned by the Regents.

In the difficult process of choosing a site, the southwest corner was preferred but eventually rejected because of the cost of acquiring private land. Not only would this site have cost a great deal of money, but property owners in the neighborhood were prepared to fight the university.

The site which was chosen – the Strawberry Canyon site – may have cost less money to acquire, but as it turned out, also involved substantial opposition from property owners whose houses were moved or whose views were ruined and from citizens who objected to the destruction of a beautiful natural place. In words still familiar in Berkeley, southside residents objected to the traffic congestion and parking problems which would be created by the stadium. In an embarrassment to the
Designers and Builders

The design of California Memorial Stadium was the responsibility of the University of California Stadium Commission whose members were John Galen Howard, E.E. Carpenter, and George E. Buckingham. Howard was an architect, while Carpenter and Buckingham were engineers with expertise in earthworks and reinforced concrete, respectively.

John Galen Howard (1864-1931) was campus architect from 1902 to 1924. He was among the most important architects of his generation in California. Educated at MIT and the École des Beaux Arts in Paris, he practiced architecture in the offices of H.H. Richardson and McKim, Mead and White before moving to California. Howard had placed fourth in the Hearst Competition for the University of California campus plan, but was appointed Supervising Architect of the University of California in 1902 to implement the winning design by Emile Bénard. During his tenure Howard founded the University of California School of Architecture (1903) and designed many of the most significant campus buildings including: Hearst Memorial Mining Building (1902-07), the Greek Theater (1902-03), Sather Tower (1913-14), and Doe Library (1907-11). Howard’s eventual dismissal as Supervising Architect in 1924 stemmed in part from his strenuous objection to locating the California Memorial Stadium at the entrance of Strawberry Canyon.

E.E. Carpenter was a partner in the firm of Baker and Carpenter, Engineers, of San Francisco. Baker and Carpenter were responsible for supervising construction of Stanford Stadium, which was designed by Charles B. Wing, in 1921.

Little is known about George E. Buckingham except that he proposed the combination earth-bowl and concrete coliseum concept for the stadium which was adopted by the Board of Regents.

In addition to the Stadium Commission, Thomas F. Chace was involved with the project. According to the minutes of the Grounds and Buildings Committee of the Board of Regents, Chace was later hired as an engineer for Edwards Stadium (1932). Chace had designed the structural steel work for the California Memorial Stadium.
A specialized part of the stadium -- the drainage system for the playing field -- was designed by "a special investigating committee" appointed by the Stadium Commission. "This committee, composed of four members and each a specialist in his line, represented drainage, irrigation, soils and grasses." The chairman of the committee, in charge of drainage, was Walter W. Weir, Assistant Professor of Soil Technology at the University of California.

The stadium was built under two major contracts, an excavation contract and a general contract for construction. In mid January 1923, excavation work was begun by Bates and Borland. Work under the excavation contract, including creation of an earth bowl for the stadium, continued until June 1923. The general contract for construction was awarded to the Clinton Construction Company of Oakland and San Francisco on 2 May 1923 and signed on 15 May 1923.

In his history of the stadium, William Henry Smyth singled out Dan Ormsbee, Resident Engineer for the Stadium Commission; Wesley Albert, Hydraulic Expert; and William H. Cagle, Superintendent of the Concrete Construction for the Clinton Construction Company "as those to whom more than any other group is due the credit of bringing to successful accomplishment this great commemorative memorial."
Recognizing the need to accommodate larger crowds and
the opportunity to generate income the Associated
Students of the University of California (ASUC)
Executive Committee on 6 October 1920 moved that a
committee be appointed "to investigate the possibility of
securing a site and raising funds for the building of an
adequate stadium." This committee, called the Stadium
Executive Committee, was made up of the ASUC
President H.W. Cline '21; California Alumni
Association representative Chaffee E. Hall '10; Robert
Gordon Sproul (later U.C. President) '13, Comptroller
of the University and Secretary to the Board of Regents;
faculty representative L.A. Nichols '17; and Frank H.
Probert, Dean of the Mining College.

The project was to be financed completely from private
rather than university or ASUC funds. A state-wide
fund-raising campaign was launched 3 October 1921 to
sell $100 subscriptions that entitled the purchaser the
right to two seats for the Big Game (California vs.
Stanford) for ten years with the option to purchase
choice seats for other California athletic contests. In
addition, a brass plate with the name and class of an
alumnus subscriber would be permanently sunk into the
concrete of each pair of seats sold. (This was never
realized.) In a remarkably short time, 6,914 subscrip-
tions from alumni, faculty and the general public and
3,230 from students raised $800,000 in cash with
$200,000 more pledged.

California Memorial Stadium was conceived and built
during an era that saw the construction of many similar
stadiums throughout the country. Among the many
stadiums begun in 1920-1922 was Stanford Stadium, a
timber structure on earth fill seating 60,000. It was
completed in 1921 for a total construction cost of
$210,200. Nearly the entire amount was recouped from
the gate receipts of the opening game, California vs.
Stanford, which drew a capacity crowd. Gross receipts
were $213,000 and net receipts were $209,000. The
precedent set by the competitors of the University of
California and the economic success of the projects
paved the way for California's stadium project.

The University of California football stadium was also
built as a memorial to University of California alumni
who had died during the First World War. Prior to
developing plans for the memorial football stadium, the
university intended to create a drill and recreation field at
the northwest corner of the campus to be dedicated as a
memorial field to the students who fell in the war. But as the football stadium eclipsed the early project, the memorial purpose shifted to the stadium project.

In a 1921 brochure published by the Stadium Executive Committee promoting the fund-raising campaign, Robert G. Sproul wrote, "[the stadium] is to be not only the setting of great intercollegiate contests, but also the center of government functions and celebrations of the community and the state. It is not only to be a splendid addition to the Phoebe Hearst Plan for the greater university, but an architectural monument ranking with the greatest structures of all times, and challenging the admiration of the world. Last year there were over 60,000 applications for seats at the Stanford-California game and the capacity of California Field was 25,000 ... the student body has agreed to support in large measure those debts and functions of university life that serve the social and recreational interests of the students. The present sources of university income cannot meet these needs and the stadium revenues will be a happy solution of the difficulty."

Other stadium sites considered included several on the campus and at least two off campus. The campus sites considered were the combined sites of two existing athletic facilities, California Field and an adjacent track and field facility on the south side of the main campus, and another site at the corner of Oxford and Hearst Streets at the northeast corner of the campus. Off-campus sites were to the south at Allston Way and Ellsworth Street, and to the west of the campus at University Avenue and Sacramento Street. Both of these sites were served by public transportation but would have required the costly and controversial acquisition and demolition of private property by the university.

For each of those sites, schematic plans were presented in aerial perspective drawings. Each proposal was for a freestanding structure that was mostly above ground. The proposals varied in shape -- elliptical or square. Some were single-deck structures and others were double-deck structures. A letter to the Finance Committee of the Board of Regents from Professor of Greek, James T. Allen on 18 December 1920, proposed the "Stadium of Athens" of 330 BC as a model. All of John Galen Howard's presentation drawings reflected Roman precedents, with tiers of arched openings in a curved-wall structure.

Only a half decade after Memorial Stadium was completed the rejected off-campus site for the Stadium on the blocks bordered by Bancroft Way, Dana Street,
fig. 8. (ca. 1914) Looking east into Strawberry Canyon from the future stadium site. (Courtesy of the University Archives Picture Collection.)
Oxford Street and Strawberry Creek was acquired by the ASUC and the university, cleared, and developed with the Edwards track and field stadium.

From the beginning, there were different viewpoints about the purposes the stadium would serve. In the President's Report on the Stadium that was presented to the Finance Committee of the Board of Regents on 21 December 1920, students were said to favor "a bowl designed exclusively for intercollegiate athletics" and faculty preferred "a stadium which might be used for the activities of the Department of Physical Education, as well as for the intercollegiate sports." University administrators saw the stadium as a place for military training and for university and public events. This mix of possibilities was in flux throughout the process of planning and building the stadium.

Underlying the opinions of many people in the debates over the stadium's purpose, location, and character was opposition to the commercialization of sport. Since a basic, if unarticulated, reason for building the stadium was to make money for the university, the stadium itself was viewed by some people as furthering the commercialization of football. William Henry Smyth was among those who objected to "the commercialization of sport" in a general way, without saying what he meant.

Several aspects of the stadium's design were directly related to its potential as a money maker. At that time, the Big Game was the only potential sell-out, but the likely receipts for that game were so great that it is not far-fetched to say that the stadium was designed for the Big Game. The huge size of the stadium could only be filled for the Big Game. The stadium was oriented so "the sun in mid afternoon on November 20 [approximate date of the Big Game] will strike the field at right angles to the direction of play thus affording the best conditions for use." And extraordinary measures were taken to provide a dry field for the Big Game (see Playing Field Drainage section).

The process of choosing a site was difficult. The selection was publicly announced and then changed twice. In March 1921, minutes of the Stadium Committee reported that "the Regents had approved the recommendation of the Building and Grounds Committee granting the use of the California Field site for the building of the Stadium." By May they had reversed their earlier decision. The minutes of the Stadium Committee for 2 May 1921 report that "Due to the inadequacy of our present campus and the fact that the [south east] corner of the campus remains as the last available site for the growth of any additional academic
Under the direction of many people in the nation, the Stadium Commission was established to plan, finance, and construct the Memorial Stadium. The purpose was to create a venue for university and public events. The project was financed through the sale of subscription bonds and contributions from various sources.

The construction of Memorial Stadium began in 1922, and it was completed in 1924. The stadium was designed to accommodate 65,000 spectators and featured a 100-yard track, making it one of the largest and most modern stadiums in the country. It was dedicated as a memorial to those who served in World War I.

Fig. 9. (Oct. 1922) John Galen Howard, Perspective Study for California Memorial Stadium. Bird's eye view of the Strawberry Canyon site from the northwest. (Courtesy of the Bancroft Library.)
unit, the Regents expressed themselves as definitely and finally opposed to the granting of [the California Field] site for the building of a stadium as contemplated.” The committee was now of the opinion that the stadium should be adjacent to the campus and recommended the purchase of 2-1/2 blocks of private property -- the area bound by Bancroft Avenue on the south, Chapel Street (present Dana Street) on the east, Campus (present Allston Way) on the north, and Atherton Street on the west.

Following this decision, the statewide fund-raising campaign was initiated to sell ten-year subscriptions to the Big Game. For this campaign, a booklet was prepared including drawings of the proposed stadium and its surroundings, and descriptions of the undertaking by various university officials. Illustrations in the brochure showed a Memorial Gateway on Oxford Street facing Addison Street. The stadium was a double-decked steel and reinforced concrete structure with 60,000 seats, and underneath the seating decks were training quarters, convenience stations, reception rooms, handball and tennis courts, and other features. The outer walls were 91 feet high and the stadium was to be bigger than the Coliseum in Rome. According to Robert G. Sproul, “It is not only to be a splendid addition to the Phoebe Hearst Plan for the greater University, but an architectural monument ranking with the greatest structures of all times and challenging the admiration of the world.” As a colossal free-standing structure on a nearly flat site near the center of Berkeley, this stadium would have dwarfed every other building on the campus and every building in nearby downtown Berkeley.

The land needed for this stadium was densely filled with rooming houses and other rental property. This option would have required the purchase of land by condemnation, removal of existing buildings, changes in municipal car lines, and closure of streets. By 2 November 1921 the committee reported that the “net cost of the property would be about $600,000. . . . [The] greatest difficulties in securing a fair price for the property was due to the income value of said property.” By 7 January 1922 the committee decided that this option was too expensive and voted unanimously to designate a site at the mouth of Strawberry Canyon “now owned by the University of California, with such expansions as may be necessary on private property at the southeast side of Strawberry Canyon.”

Although this new site was said to have been because land acquisition costs were lower, W.H. Smyth observed that this was not a cheaper solution. Rather, it “transferred the cost of the necessary land from the
fig. 10. (1923) Early stage of the stadium under construction, looking north. Note draw horses and mules and Strawberry Creek bed. (Courtesy of the University Archives Picture Collection.)
subscribers to the Stadium Fund, its beneficiaries, and dumped this cost onto the broad but tired and galled shoulders of the State’s Tax Payers. (Who, by-the-way, had purchased this particular Canyon location for, and as peculiarly adapted to, reservoir uses.)”

The new site was very different from the others which were all on flat or nearly flat land. This site was at the mouth of a canyon at the base of the Berkeley hills. The site was uneven and was crossed by Strawberry Creek and by two fault lines. The different conditions of this site required fresh thinking about the nature of the stadium. While the other sites presented conventional problems to architects and engineers, this site provided distinctive challenges that were better addressed by engineers with special qualifications, especially in the areas of excavation, earthworks, and drainage.

To arrive at a solution, several proposals were made to the Stadium Committee. On 7 January 1922, “Mr. Carpenter, of Baker & Carpenter Co., Engineers, presented their plan for a stadium to be built on the Stanford type, elliptical in shape, and seating 75,000 persons, to be built on the nursery site [in Strawberry Canyon].” On 22 January 1922 “the plans for a stadium to be placed on the nursery site as developed by Palmer and McBride [were presented]. This would be a man-made earth bowl with wood seats that would be relatively inexpensive to build.”

John Galen Howard proposed a variation of his design for a stadium at the southwest corner of the campus. This was a reinforced concrete double-decked coliseum with 60,000 seats. A third proposal by George E. Buckingham combined the Howard and Carpenter designs. This plan which was partially a bowl and partially a coliseum, was accepted.

The Board of Regents established a Stadium Commission to develop the design and to oversee construction. The Stadium Commission members were John Galen Howard, E.E. Carpenter, and G.E. Buckingham.

Site Preparation

Of the several sites considered for the stadium, the Strawberry Canyon site was by far the most difficult to build upon. The natural topography was a narrow canyon mouth. Charter Hill (later called Tightlyad Hill) rose steeply on the north side of the canyon and Panoramic Hill did the same on the south. Strawberry Creek ran west through the canyon and down through the main campus. The Hayward Fault runs north-south
fig. 11. (1923) Stadium under construction, looking southwest. Note the concourse running above the north tunnel and under the coliseum seating. (Courtesy of the University Archives Picture Collection.)
through the middle of the site and emerges at the northeast and at the southwest. A secondary fault runs east-west through Strawberry Canyon. The faults caused Strawberry Creek to make a sharp right angle and turn north through the site.

The stadium grounds consisted of 22 acres altogether, 16 acres of which were already owned by the university, and six acres of which were purchased from private owners. The area was much admired for its natural and domesticated beauty. The university land was part of a larger area that previously had been purchased for a reservoir and had been designated a bird and wildlife sanctuary. A botanical garden and nursery were established there. This beautiful spot was a popular place for hikes and outings. To take advantage of the setting, a residential neighborhood of large houses was developed on the south and west of the site, on Panoramic Hill and along Piedmont Avenue. The private land which was purchased was between College and Piedmont Avenues on the north side of Bancroft Way. Six houses on this land were moved at a cost of $268,000. Some of the houses were moved across the street to lots on Piedmont Avenue where they joined an existing enclave of residential properties. Eventually this area was also acquired by the university, but some of its houses still remain in a row facing the stadium.

Bates and Boreland Company, excavation contractors, began excavating the 22 acre site in mid-January, 1923. The work force varied between 391 and 433 men. One-hundred fifty workers camped in tents above the Greek Theatre.

The excavation proceeded in several steps. Holes were drilled for testing the soil. To open a space large enough for the stadium and its grounds, to create a level site and to build up an earthen bowl for the stadium, 280,000 cubic yards of soil and rock were moved on the site, mostly from the lower slopes of Charter Hill. This was accomplished by first loosening the ground by blasting. Altogether 24,000 pounds of black powder and 10,000 pounds of dynamite were used in the job. Loosened earth was moved first by steam shovels and by 60 H.P. gasoline Caterpillar tractors, and by lines of wagons drawn by Percheron draft horses. Over 50,000 cubic yards were moved by these means. The remainder was moved hydraulically, much as in the gold fields before 1882. Water diverted from Strawberry Creek brought in by water wagons and re-used by means of electric powered centrifugal pumps was blasted at a rate of 5,000 gallons per minute through 4-1/2 inch nozzles against the hillside. During the course of this work, Strawberry Creek itself was placed in a four-foot
fig. 12. (1923) Stadium under construction, looking northwest with the Campanile on the right. Construction elevator at center. (Courtesy of the University Archives Picture Collection.)
Concrete culvert that ran north-south across the center of the site. The rock was pulverized into silt and gravel and moved around in sluice boxes on the site creating a raised, flat surface ranging from 14 to 24 feet above the old creekbed, and then building up an elliptical mound around the field. The mound was built up over seven concrete tunnels; five led onto the field. The flat field and the mound around it were created as part of the excavation contract, but this work was a substantial part of building the stadium itself. The lower half of all the seats and all the seats on nearly half of the stadium, encompassing its entire east side, rested directly on the mound created by the excavation contractors.  

Construction of the Stadium

Following a substantial amount of construction for the stadium under the excavation contract, the general contract for construction was signed 15 May 1923 with the Clinton Construction Company. The journal Concrete described the structural character of the stadium concisely as follows: “The University of California Memorial Stadium in the Strawberry Canyon on the University of California campus is a combination of earth bowl and coliseum type of elliptical form. The major diameter is 760 ft. and the minor diameter 568 ft., extreme dimensions. The seating capacity is 72,800. On 62% of this area the seats are entirely supported on earth, and on the remaining 38% are supported on a reinforced concrete suspended slab and beam construction of an average thickness of 7 in. The suspended slab and beam construction is supported by reinforced concrete columns and braced longitudinally and transversely by horizontal tie beams.” Along the west side, “the periphery of this superstructure is a reinforced concrete curtain wall 1,200 ft. long, with a maximum height of 66 ft. and an average thickness of 10-1/2 in. A reinforced concrete score board, 50 ft. x 34 ft. in dimension, towers 35 ft. above the upper row of seats at each end of the stadium.”

To accomplish this work, a concrete plant was built near the south end of the stadium. “During the construction period of 5 months, a crew of approximately 250 men placed approximately 7,500 cu. yd. of concrete and 600 tons of reinforcing steel. Over 1,000,000 board feet of form lumber and 750,000 board feet of seat lumber was required.”

While most of the task was structural only, the finished character of the outer wall required special effort. “Owing to the many belt courses, moldings, offsets, and panels, which give the exterior the appearance of the [Roman] Coliseum, and the curve of varying radii, the
fig. 13. (1923) Stadium under construction. Detail showing workmen laying steel reinforcing bar for concrete slab under upper level seating. (Courtesy of the University Archives Picture Collection.)
form work for the high wall was complicated and necessitated employment of the most able and skilled carpenters. The forms for the moldings and panels were made at the mill, and a finished surface for the concrete was attained by pouring directly against the curved forms." 13

During the course of its construction, William Henry Smyth stated that, "this great and monumental work . . . when completed and beautified, will be one of the accomplishments of this greatest of all Ages in which it is our transcendent privilege to live." 14 Later Smyth expanded upon this theme:

"In this regard the Berkeley Memorial Stadium is unique as an impressive monument to Human Progress and Man’s application of the forces of Nature -- his acquired knowledge of Nature’s Laws and their applicability to furthering the accomplishment of human purposes and whims. "It is not improbable also, that, in the respects indicated the Berkeley Memorial Stadium will remain unique for all time, for it is to the degree improbable that another such structure will ever be built in just such a peculiar situation which called for and permitted the employment of these diverse processes and the instrumentalities available in the Strawberry Canyon site of the Coliseum." 15

Just as Smyth was impressed with the site preparation and the construction process, the Architect and Engineer admired its appearance: "Architecturally beautiful, the stadium will constitute an integral unit of the university buildings group. Its coliseum façade, of the two-story type, is designed to conform with the general architectural style attained on the campus." 16

Playing Field Drainage

Drainage was recognized during the design stage as a critical feature of the stadium from both a financial and a technical point of view. According to Walter Weir, assistant professor of soil technology, the Stadium Commission considered drainage important because the "usefulness" of the stadium "depended entirely upon the ability of the two universities, Stanford and California, to play their annual game in it." 17 Remembering that Stanford almost completely paid for its stadium in its opening game with California, and in view of the financing of the stadium through the sale of subscriptions to the Big Game, the university could not afford to have a game canceled because of a soggy field. The only game likely to fill the stadium would be the Big Game and the ability of the university to pay for the
fig. 14. (1923) Stadium under construction, looking northeast toward Charter "Tightwad" Hill which has been excavated. Note the steel reinforcing bars in the concrete posts at the location of beam connections. (For stereo viewer. Courtesy of the University Archives Picture Collection.)
stadium depended inordinately on that game. Because the Big Game was usually played during the third week of November, by which time the rainy season had begun, the precaution was taken to minimize the risk of a game canceled due to bad weather. The 1912 Big Game recalled as the Mud Game, was the wettest game and was a recent memory.

To address this problem, the Stadium Commission appointed a special investigating committee consisting of four members with specialties in drainage, irrigation, soils, and grasses. Under the leadership of Walter Weir, this committee prepared recommendations which were adopted by the Commission.

From a technical point of view, soil conditions made it unusually difficult to provide good drainage. Although the base of the playing field was created from fill, which often drains quickly, in this case, “the finest materials were included in the fill, making it about as impervious as is possible to obtain.” In addition, the field had no crown or slope, “so that any water falling upon it would remain.”

Two systems were devised to address the situation. First, water running down the slopes of the seats would not reach the playing field, as it was carried in an elliptical drain around the periphery of the field and down to the Strawberry Creek culvert underground. Second, water falling on the field drained quickly through several layers of specially selected material. On the impervious surface were laid a series “of lines of 4-inch tile spaced 30 feet apart.” These lines were gently sloped from the center to the periphery by cutting them into the impervious surface of the fill. When these were in place, “the entire field ... was covered with a 4-inch layer of crushed rock, followed successively with four inches of fine gravel, four inches of river sand, and finally ten inches of soil.” Each material used was selected after testing in a laboratory. The soil chosen was taken from Alameda. The sod was a mixture of six grasses.

Construction of the stadium was punctuated, but apparently not delayed, by the Berkeley wildfire of 17 September 1923, which destroyed some 600 homes in the north Berkeley hills and threatened the campus. Tree plantations and fencing in the canyon above the stadium had burned, and the high pressure waterline, provided for the excavation of the hillside at the stadium site proved helpful in fighting the fire. There was no reported damage to the stadium project itself. The stadium, including the land, was completed at a cost of $1,400,000 in time for the first Big Game between California and Stanford on 24 November 1923. Attendance was 73,000, the largest ever.
to attend a football game in the Western United States. Because of the sell-out crowd and the success of the fund-raising campaign which had raised over $1,000,000 after the first day of its use, the balance still due on the stadium was reduced to $600,000. The remainder of the debt was paid off before the ten-year term of the subscription program.

While the stadium and most of the landscaping were completed in time for the 1923 Big Game, two secondary structures were not completed and never would be, although tunnels to connect them directly to the interior of the stadium were laid. These were the 2, two-story buildings for the home and visiting team. Designated as North Team House and South Team House on the completed architectural drawings, these would have stood outside the stadium, near the north and south entrances.

**Changes to the Stadium and its Grounds**

In its first years, few significant changes were made to the stadium. Around 1930, due to increasing attendance, bleachers were built above the east side of the stadium, increasing its capacity to 80,000. Around the same time, freestanding ticket sales buildings were erected outside the south end. These were three small, square, wood sheds with hipped roofs. In 1947, architect Walter Steelberg proposed a schematic plan for filling the area under the seating structure with a dormitory for 438 men, a museum or classrooms. This plan was not executed. By 1954 the stadium was surrounded by a chain link fence and there were galvanized steel gates near the ticket booths. By 1957 the bleachers appeared to be in bad condition. Shortly afterwards, they were removed both for safety reasons and because attendance was declining.

The first substantial physical change to the stadium was the addition of the Haas Press Box, a large steel structure clad in Corten Steel, along the rim of the west side of the stadium in 1968. In 1981, the grass playing field was replaced by artificial turf. This was done because of drainage problems and because the construction of the Recreational Sports Facility on the campus eliminated a practice field for the football team, requiring heavier use of the Memorial Stadium field. In the 1980s, new floor decks were laid and spaces enclosed below the seating on the west side for offices, weight and training rooms, and locker rooms. In 1996, the Brick Muller Room and the Big Game Room that occupied three structural bays above the north tunnel were remodeled into the Travers Memorial Club Room. The stadium is currently undergoing seismic strengthening and code upgrade.
In the decades after World War II, the grounds were also changed. The original design of the grounds around the stadium included a plaza, Prospect Court, outside the southern end with an elliptical arrangement of a road around a central area, and a formal, divided, approach road leading to the north tunnel entrance from Stadium Rimway. The northern end of Piedmont Avenue bent in a curve through the area where Kleeberger Field now stands. Alterations to the area included realignment of Piedmont Avenue to connect directly with Gayley Road and provide a more direct driving route across the eastern end of the campus and conversion of the approach roads and plazas at both ends of the stadium to asphalt surfaced parking lots. These areas are now used for daily campus parking which is in high demand. Kleeberger Field, with its artificial turf, was built northwest of the stadium. Together these changes altered the landscaped plan of roads and pathways that originally brought people to the stadium.

In addition to these physical changes, changes of use have been proposed and in some cases implemented. In 1959, proposals were made to the Berkeley City Council to allow professional football to be played in the stadium. In 1960, the City Council rejected this proposal and banned commercial use of the stadium through 1965. In May 1972, the university signed a three year contract with the Oakland Raiders to practice at the stadium. This has met with protests from the Panoramic Hill neighborhood and the Berkeley City Council. In 1974, the City Council went on record as opposing professional football in the California Memorial Stadium. Except for this episode, the university has had an agreement with the Panoramic Hill neighborhood to limit events in the stadium to the home football games and university functions held during working hours. For the most part, the university has honored the agreement with a couple of exceptions such as rock concerts. Today, the bowl of the stadium retains its original use almost exclusively as a football stadium. There are now six scheduled football games during the annual season, with the main event the Big Game against Stanford every other year.

The Berkeley campus currently continues to prohibit large spectator events in the stadium that are not campus-related (i.e. football games, other intercollegiate sports, and campus ceremonies). This policy was formally articulated by Chancellor Bowker in the 1970s, and has since been reaffirmed by Chancellor Heyman and Chancellor Tien. The issue of non-University use of the Stadium has not arisen during Chancellor Berdahl’s tenure.
Fig. 15. (1924) Aerial view from the north, showing the stadium filled to capacity. Note the bleacher seating at the east rim and spectators on "Tightwad" Hill, above a protected area of newly planted hillside. Straight paths radiate from Piedmont Plaza, a wide path on the west side of the stadium, to Piedmont Avenue. (Courtesy of the University Archives Picture Collection.)
ARCHITECTURAL DESCRIPTION

The following Architectural Description describes the original configuration and historic appearance of the California Memorial Stadium and identifies character-defining historic features, as well as alterations. The following Building and Site Chronology section lists known alterations in chronological order. The final section, Existing Conditions identifies conditions that, if left unchecked, could compromise the historic integrity of a significant element. "Historic integrity" is the extent to which a historic resource remains unchanged.

Plan and Circulation

The California Memorial Stadium is an elliptical reinforced concrete structure, 760 feet in length and 568 feet in width on the outside. The long axis runs north-south, parallel to the topographical contours that step downhill to the west, and oriented to be exactly perpendicular to the path of the sun on the day of the Big Game.

A grass football field, also elliptical, centered in the structure is surrounded uniformly by sloped seating. Straight stairways divide the seating into 44 equally sized sections and two wide sections above the 50 yard line. Twenty-eight portals centered on the stairways at the midpoint of the seating sections lead to a concourse beneath the seats on the west. Locker rooms for the home and opposition teams, public toilets and concession stands were located beneath the seats at the concourse level, which functioned primarily as circulation space before construction of the Inter-collegiate Sports Facility in the 1980s.

Circulation and crowd control are significant elements in stadium design. At the California Memorial Stadium huge crowds are divided and controlled outside the stadium with multiple paths emanating from different directions that lead to numerous well-spaced entries. A wide path circles the outside of the stadium. Stairways entered through large openings in the façade lead up through the structural frame to a second wide path (the concourse) that partially rings the field under the seats. Short flights of steps lead from the concourse out to the midpoint of each seating section. A third circulation ring circumscribes the field at the bottom row of seats.

The stadium’s hillside site allows access from grade to each of the concentric circulation rings. The North Tunnel entry is level with the bottom row of seats; the south entry (Prospect Court) is level with the concourse; while entries on the east are level with the top of the seating. Three small tunnels lead from Piedmont Plaza on the west to the playing field.
fig. 16. California Memorial Stadium, site diagram, 1923. “Stadium Rimway” is the official name for the road that climbs past Bowles Hall and the stadium. “Prospect Court,” “Fiedmont Plaza,” and “Tunnel Court” are informal names that are descriptive of parts of the site, but are not official University names.
As part of the exterior ring path, wide concrete stairways curve around the stadium on the north and south connecting Piedmont Plaza at field level to the eastern rim.

The North Tunnel entry, the original ceremonial entry from the campus, still functions as such for the University of California team and the California Marching Band, both of which have traditions associated with the entrance. The opposing team typically enters the field from a small southwest entrance leading to the visitor's locker room, while the main south tunnel entrance is typically used by visiting bands.

The eastern half of the stadium as well as the lower portion of seats on the west is slab-on-grade construction that sits on an artificially formed earth bowl. Higher seating on the west rests on a concrete slab, beam and girder system supported by a colossal structural frame of reinforced concrete posts and beams. The beams radiate out from the top of the earth ring on the inside of the concourse, where they are spaced 17 feet apart, to the outside stadium wall where they are spread 24 feet apart. Posts are arranged in a triple colonnade and spaced approximately 20 feet apart. The structural skeleton was originally fully exposed under the sloped seating, but screened from the exterior by a high neoclassical façade.

The structure is built in discrete sections separated by two-inch wide expansion joints. The sections can move independently from one another. Double rows of structural columns coincide with joints through the façade and slab at seating sections C, F, HH, and KK. The expansion joints were designed to allow thermal expansion, which is considerable in such a large masonry building, and have also accommodated some seismic movement.

The stadium's simply composed and classically detailed façade draws on Roman precedents and also relates to the neoclassical buildings and Beaux Arts campus plan of John Galen Howard.

The façade has a two-part vertical composition with large arched openings above a rusticated base and string course, and crowned with a classical cornice and parapet with recessed panels. The arches with voussoirs align with large rectangular framed entries at ground level. The openings are uniformly sized and organized in an
fig. 19. (1930) Stadium viewed from the north. Note the low fence and a small, wood ticket booth. Wood framed windows partially enclose the arched openings west of the North Tunnel. All of these elements were later replaced. (Courtesy of the University Archives Picture Collection.)
an alternating pattern of single openings and groups of three. The single openings are framed in slightly projecting rusticated bays and embellished with balconies supported on overscaled consoles. The façade is finished with a unifying light-colored concrete dash coat to more closely simulate stone.

High wooden flagpoles supported on decorative brackets flank the single arches and project above the stadium rim. Historic photographs depict multi-colored pennants flying from the flagpoles, adding a festive character to the sober classical structure. Flags in an array of colors are still flown from the poles during football season. Although no written documentary evidence could be found, a persistent anecdote about the flags is that their colors were selected to represent the colors of military units in which large numbers of University of California students and alumni served in World War I.

At the north and south ends of the ellipse, huge concrete scoreboards embellished with classical molding project high above the rim. Roman letters incised in the concrete on the north side of the northern scoreboard read, "California Memorial Stadium." Below, the high, coffered memorial arch dramatically marks the entry for the University of California team. The arch, originally open to its full height, has been bisected by an added room and balcony at the concourse level.

A large tablet commemorating University of California Alumni who were killed during the first world war is located on the east side of the memorial arch. Bronze Roman letters within an architectural frame read,

"IN MEMORY
OF
CALIFORNIA
WHO GAVE THEIR LIVES
IN THE
WORLD WAR
1914 - 1918"

A matching but empty frame faces the memorial from the opposite side of the arch. In 1922, John Galen Howard had recommended a free-standing monument in the center of North Tunnel Court as a fitting memorial, but was over-ruled.

A small bronze commemorative plaque mounted on the west side of the arch entry reads, "This Plaque Honors, John Fitzgerald Kennedy, President of the United States, Principal Speaker at the Charter Day Ceremony, held in this Stadium, March 23, 1962, Edmund G. Brown, Governor of California, Edwin W. Pauley.
fig. 23. (1924) Aerial view of the stadium from the southwest. (Courtesy of the University Archives Picture Collection.)
Chairman of the Regents, Clark Kerr, President of the University, Edward W. Strong, Chancellor at Berkeley."

Large metal grilles cover openings at the north and south ends of the façade. Most of the other openings were originally open, but over time nearly all second level arched openings have been enclosed. Earliest enclosures were wood and glass and enclosed the openings only up to the spring line of the arch. These were replaced and today, nearly all of the arched openings are completely filled with anodized metal sash, tinted-glass windows. A few arches have been enclosed with stucco panels set back from the outside face of the coliseum wall.

Most ground level openings remain open except the wood paneled Police Booth, a glazed entry to the University of California Intercollegiate Athletics office, and the elevator entry to the Haas Press Box. A bronze plaque to the south of the press box elevator reads, "CAL, Sports, 80's, Haas Press Box, in appreciation of the many generous contributions of Mr. and Mrs. Walter A. Haas, Mr. and Mrs. Walter A. Haas, Jr., Mr. and Mrs. Peter E. Haas, Men's Intercollegiate Athletics, University of California, Berkeley, 1983."

The oval field is 459 feet by 267 feet, and designed solely for football. Although most stadiums have a running track ringing the playing field, California Memorial Stadium never included a track, giving spectators greater proximity to the action.

Seating

The original design of the stadium specified reinforced concrete benches, but was revised late in the design process to have wood bench seats and footboards because they were more comfortable. The wood was painted a light color to visually unify the wood and concrete of the bowl and approach the monolithic appearance of classical stadiums, built completely of light-colored stone.

There was no hierarchy to the original seats. Every spectator had an unobstructed view of all points on the playing field, and was closer to the action than most stadiums. Seats, 2x12 wood planks with no back rests were advertised as being 24 inches back-to-back and 17-1/2 inches wide. Because they are completely exposed to the elements, all the wood has had to be replaced over time. The original single-plank benches and footboards were replaced with two 2x6 boards, but seat numbers continued to be carved into the wood at approximately
fig. 26. (1923) Original south scoreboard and single plank wood benches. (G.E. Ferriter, photographer. Courtesy of the University Archives Picture Collection.)
the original spacing. Today, wide sections of seating above the 50 yard line have been replaced with shiny gold-colored aluminum benches. On the east a large blue “C” appears at the center of the gold field. Yellow plastic fixed-chair seating with backs and armrests has replaced wood benches in a section above the north end zone.

Accessible ramps and wheelchair platforms have been added on the east side of the stadium at the rim and at the lowest row of seats. The latter is accessible from the north tunnel entrance.

Field

To assure good playing conditions the field was built over a complex system of pipes that efficiently drain the field. Over the drainage pipes, the field was built up with four inches of crushed rock, four inches of pea gravel, four inches of sand, and finally ten inches of loam planted with rye grass.

In 1981, the grass field was replaced with synthetic turf, which required the addition of a supporting substructure. The rationale given for the alteration was that a grass field could not withstand the more intensive use that would be required after the team’s practice field was lost due to construction of the Recreational Sports Facility. In 1996, the artificial turf and substructure were removed and a grass field was re-established.

When the coach of the undefeated 1920-1924 “Wonder Team,” Andy Smith, died in 1926, his ashes were scattered over the playing field and a long commemorative granite bench on brick and granite paving placed at the east sideline. An inscription carved into the backrest quotes Smith, “We don’t want men who will lie down bravely to die, but men who will fight valiantly to live.” ---- “Winning is not everything. It is far better to play the game squarely and lose, than to win at the sake of an ideal.” Large Roman lettering carved into the rear of the backrest and visible from the California rooting section identifies the memorial: “In Tribute to Andrew Latham Smith - Coach - 1916 - 1925.” Centered below the lettering is the shadow of a small square plaque, now missing.

Rim

Huge concrete scoreboards project 35 feet above the rim on the north and south. Originally these were mechanically operated, but have been altered several times. Today, illuminated electronic scoreboards and
fig. 30. (ca. 1924) View under the seating on the west side of the stadium, showing the reinforced concrete post and beam structure. (Courtesy of the University Archives Picture Collection.)
Area Beneath Seats

The reinforced concrete post and beam structure divides the space beneath the seats into three concentric structural bays, each approximately 20 feet wide. The paved concourse fills the innermost bay, while the two outer bays were mostly open the full height between the exposed soil and bottom of the sloping seats, a height up to nearly 60 feet.

Floor decking and rooms added over time beneath the seating have greatly reduced the area where the massive structural post and beams and sloping underside of the seating are exposed. These changes have altered the original character of the space and reduced the amount of natural light, requiring artificial lighting. The dramatic spatial experience of the original structure is still evident in a few areas, the largest being near the south entry and in the concession area, although neither are 60 foot high spaces. The former was identified by an earlier structural engineering study as requiring the most seismic strengthening, which could require altering the space. The latter has already been substantially altered by the addition of floor decking and the intrusion of the elevator shaft and structural steel columns and beams that support the Haas Press Box.

Tunnels just east of the north and south tunnels to the field were constructed to lead to free-standing, two-story team quarters beyond the stadium wall on the north and south, that were never constructed. The tunnels are significant as physical evidence of the original stadium design that was more ambitious than what was realized. The tunnels are presently used for storage. To save cost and time, team quarters were constructed under the seats at opposite ends of the stadium. The home team quarters, near the north end, have been improved several
fig. 34. Plan showing built-out area beneath the stadium seats. (Courtesy of UC Planning, Design & Construction.)
times, and its historic character lost. The visiting team quarter has been added to, but retains some of its historic character. It is comprised of two locker rooms furnished with wall-mounted open lockers and little else, two gang shower rooms with ceiling mounted fixtures, and a toilet room. Historically it was entered on the north, from a flight of narrow wooden stairs from Piedmont Plaza and the small southwest tunnel to the field. Today it can also be entered on the south, from just inside the Prospect Court entry to the stadium.

A 1995 article in the California Monthly, the University of California alumni magazine, described the Memorial Stadium’s visiting locker room as “the smallest visiting locker room in the Pac-10 and certainly the least improved.” After listing a number of specific discomforts to the rooms the author goes on to say,

“But the best part of it is access to the field. Players come through a single wooden door and are met by a stairway just wide enough for one man in pads. The stairway takes a hard left, then two hard rights -- 31 steps in all -- to a dank, low-ceilied tunnel, then another 100 feet to 15 more steps up to the field level. It surely requires the most complicated piece of navigation any team must endure, and it presents a united charge onto the field.

By comparison, the Cal locker room is spacious and plush with carpeted rooms, wood-paneled lockers and windows.”

In 1963, the Brick Muller Room, designed by Michael Goodman, was added north of the home team locker room. It provided a finished space for post-victory celebrations for the team and selected alumni. The room adjoins the balcony over the North Tunnel, from which the head coach traditionally addressed the crowd of spectators.

In the 1980s, 20,000 square feet of new space was enclosed beneath the seating to house the Department of Intercollegiate Athletics, displaced by construction of the Recreational Sports Facility. The two-story complex, financed entirely by private donations, was designed by Hansen Murikami and Eshima, Architects (HME), and constructed in four phases. The facility consists of weight and training rooms, locker rooms for players and coaches, and offices for the approximately fifty full-time employees of the Department of Intercollegiate Athletics. With the addition of the Intercollegiate Sports Facility, the stadium has gone from being an occasionally used structure to one that is used daily. Anticipating the
fig. 37. North end of the stadium obscured by Kleeberger Field fencing and lights. This is the route followed by the California Marching Band as it parades from Sproul Plaza through the campus prior to each game.
eventual structural retrofit of the stadium, HME designed the infill to be light weight and easily demolished and rebuilt. The new work is easily distinguished visually from the original structure.

In 1996, two spaces over the North Tunnel, the Brick Muller Room and the Big Game Room, were combined and remodeled to be the Travers Memorial Club Room. Public toilets tucked under the seats on the inside of the concourse behind painted board and batten partition walls retain much of their historic character. Many of the historic fixtures and wood partitions remain. Painted board and batten is the historic infill material at the stadium. Recent infill has generally been stucco.

Site and Site Elements

A cohesive system of roads, paths and plazas for ticket sales, pedestrian and vehicular access, and views were designed as an integral part of the stadium and constructed and landscaped at the same time. Large open areas at opposite ends of the stadium, Prospect Court on the south and Tunnel Court on the north, were linked by Piedmont Plaza, a broad walkway extending around the base of the stadium. Four paths and short stairways led from Piedmont Avenue to Piedmont Plaza.

Today, these areas have been paved with asphalt and serve as parking lots during the week.

Charter Hill, denuded by the hydraulic excavation work, provided clear views onto the playing field. Historic photographs taken before the planted vegetation reached any height show a large crowd standing behind a fence to protect the immature plants and trees, earning the nickname “Tightwad Hill.” Even after trees matured, viewing games from the hillside had become an institution. A permanent reinforced concrete platform was poured on the hillside in 1979 for the victory cannon.

Views

Views of the stadium have been blocked or diminished by the construction of the International House and Kleeberger Field. High chain link fencing and large field lights at Kleeberger Field significantly altered the view of the stadium from the north, the traditional campus approach, for the California Marching Band that parades through the center of Campus before each game.

A panoramic view from much of the stadium and from the mouth of Strawberry Canyon was effectively blocked by the Haas Press Box.
Ticket Booths

Original ticket booths were small hipped-roofed, board and batten wood structures designed to accommodate one ticket seller. Similar booths, painted blue, are still in use at the Piedmont Avenue approaches to the stadium.

Flat roofed, concrete block ticket booth and program distribution structures were built at Prospect Plaza in 1949.

Fencing

Chain link and steel pole gates and fencing for crowd and entry control appear to be in their historic locations, but have been modified to raise the height of the fencing in most locations.

Metal sliding gates and security fence, with a blue factory finish, has been added at the stadium openings at Prospect Plaza.

Signs

The blue and gold enameled sheetmetal signs for sections, toilets, concessions, etc. are not historic.

Site Lighting

There are no permanent floodlights, but temporary stanchions of high-powered lights are presently mounted on the east and west sides of the stadium seating at about concourse level. Since the late 1970s portable lights have been brought in and placed around the Stadium for late afternoon games.
B3U1DINING & SITE CHRONOLOGY

Note: The following chronology is based on sources cited in the Bibliography. Where an exact date is unknown no date is given, but the item is inserted in the assumed chronological order.

Oct. 1921 - ASUC launches a state-wide fund raising campaign for the construction of the California Memorial Stadium.

1922 - Stadium construction begun.

23 Nov. 1923 - Stadium dedication ceremony at Memorial Arch, North Tunnel entry.

24 Nov. 1923 - Stadium opened with the "Big Game," California vs. Stanford.

1929 - International House constructed at southwest of stadium.

1936 - Floor decks added at Concourse level.

1944 - Strawberry Creek culvert extended.

1946 - Repair work on culvert.

1947 - Visiting team quarters enlarged.


1948 - Strawberry Creek culvert repairs.

1949 - 6 ticket booths running N/S at base of planting removed.

New turnstiles added.

West path (Piedmont Plaza) widened.

New concrete block ticket booth and program distribution building at Prospect Plaza, south of stadium.

Seat numbers burned in new wood seating.
Row numbers stamped in new concrete stairs and painted on asphalt finish steps.
Waterproofing: asphalt bound vermiculite, PRES topping. Gunite ribs, concrete ledgers, copper expansion joint.

1954 - Home Team quarters below seating section CC.
Kleeberger field built north of stadium.

Press box alterations (Walter Steilberg, architect)

1956 - University corporation yards constructed east of stadium.

1957 - Temporary bleachers at east rim demolished.

1962 - President John F. Kennedy Charter Day address; 90,000 people attended.

1963 - Brick Muller Memorial room added above north tunnel (Michael Goodman, architect).

1968 - New Press box (Ratcliff Slama Cadwallader, architects; Allan R. McKay, structural engineer; Collouette & Associates, mechanical engineers).

1972 - Three year contract signed with Oakland Raiders professional football team for use of California Memorial Stadium.

1976 - Seat changes.

1979 - Tightwad Hill victory cannon platform constructed.

1981 - Cal Sports 80s construction program, Phase I

East rim modified for wheelchair seating.

Grass at playing field removed, synthetic turf and substructure added.

Waterproofing.

Cal Sports 80s construction program, Phase II

Intercollegiate Training Complex (Hansen, Murikami, Eshima, architects)

1983 - Cal Sports 80s construction program, Phase II

Waterproofing.

1985 - Cal Sports 80s construction program, Phase III

Hall of Fame (Hansen Murikami Eshima, architects). Display cases.

1986 - Series of concession stands added.
Toilet room remodeled.

1987 - Coaches shower and toilet additions and Intercollegiate Training Complex, Phase II (Hansen Murikami Eshima, architects): equipment office, storage, team meeting room, varsity locker, laundry, electrotherapy, hydrotherapy, shower room, meeting room, renovation on two levels.

Restroom remodeled.

Sewer rehabilitation.

1988 - Men's room under seating sections H and HH remodeled into telephone and storage (UC Facilities Management, architects).

Renovation of cheerleader platform.

Head coaches shower room.

Permanent power for concession stands.

1989 - Synthetic turf replaced with same type. "California" in northern goal zone, "Golden bears" in southern goal zone, Cal. insignia at 50 yard line.


1991 - Cal Sports 80s construction program, Phase IV

Administrative offices.

Walk sliding gates.

1992 - Temporary lighting.

Fire alarm system.

1993 - Hall of Fame ceiling fans added.

New recreation lighting.

Interior fencing.

Sitework grounds maintenance.

Press box enclosure.

Football coach's offices.

Intercollegiate Athletic Facilities: weight room remodeled; new carpet; ten lockers; student gate
entry sleeves; fire alarm system; Room 208 - new bookshelves.

1994 - Team Meeting Room remodel (Noll & Tam, architects).
New concrete floor added at section G-GG.
Weightroom flooring.
Accessible seating added.
Signage added.
Visiting team locker rooms rehabilitation.
Stadium bench seating replaced.

1995 - Electronic scoreboard upgraded to include TV screen (Degenkolb Engineers).

1996 - Synthetic turf removed, grass playing field restored (CMX Group).
Perimeter wall of field restored.
Rubber surfaced concrete walkway constructed around field to protect footing, irrigation system.
Travers Club Room (Swatt Architects) replaces Team Meeting Room and Brick Muller Room.
**Existing Conditions**

**Fault Creep**

The Hayward fault runs directly under the north-south axis of the stadium. Due to fault creep, the western portion of the stadium is moving north relative to the eastern portion. This has caused and continues to cause damage to the structure. The most serious distortion is evident in the supporting columns at the expansion joints between seating sections K and KK.

**Concrete**

The California Memorial Stadium was constructed at a relatively early date for reinforced concrete construction. Some shortcomings inherent in early reinforced concrete construction were corrected in later structures. For example, in a number of locations in the California Memorial Stadium steel reinforcing bars were placed less than one inch below the outside surface of concrete; two inch cover is now the standard. This condition has led to corrosion of the steel, resulting in expansion of the bars that in turn has caused large patches of concrete to pop off or spall.

Another defect in early reinforced concrete construction was inadequate vibration of the wet concrete. This is evident in the stadium and resulted in some areas of visible voids and exposed aggregate.

Concrete at the façade appears to be generally in fair condition. Patches of dark biological growth indicate areas where drainage is inadequate. The discoloration appears to be the result of superficial soiling rather than permanent staining. The exterior concrete was originally finished with a unifying light-colored dash coat to cover the board form impressions and to more closely resemble classical stone stadiums. Over time, large areas of the dash coat have weathered away, resulting in a mottled surface appearance where the gray structural concrete reads through the warmer-colored stucco finish.

Sections of concrete have spalled from the underside of projecting molding. This is particularly true on the north side of the stadium, suggesting that moisture is retained in the horizontal elements which are consequently vulnerable to freeze/thaw cycles. This failure may also be the result of rusted reinforcing bar. In an effort to combat this phenomenon, in some locations painted sheet metal “flashing” has been added in an ad hoc fashion above the string course. Decorative acanthus leaves originally embellished the support brackets below each flagpole. All are now missing, suggesting they were systematically removed, perhaps because they were falling hazards.
The approximately seven-inch thick concrete slab under the seats was originally covered with an asphalt weatherproofing system. This is currently in a very deteriorated condition particularly at the southern end of the stadium, where it is retaining moisture and sustaining thick biological growth under the seats. Water stains at the finished ceilings in the Intercollegiate Sports Facility beneath the seating testifies to the inadequacy of the waterproofing system of the concrete slab and possibly the drainage system of the seating section. As originally designed, rain water from the 48 seating sections drains into a five inch tile pipe that rings the stadium at the base of the seating sections. To prevent run off from flowing onto the field, the seating drain pipe connects directly into the main drainage outlets just inside the parapet at either end of the field. Trash and plant debris, evident during this survey, can easily clog the drains beneath the seats, and cause a breakdown in the system.

The original structure was detailed with expansion joints that run through the entire structure. The expansion joints were designed to accommodate thermal expansion, which is considerable in a massive masonry structure. Although the expansion joints have also accommodated some seismic movement, there is no mention of this purpose either on the historic drawings or in published descriptions of the stadium at the time of construction. No expansion joints occur where the concrete post and beam construction meets the slab-on-grade construction at the northeast and southeast. In these locations, cracks through the concrete are evident at the rim parapet wall.

In general, all historic wood elements require regular painting and maintenance. They should be repaired rather than replaced.

**Board and Batten Partitions**

Original infill and partitions were constructed of painted board and batten siding or single wall construction. These are still in place at the public toilets along the concourse. Dryrot at the bottom of boards is typical where the exposed end grain of the boards readily absorbs ground moisture.

**Bench Seating**

The wood benches are fully exposed to the elements and require regular painting and maintenance. Dryrot is evident in most of the wood benches and many are seriously deteriorated.
Flagpoles

The original wood flagpoles appear to be in good condition, but the protective paint layer is flaking and in need of maintenance.

Doors

Historic wood panel doors appear at the exterior and interior partitions of the public toilets along the concourse. These appear to be in fair to good condition and should be retained.

Metal

Historic metal elements are limited to painted iron newel posts and rails at a few stairs and at the façade balconies. These should be retained in place and maintained with regular painting. Any rust should be removed down to bright metal prior to painting.

Site

The modern metal sash windows appear sound. There are no apparent leaks. Sash and glazing are installed flush with the interior edge of the openings to maximize the reveal from the exterior.

Bent ferrous metal plates at the rim that cover the top of expansion joints are rusted and distorted due to fault creep. The plates should be cleaned of rust and painted as the rust will seriously stain the concrete façade.

Existing asphalt walkways are cracked and patched and the surface is uneven. The wide curving concrete steps leading to the rim road are in fair condition. They also exhibit cracks and have been patched with asphalt.
CONCLUSION & RECOMMENDATIONS

The California Memorial Stadium is a significant part of John Galen Howard's architectural legacy at the University of California at Berkeley. The stadium has retained a high degree of integrity in spite of significant changes to the surrounding campus and neighborhood and major infill projects beneath the seats.

Because the property is a recognized landmark, all design and construction should meet the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. The Secretary of the Interior's ten Standards for Rehabilitation follow, with those appearing in bold print being the most pertinent to the California Memorial Stadium project:

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

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

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

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

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

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

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

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

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

General Recommendations

Exterior

Re-establish the classical, stone-like appearance of the original stadium bowl. To this end, replace seating where necessary with benches (preferably painted wood) of a single, non-reflective, light color matching the concrete façade of the structure.

The democratic seating of the original stadium is a significant character-defining feature. Alterations that might establish hierarchy or differentiation in the seating, such as added back supports or arm rests in some sections, should be avoided.

Advertising signs currently attached to the playing field wall, scoreboards and Press Box detract from the historic character of the stadium and should be discouraged and, if possible, removed.

Design modern electronic scoreboards to minimize obstruction of the decorative elements of the historic masonry. New scoreboards should be sized so they do
not project beyond the original scoreboards. The current scoreboards do project above the historic and are visible from the stadium exterior.

**Interior**

Retain (or re-establish) some areas beneath the seats on the west free of floor decks and infill walls, where the full height and curve of the original space experienced.

Continue to expose the original reinforced concrete post and beam structural grid.

**Alterations**

As possible, remove insensitive past alterations and poorly executed repairs and replace with more sensitively designed solutions.

Alterations should be designed to be reversible, that is, in a manner that allows future removal of the added element without damage to historic material.

No additions or alterations should project above the historic rim of the stadium.

Avoid filling the large openings in the Coliseum wall. When required, infill should be as transparent as possible and recessed as far as possible from the outside face of the wall. Light colored stucco is not an appropriate infill material for this location because it reads as a continuation of the masonry wall.

Design required new structural elements to be clearly distinguished from the original concrete structure.

Design new infill walls beneath the seating to be clearly distinct from the original structure. To this end, recess new infill from the original concrete structural frame, and construct the infill of light-weight materials such as wood and stucco.

**Materials**

To re-establish the historic uniform appearance a dash coat matching the original in color, materials and finish should be reapplied.

Both the exposed structural concrete beneath the seats and the stucco dash coat on the exterior are significant character-defining features of the stadium and should not be painted.
Surface cleaning to remove general soiling, biological growth, or graffiti should utilize the gentlest effective method.

Site

Remove structures and planting from the east rim that obscure views from the Rim Road into the stadium bowl and beyond to the Campanile and San Francisco Bay.

Re-establish a visual link to the stadium from the intersection of Gayley Road and the path followed by the marching band through central campus. Lights and high chain link fencing around Kleeberger field currently screen views of the stadium.

Re-establish the formal pedestrian paths at Prospect Court, Piedmont Plaza, and North Tunnel Court. Many of the formal paths have degenerated into amorphous asphalt parking lots.
FOOTNOTES


12. Ibid. p. 145.

13. Ibid. p. 144.


18. Ibid. p. 714.

19. Ibid. p. 715.

20. Hugill, Superintendent of Grounds and Buildings, correspondence to President Campbell, University Archives President’s office files for 1923.

21. Source: Steve Finacom, Planner, University of California Physical and Environmental Planning.

22. Ira Michael Heyman, correspondence with Carroll Brentano, February 5, 1981.

PHOTO INDEX

cover. (ca. 1923) California Memorial Stadium viewed from Panoramic Hill, looking northwest. (Courtesy of the University Archives Picture Collection.)

fig. 1. (ca. 1924) Man posed standing in one of the large arched openings at the concourse level on the west side of the stadium. Note: there is no floor providing safe access to where the man is standing. (Courtesy of the University Archives Picture Collection.)


fig. 3. (1923) Memorial Arch or North Tunnel Entry at the north end of stadium (from Serby, M.W., The Stadium).

fig. 4. (Jan. 1914) John Galen Howard, Phoebe Apperson Hearst Plan for the University of California. Note location of large stadiums in the general location of the Women's Gym. (Courtesy of the Bancroft Library.)

fig. 5. (1917) John Galen Howard, Perspective View of the Proposed University of California. (Courtesy of the Bancroft Library.)

fig. 6. (Jan. 1922) John Galen Howard, Study for a Theater, Administration Building, Men's Gymnasium, Armory and Stadium in the area of the Life Sciences Buildings, Jan. 1922. (Courtesy of the UC College of Environmental Design Documents Collection.)

fig. 7. (1923) View of the stadium from the Campanile, looking southeast. Note the large private houses along Piedmont Avenue. (Courtesy of the University Archives Picture Collection.)

fig. 8. (ca. 1914) Looking east into Strawberry Canyon from the future stadium site. (Courtesy of the University Archives Picture Collection.)

fig. 9. (Oct. 1922) John Galen Howard, Perspective Study for California Memorial Stadium. Bird's eye view of Strawberry Canyon site from the northwest. (Courtesy of the Bancroft Library.)

fig. 10. (1923) Early stage of the stadium under construction, looking north. Note draw horses and mules and Strawberry Creek bed. (Courtesy of the University Archives Picture Collection.)

fig. 11. (1923) Stadium under construction, looking southwest. Note concourse running above the north tunnel and under the coliseum seating. (Courtesy of the University Archives Picture Collection.)

fig. 12. (1923) Stadium under construction, looking northwest with the Campanile on the right. Construction elevator at center. (Courtesy of the University Archives Picture Collection.)

fig. 13. (1923) Stadium under construction. Detail showing workmen laying steel reinforcing bar for concrete slab under upper level seating. (Courtesy of the University Archives Picture Collection.)

fig. 14. (1923) Stadium under construction, looking northeast toward Charter "Tightwad" Hill which has been excavated. Note the steel reinforcing bars in the concrete posts at the location of beam connections. (For stereo viewer. Courtesy of the University Archives Picture Collection.)

fig. 15. (1924) Aerial view from the north, showing the stadium filled to capacity. Note the bleacher seating at the east rim and spectators on Tightwad Hill, above a protected area of newly planted hillside. Straight paths radiate from Piedmont Plaza, the wide path on the west side of the stadium, to Piedmont Avenue. (Courtesy of the University Archives Picture Collection.)

fig. 16. California Memorial Stadium, site diagram, 1923. "Stadium Rimway" is the official name for the road that climbs past Bowles Hall and the stadium. "Prospect Court," "Piedmont Plaza," and "Tunnel Court" are informal names that are descriptive of parts of the site, but are not official University names. (1998, Siegel & Strain Architects)
fig. 17. Expansion joint at rim (1998, Siegel & Strain Architects).


fig. 19. (1930) Stadium viewed from the north. Note the low fence and a small, wood ticket booth. Wood framed windows partially enclose the arched openings west of the North Tunnel. All of these elements were later replaced. (Courtesy of the University Archives Picture Collection.)

fig. 20. Memorial Arch (1998, Siegel & Strain Architects).


fig. 22. Glazed infill and entry to UC Intercollegiate Athletics (1998, Siegel & Strain Architects).

fig. 23. (1924) Aerial view of the stadium from the southwest. (Courtesy of the University Archives Picture Collection.)


fig. 25. Fixed-chair seating (1998, Siegel & Strain Architects).

fig. 26. (1923) Original south scoreboard and single plank wood benches. (G.E. Ferriter, photographer. Courtesy of the University Archives Picture Collection.)

fig. 27. Field with temporary field lights (1998, Siegel & Strain Architects).

fig. 28. Electronic scoreboard at north (1998, Siegel & Strain Architects).

fig. 29. Haas Press Box (1998, Siegel & Strain Architects).

fig. 30. (ca. 1924) View under the seating on the west side of stadium, showing the reinforced concrete post and beam structure. (Courtesy of the University Archives Picture Collection.)


fig. 32. Area inside Prospect Court entry (1998, Siegel & Strain Architects).

fig. 33. North side and historic entry to visiting team quarters (1998, Siegel & Strain Architects).

fig. 34. Plan showing built-out area beneath the stadium seats. (Courtesy of UC Planning, Design & Construction.)

fig. 35. Concourse (1998, Siegel & Strain Architects).

fig. 36. Historic public toilets at concourse (1998, Siegel & Strain Architects).


fig. 38. Stone retaining wall at Piedmont Avenue (1998, Siegel & Strain Architects).


fig. 41. Exposed reinforcing bar at rim (1998, Siegel & Strain Architects).

fig. 42. Flag pole bracket; embellishment is missing (1998, Siegel & Strain Architects).

fig. 43. Expansion joint and iron plate at rim (1998, Siegel & Strain Architects).

SIEGEL & STRAIN ARCHITECTS
fig. 44. Two-board replacement benches (1998, Siegel & Strain Architects).

fig. 45. North Tunnel Court, now parking lot (1998, Siegel & Strain Architects).

fig. 46. South scoreboard and entry to seating. Note how new electronic scoreboard projects above the original (1998, Siegel & Strain Architects).

fig. 47. "Piedmont Plaza" on the west side of the stadium, looking north. Originally a landscaped path, it is now used for parking (1998, Siegel & Strain Architects).

fig. 48. Memorial Arch and North Tunnel Entry with parking in foreground (1998, Siegel & Strain Architects).
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HISTORIC VALUE AND SENSITIVITY TO CHANGE OF HISTORIC ELEMENTS

The following list assigns a historic value to features of the California Memorial Stadium. The period of significance is assumed to be 1922 to 1948 (see Significance section above). Ratings are defined as follow:

**Very Significant:** (VS)
- The element was built during the period of significance and is architecturally significant.
- It has had only minor alterations (retains its historic integrity).
- It contributes significantly to the historic character of the structure.
- It is physically in good or fair condition.
These elements are highly sensitive to change.

**Significant:** (S)
- The element was built during the period of significance and is architecturally significant, but
- It is in poor condition or has been altered, or
- It was built after the period of significance, but is architecturally significant.
These elements are less sensitive to change.

**Contributing:** (C)
- The element was built during the period of significance, but is not architecturally significant.
- The element was built after the period of significance, but is architecturally compatible with the original.
These elements are less sensitive to change.

**Non-Contributing:** (N-C)
- The element has had major additions or incompatible alterations,
- It is not compatible in style, material, scale, character, or use with the original building, or
- It is in poor or critical condition.
These elements are less sensitive to change.

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SIEGEL & STRAIN ARCHITECTS
coffering
  at north entry tunnel VS
  under balconies VS
incised lettering at north scoreboard VS
stucco dash coat S
metal balcony rails C
flag poles VS
commemorative plaques N-C
infill walls at openings
  wood (e.g., police) C
  glazed (steel frame) N-C
  stucco N-C
enamed metal signs N-C
awnings N-C
Press Box N-C
elevator to Press Box N-C
light fixtures N-C
gates & fencing N-C

AREA BENEATH SEATS
Exposed unpainted concrete VS
structural skeleton VS
concourse VS
concrete stairs C
rails
  round pipe C / N-C
  square iron (painted) VS
visiting team quarters S
home team quarters N-C
1980s infill spaces N-C
infill walls
  board and batten walls S
  stucco walls N-C
doors
  wood, paneled C
  metal N-C
floor decks N-C
public toilets
  board and batten partitions S
  wood stalls & doors S
  historic fixtures S
concession structures
  wood S
  stucco N-C
drinking fountains
  historic S
  modern N-C
light fixtures
  incandescent C
  fluorescent N-C
exposed pipes & conduit N-C
enamed metal signs N-C
SEATING AREA
- painted wood benches
- incised numbers
- aluminum benches
- plastic fixed seats
- stairs
  - incised numbers
  - painted numbers
  - non-skid coating
- score boards
  - concrete portion
  - electronic scoreboard
  - electronic clock
  - advertising signs

PLAYING FIELD
- turf field
- commemorative bench & paving
- carpeted path at perimeter
- low wall around perimeter
- advertising signs at perimeter wall
- cheerleaders' platform
- drinking fountains
- pole mounted megaphones
- lighting