This chapter is divided into four sections. The first provides a historical overview. The second describes the appearance of the exterior of the wing and pavilion as they were designed and constructed. The third briefly explores modifications in the exterior from 1917 to the 1980s, particularly of the Northeast Pavilion ground story; the changes also include various cleanings of the building and repairs and replacements of the roof and skylights as far as they can be determined. Finally, the chapter describes the condition of the wing as it was revealed in surveys prior to 1998–2001 Restoration and Rehabilitation, the reasoning behind the recommendations made for restoring and rehabilitating the wing and the treatments implemented.

**Historical Background**

From the early 1890s until his death, George B. Post (1837-1913) was one of the United States’ leading architects of buildings in the French Beaux-Arts style. That style dominated America’s public architecture from the World’s Columbian Exposition in Chicago of 1892-93 until the conclusion of World War I in 1918. Post has come to be known especially for four Beaux-Arts buildings: the Manufactures and Liberal Arts Building at the Chicago exposition (1892); the Bank of Pittsburgh (1895); the New York Stock Exchange (1901-03), and the Wisconsin State Capitol (1906-17). Post considered the Capitol, his last major undertaking “an architectural monument” that would be “a model for buildings of its class, and which would as such exert a great educational influence throughout the land.” Post also had a keen interest in technological innovation. In 1868, he was responsible for the first elevators in an American office building, the Equitable Life Assurance Society building in New York. The enormous steel spans in his Columbian Exposition building made it the largest structure under a roof at that time. In the Capitol, he introduced the latest ventilating fans and a new type of steel beam.¹

In the initial stages of designing the Capitol from 1906 to 1908, Post worked personally with William F. Vilas of Madison, one of the Capitol commissioners, a former U.S. senator, a former cabinet member in the Grover Cleveland administration and a “taste maker” for the city and the state. Like Post, Vilas desired that the building become a model of its type and insisted upon excellence in design, materials and execution. Vilas died in the summer of 1908, just as the Capitol was beginning to take shape physically but after most of the important design decisions had been made for the West and East Wings and the rest of the building had been thoroughly conceived.²

A widely consulted architectural dictionary defines the Beaux-Arts style in this way:

A grandiose architectural style as taught at the Ecole des Beaux Arts in Paris primarily in the 19th century, widely applied until 1930 to large public buildings such as courthouses, libraries, museums, railroads, and to some pretentious residences. Characteristics often include formalism in design,
symmetrical plans, heavily rusticated arched masonry, ashlar stone bases with rusticated stonework, especially on the ground floor and raised basement levels; sculptured figures; a massive and symmetrical façade, often with a projecting central pavilion; a monumental attic story; commonly decorated with dentils; enriched entablatures; monumental flights of stairs; classical columns often set in close pairs; banded columns, engaged columns, coupled pilasters; highly decorated pilastered parapets; balconies; sculptured spandrels; decorative brackets; ornamental details such as cartouches, floral patterns, Greek key designs, ornamental keystones, medallions; elaborately decorated panels, and the like; the roof, commonly a flat or low-pitched, hipped, or a mansard roof; often, domes and rotundas; rectangular windows symmetrically placed, with lintels overhead; arched dormers, balustraded windows, pedimented windows, or windows with balconies; doors, commonly paneled with a glass-paneled canopy over the primary entryway, flanked by columns or pilasters; a wrought-iron grille on the exterior side of the entry door. Post employed many of these characteristics in his design, drawing his footprint for the building from the program established by the Capitol Commission in 1905. It required a building "in the form of a St. Andrew's cross" or a cross in an X shape with equilateral arms, thus assuring that the wings of the cross face the corners of the Capitol Square, comprised of four city blocks or about 13.4 acres. The plan for the prospective city of Madison (1836) had scaled the radiating streets at the Square's corners at a relatively narrow, residential or retail/commercial width, with grander ceremonial boulevards extending from the centers of the sides of the Square where arms of the cross would meet at the center. Thus, the commission's program and the city plan together can be said to have dictated that the ceremonial entrances to the Capitol coincide with the boulevards, leaving daily pedestrian access to the ground-floor entrances of the wings and pavilions.  

5.4 East Washington Avenue from the Capitol, circa 1917
The early commercial buildings situated at the top of East Washington Avenue are apparent from the Northeast Pavilion. The water tower in the center was erected in 1889 and demolished beginning in October 1920. One of the Capitol's last finishing touches, bronze urns on pedestals in the semi-circular eves, had not yet been put in place.
The East Wing faces King Street, the historic “first settlement” district of Madison, and originally enjoyed fine views of Lake Monona before large buildings were erected where King Street meets Wilson Street. The Northeast Pavilion faces East Washington Avenue (which actually runs northeast). At the time the Capitol was constructed, it was a business and residential boulevard for four or five blocks. Near the Yahara River (fourteen blocks from the Capitol), an industrial district had developed by the late nineteenth century, and the section of the avenue between the foot of the hill on which the Capitol stands and the Yahara was low, marshy ground. It was filled gradually and by 1920 was a thing of the past, leading eventually to the installation of a four-lane boulevard with a landscaped median strip. An excellent view of the Capitol could be had along the avenue’s length, and conversely an excellent view of the city could be had from the Northeast Pavilion. The view is especially fine from the grand stairway leading to the first floor exterior doors atop the ground floor porte cochere.

**Description of the Exterior**

The exterior is constructed of monument-grade, white Bethel granite from Vermont, a stone that glints and changes visual appearance as it reflects the prevailing colors of the sky. The street façades of the East Wing and Northeast Pavilion were designed to resemble their counterparts around the building, with rusticated masonry in which the horizontal joints of the stones are recessed, thus creating a substantial looking base for the entire building. Heavy, rustic arches also characterize the ground floor entrance areas of the pavilions. On the principal King Street façade, six, approximately 43-feet-tall Corinthian columns together with entablature support the pediment that contains monumental tympanum sculpture in classical arrangement. The pavilion features a monumental stair that faces East Washington Avenue and terminates in a quarter-circular portico with four 36-foot Ionic columns surmounted by an entablature and low domed roof. The entablature continues along the north side of the wing, creating a course that ties the wing to the pavilion in a continuous architectural rhythm.

These massive entrances correspond visually to the volume of the building and make the interior of the building easily recognizable and understandable from the street. Historically, the two pavilions used most for ceremonial purposes seem to have been the southeast and southwest. The southeast has the best natural light and level ground, and was designated by George Post as the principal entrance to the building; the southwest was close to the Milwaukee Road’s passenger depot. The use of the ground level of the Northeast Pavilion as an early service entrance would have been a logical choice because of its proximity to rail and highway routes and its level approach. Like all the wings, the East Wing consists of five levels—basement, ground, first through third floors and the attic, or fourth floor. The wings measure 125 feet in width, 187 feet in length and 85 feet in height. Pitched skylights in the roof illuminate interior spaces all the way to the first floor level. The side façades of the wings are virtually identical for the entire building, while variations exist in the street-end façades. The North Wing and South Wing street façades (the last to be built) are identical, while the West and East Wing façades are each distinctive. The Northeast Pavilion, too, is virtually identical to the others. The overall design of the pavilions is circular, and the portion that is exposed on the exterior constitutes a quadrant or one-fourth of the circle.

The organization of East Wing interior space informed exterior window organization and decorative treatment on the principal King Street façade, distinguishing it from the other wings. Otherwise the architectural arrangement of the Northeast Pavilion and the street and side wall façades of the East Wing are virtually identical to those elements throughout the building.

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5.5 Principal elevation, East Wing, 2000
The pediments above the first floor windows and the shorter second story windows distinguish the East façade from the three other principal façades of the building. The Executive Chamber, on the first floor, required that taller windows be installed to accommodate ceiling heights in that room. Drawings generated during the 1998-2001 Restoration and Rehabilitation accurately depict both the differences and similarities in the Capitol’s façades.

5.6 Principal elevation, West Wing, 2000
The windows of the West façade also vary from those in the other sides to accommodate interior ceiling heights. The second story windows that illuminate the Assembly Chamber rise a full two stories, eliminating the necessity for third story windows.

5.7 Principal elevation, South Wing, 2000
The South and North Wings, the third and fourth of the wings constructed, have identical façades with the exception of the sculptural groups in the pediments.

5.8 North elevation, East Wing, 2000
The north and south façades of the East Wing are virtually identical. The elevation of the Northeast Pavilion, at the right side of the drawing, demonstrates the typical juncture between the wall and pavilion. The windows at the end of the wall are located within the pavilion’s portico and their design has been modified slightly.
North and South Façades

The rusticated ground floor is separated by a belt course from the stories above, which are faced with flat stones. Eight window bays exist at each of the four levels. On the ground floor, two window bays at the west end of the wing are positioned within each porte cochere, associated with the Northeast and Southeast Pavilions; on the upper floors, the pavilions’ roofs extend above one window bay on each floor. On the ground floor, all windows have six-over-six sash. A scrolled keystone with double helices and acanthus leaves on either side appears above each of the six easternmost windows. The ground story pavilion windows are treated more simply; they have no ornamented keystones, and their stone framing is less elaborate. Stonework under the pavilion decks is flat, not rusticated, but the space under the pavilions’ first floor decks features broad arches and stone piers. The ground floor windows have segmented arches, as do those on the east façade. The radii vary according to the width of the openings in order to create a consistent appearance in the arches.3

The Ionic columns of the pavilion terminate several feet lower than the capitals of the Corinthian columns on the east façade. The pavilion entablature consists only of an architrave-cornice, lacking a frieze. It is surmounted by a balustrade that begins at the line of the frieze above the Corinthian columns on the street façades. Thus the pavilion ties to the wing visually, with the architrave-cornice of the pavilions continuing along the north wall, around the corner of the east façade and terminating at the Corinthian colonnade.

The windows on the first floor have pedimented lintels with double-helix brackets enriched by an acanthus motif on each side and below. The sash is six-over-six. The window in the eighth bay within the pavilion portico has no pediment, but the sashes are the same as the other seven.

The arched second story windows create the suggestion of an arcade along the side walls and the pavilion at that level. Post’s Capitol competition perspective indicates balustraded balconies outside these windows. Balustrades without balconies appear in the finished building on the street façades of the other three wings, where the second story windows continue below the balustrade railing. The windows are the most elaborate and among the largest on the building exterior, being 11 feet tall and 6 feet wide. (All dimensions provided derive from George B. Post & Sons drawings.) A keystone scroll with double helices and acanthus appears above all the windows at this level, including the one under the pavilion roof, which is slightly narrower than the others. Swags of fruit appear in each corner, visually secured by rosettes and ribbons. Cyma reversa moldings at the top of the arch and below the base of the arch feature waterleaf carvings. The windows are double-hung with six narrow lights and one large light below, and seven narrow lights and one large light above.

The third floor fenestration course consists of seven double windows and one single, located within the pavilion. The double windows have openings that measure about 5 feet high by 3 feet wide; the single window is wider. All windows are double-hung with two-over-two sash. Each pair is divided by a pilaster or pier that separates the windows vertically.

The attic story is set back 20 feet from each side wall and cannot be seen from the street, hidden by a balustrade at the sides and by the attic pediment and parapet wall on the east end. The balustrade that forms the parapet continues the line of the frieze, which is established by the entablature above the Corinthian columns of the street façade. The balustrade is divided by piers that are placed to emphasize the organization of the windows beneath and punctuate the balustrade above each of the pavilion columns. The balustrade runs continuously from the side of one window to another, crossing the pavilion. The attic story has modest detailing in the stonework, and fenestration consists of six sets of paired windows on either side. Each window has two-over-two sash.
The East Façade

Both practical and symbolic organization mark the design and execution of the East Wing's principal façade. The exteriors of the North and South Wings are identical; the East and West Wings vary, reflecting the activities occurring in those wings. The increased ceiling height of the Executive Chamber on the first floor led to changes in window height and decoration that accommodate these interior conditions. The East façade is symmetrical with two narrow, flat walls on the outside of the wing, recessed from and flanking the wider, highly ornamented, heavily fenestrated central façade behind the colonnade. Except for two small windows in each of the narrow elements on the ground floor, these walls rise blank, flat and without ornament to the cornice that circles the building. These unadorned walls had been designed with relief statury in the initial conceptual phases, but George Post abandoned the idea early in the design process.

On the ground floor, three central doorways and four windows are arranged symmetrically. The walls are capped by the belt course that circles the entire building, joining the ground floor to the first floor. Segmented arches surmount the seven openings, with doors and windows constructed to match. There are scrolled keystones above the doorways but not the windows. Exterior masonry continues inside the doorways for 6 feet. The doorway keystones are scaled slightly larger than those above the windows of the north and south side walls, but they share design features of two helices and acanthus leaves. Three low granite steps lead to the entrance doorways. The first two steps are broad, measuring 14 inches; the third constitutes an 8-foot-wide stoop. From the stoop, a 5-inch step gives final access to doorways. Four granite lamp bases flanking the doorways align with four columns above; the five-globe bronze standards have lion-head and lion-paw motifs that are repeated in the ground story interior hallway. Statuary had been planned for the base of the balusters at each wing but was never fully designed nor executed.

The six granite Corinthian columns and surmounting pediment of each wing are, along with the dome, the most dramatic and recognizable components of the Capitol. The Capitol's columns are positioned at a distance from one another that is twice their diameter (4 feet) just above the base. They stand atop an 8-foot-wide portico, and the pilasters behind them echo the columns' detail precisely. The columns and pilasters are approximately 43 feet high; Post's drawings show their capitals as 5 feet 7 inches high and the entablature as 9 feet 9½ inches high. The columns are textbook examples of their type, as are the Corinthian pilasters immediately behind them that repeat the columns in rectangular form against the wall. Rising from square plinths, the columns have standard tori molding of semicircular profile and scotiae (a hollow molding between tori) at their bases. The shafts swell slightly in the middle and taper near the capitals. Astragals separate the shafts from the capitals, whose leaves (caulicoli), flowers (fleurons) and helices imitate the standard drawings available in nineteenth-century pattern books from Europe and remained reprints of the works of Andrea Palladio, a sixteenth-century Venetian Renaissance architect and author.

There are five bays of windows across the east façade. In scale, the first story windows resemble those of the other wings' principal façades. The openings are 9 feet 10½ inches by 4 feet 7 inches, with six-over-six sash. The lintels are capped by pediments, similar in design to those over the first-floor windows on the sides of the wings. As an added element, the pediments accommodate an increase in ceiling height for the Governor's Conference Room (originally called the Executive Chamber). All the other principal façades have less elaborate lintels at the first floor level.

At the second story, the five arched windows are nearly a foot shorter than the comparable windows in the North and South Wings. The lower sashes of seven panes resemble the lower sashes of the side elevations and those of the North and South Wing street façades. But the upper sashes are shortened by two panes; side façades and North and South Wing street façades have eight-pane upper sashes, the East Wing upper sashes have six panes. Post's drawings show the measurements as 10 feet 3½ inches in height and 5 feet 9 inches in width. This compares to wider and taller windows

5.11 Post drawing 518-508, East Wing, North Elevation Structural (detail), 1908
The massive ness of the Corinthian colonnade on the east façade is conveyed in this structural detail that also illustrates the projection of the pediment from the building. The entases, or swelling of the vertical profile of the column, is evident in the drawing. This device was used to offset the optical illusion of concavity that characterizes straight-sided columns.

5.12 East façade barricaded for Restoration and Rehabilitation, 2001
During Restoration and Rehabilitation of the East Wing, pedestrian access to the wing was restricted to the members of the construction and design teams.

5.13 Column base, east façade, 2001
The architect employed classical detailing in the columns, including the square plinth above which the curvilinear elements of the base appear. A pair of hollow moldings, called scotiae, separates two sets of stepped rounded moldings called tori.

5.14 Capital, east façade, 2001
The Corinthian capitals also exhibit standard classical detailing. The molding at the base of the capital, or astragal, visually separates it from the shaft of the column. The capital's elements include leaves (caulicoli), flowers (fleurons) and helices.
at this level on the sides of the building (11 feet tall, 6 feet wide), and taller and narrower windows in the North and South Wings (11 feet 1½ inches tall, by 4 feet 6 inches wide). As at the side façades, all are enriched with carvings of fruit, a keystone scroll with helices and acanthus and waterleaf embellishments on the cyma reversa. Between the second and third story windows, Post placed a three-step or three-facia course (that resembles the architraves of the exterior), an egg-and-dart molding and a sill for the third story windows, thus establishing a boundary between the elaborate second story windows and the plain third story windows.

At the third story, there are five bays with pairs of windows that hang with four-over-four sash. The openings are the same at this level for the East, North and South Wings—7 feet 1 inch by 2 feet 10 inches. Between each window in the pairs is a stone pier 1 foot 5 inches wide. The lintels and stone courses above these windows rise behind the architrave to meet the coffered ceiling of the portico.

Above the columns, Post designed a classical entablature and pediment, with an attic story behind the pediment. A classical entablature consists of three elements, from bottom to top, an architrave, a frieze and a cornice. For the entablature, Post selected a standard design of three stepped fascia separated by decorative moldings. The lower face (which is slightly battered, meaning that it tilts against the vertical) is the narrowest, the top the deepest. Altogether the entablature is 3 feet 1½ inches tall. An unenriched cyma reversa molding separates the architrave from the frieze. The frieze is simply decorated with plain rondels (round ornaments; in this case they have two fields each, or one circle within another) above each column and one at the side. Between the frieze and the cornice there is an undecorated ovolo molding—shaped like half an eggshell. The cornice, too, follows basic classical arrangement. First comes a course of denticulated or tooth-like stone. The standard dentil, as show in Post’s drawings, is 6½ inches wide, separated by a gap of 3⅛ inches, though the width of the dentils and gaps varies slightly at the corners of the portico and above the columns in order to make them fit the façade. Modillions or two-helix scrolls, laid horizontally, contrast with the vertical scrolls used with windows as brackets or keystones. These are separated by coffers that step into the base of the pediment. Post also employed dentils, modillions and coffers in the gable of the pediment. Bronze dowels tie the stones together.

The triangular pediment rises above the level of the attic, giving the impression of substantial height. A horizontal cornice and two raking cornices enclose the triangle and surround the tympanum. The tympanum sculpture by Karl Bitter is a classical composition of figures in triangular arrangement; the theme is “Justice.” Bitter described his work thoroughly in a 1908 letter to Lew Porter, secretary of the Capitol Commission.

To interpret this subject on lines distinctly American I placed a statue representing “Liberty” in the center, reasoning that without Liberty “there can be no justice.” Liberty is represented in the act of bringing light to “Justice” and shielding and protecting “Truth.” Both Justice and Truth are represented by seated figures, the former holding aloft the scales, the latter the mirror, being long accepted and customary symbols of these allegorical figures.

Grouped with Justice I show the figure of an aged man with the tablets containing the Ten Commandments, intended to point to the origin of our conceptions of the moral elements in law, while as a counter motive on the side of Truth I have a figure of an Anglo Saxon youth holding the Magna Charta [sic], thereby introducing the other principal sources whence sprang the laws by which our race is governed.
The composition is completed on the left by a group representing “Tradition”, a mother imbuing her children with the first and primitive ideas of right and wrong, while the extreme right shows a group of men engaged in the study of practical law. By these groups I intend to point, on the one side at the hereditary and instinctive ideas of right, which are not the result of special training, but lived and do live for generations as characteristics of our race; while the other side leads to the intricate details which the practical application of these ideas necessarily brings about.

The three principal figures of Liberty, Justice and Truth are placed about a monumental seat, the allegorical details of which will have reference to the fact that this part of the building will also form the seat of the Executive branch of the Government of the State.11

Behind the pediment, the attic or fourth floor is subtly expressed; a stone wall, capped by a simple cornice, extends horizontally from near the midpoint of each raking cornice (although several feel behind the front edge) to a point in line with the entablature below. The wall then returns to the central portion of the façade, which expresses the width of the attic and frames the entire portico.

The Northeast Pavilion

The first floor pavilion entrances are the ceremonial entrances to the Capitol. It appears that the Northeast Pavilion has been seldom used for this purpose, and at the ground story it had become the service entrance to the building, although this function was not apparent in original drawings and has ceased as of 2001. An old, perhaps original, steel eye attached to a structural beam on the ceiling of the porte cochere provides a purchase for a hoist from wagons or trucks, suggesting the early use of the pavilion as a service entrance. The Northeast Pavilion receives little sunlight except in the mornings, so the more logical pavilion for ceremonial use is the southeast, which George Post considered the principal entrance to the building. Both the northeast and the southeast sides of the Capitol Square are relatively level, making them the logical sites for ceremonies, erection of platforms for visitors and large events.

Compositionally, the Northeast Pavilion ties the east façade of the North Wing and the north façade of the East Wing into a single element. Its flat dome helps provide a visual base for the statuary group at the drum of the dome.

The floor plans of all four pavilions are virtually identical and essentially circular. The drawings reveal that they are based on radii centered in the rooms. Although they were designed in connection with the Central Portion and Dome, the pavilions abutting the North Wing were constructed with that wing between 1914 and 1917, the last parts of the Capitol to be built. The pavilion is included in this report because its refurbishment was undertaken as part of East Wing Restoration and Rehabilitation.

At the ground level, the pavilions feature a grand staircase leading to the first story, plus a porte cochere for vehicles and pedestrian entrances. The stone work is flattened at the porte cochere, giving extra width for vehicles. A tool shed measuring about 20 feet square occupies the space under the ceremonial staircase. It has no windows. The two similar spaces at the Northwest and Southeast Pavilions each had two windows each because they were public toilets originally.

The rusticated stonework of the ground story carries around the exterior of the pavilion and staircase. The two major openings at each side of the pavilion—one for the porte cochere, the other for pedestrians—both have scrolled keystones with two helices and acanthus enrichments, similar in shape but not in size to those above the ground story.
windows. Inside the porte cochere, the walls are plain. Two windows (six over six with segmented arches) of the East and North Wing ground floors are positioned inside the porte cochere, and there are three double entrance doors, curved and arched, each with one light.

The organization of the pavilion ground floor is complex because of the number of openings and arches. The use of rusticated stone and relatively flattened arches gives the impression of great weight and massiveness, as though the piers and walls support the building, which they do not, although they do support the columns and porticos of the pavilions. The ceilings are built of arched brick within a steel framework. The floors above are concrete and granite. Compared to other exterior arches in the building, the radii specified for those in the ground floor of the pavilions are very broad—20 feet for that of the porte cochere and pedestrian entrances, and 15 feet 3/4 inches for the entrance to the tool shed.12

The stairway to the first floor level has two granite pedestals at its base that were intended to support figural sculptures. The stairs rise to a landing just above the midpoint of the story (but visually at the midpoint because of the stone newels), then continue to a rectangular platform at the first floor level. Bronze light standards with five globes surround the newels at the top of the stairs. Stairway, platform and portico floor railings are composed of vase-turned balusters with solid piers at corners. The balustrade continues along the edge of the portico until it intersects with the East and North Wing walls. The platform floor pitches slightly for drainage. Where it meets the portico, there is another step to a slightly pitched floor. At the pavilion entrance are three doors similar to the double doors in the ground story. There are no windows in the first-floor pavilions, which act as entrance lobbies to the building.

The most dramatic feature of the portico is the set of four, 36-foot-tall Ionic columns and two pilasters which rise to the cornice that wraps the wings and pavilions just above the third story windows. The shafts have a diameter of about 4 feet 3 inches where they meet their bases. The outer columns are positioned very closely to the pilasters. Both columns and pilasters are plain, not fluted, and have Ionic capitals consisting of double helixes. Because of the curvature of the portico, it is difficult to measure the spaces between columns precisely, but the intercolumniation appears to be about 6 feet 6 inches, or about one-and-a-half times the diameter of a column.13

The columns are not surmounted by a traditional entablature, but rather an architrave-cornice. This feature runs from the pavilions to the sides of the wings and around the narrow sections of the principal façades, tying the pavilions to the wings compositionally. The architrave has three fascias, like those in the Corinthian entablatures, but these lack enrichment except that the lowest course is banded, just as is the King Street façade architrave. Behind the architrave, the portico is sheltered by a coffered ceiling. Above the architrave, a simple course of molded stone and a cornice of dentils is surmounted by another molded course. Above that, the balustrade has piers positioned to correspond to columns and pilasters.

The attic of the pavilions consists of a low shallow-domed story with seven windows and an exterior deck that originally was tiled. The deck continues behind the balustrade along the wings. Access is from small doorways in the wings at the rear of the secondary stairs. Six large granite buttresses (12 feet high, 7 feet across and 3 feet deep) support the low dome but are not required structurally, although they guide the eye up towards the sculpture groups at the base of the dome. The three small windows at the fifth level, above, draw the eye still higher.

Windows in the pavilions appear much the same as those on the wings and façade, but are treated differently both in individual and overall design. The pavilion windows, treated as horizontal courses, are proportioned and enriched uniquely. There are three windows or doors on the first through the third stories and the attic has seven windows. At the first story, three glazed double doors provide access to the building. A belt course acts as a connector to the first story windows of the adjoining wings.

At the second story, the three tall arched windows are linked with pilasters and have the effect of an arcade. The pilasters conclude where the arches begin, terminated by a molding enriched with waterleaf carving. The outermost molding of the three-part arch also has waterleaf enrichment. Scrolled keystones with helices and acanthus appear above each window. The carvings in the spaces between the arches consist of swags of fruit joined by the scrolls and by carved wreaths at the widest points. A continuous molding that connects the pavilion to the wings surrounds the carvings. The glass in these windows is slightly curved, as are the window frames, with eight panes in the upper sash, seven in the lower.

The third story pavilion windows are not pairs, as is the case in the sides of the wing, but are single windows, with three-over-three sash that are slightly curved. The stonework surrounding them is unremarkable, but the molding above them constitutes a final horizontal course. There are seven windows in the attic or fourth story of the pavilion, looking out over the roof to the balustrade. They also received relatively simple treatment and have two-over-two sash.

**Modifications, Repairs and Cleanings, 1917 to 1988**

Except for the roof and skylights, the exterior of the East Wing—as well as the exterior of most of the Capitol—remained largely unchanged from construction until the Capitol Restoration and Rehabilitation began in 1988. No records of work on the building exterior have been located for the period prior to the mid-1950s. Extant records indicate that cleaning, tuck pointing, roof replacement and closing and repairing skylights occurred from the 1960s through the early 1980s. Modifying the ground floor of the Northeast Pavilion into a service entrance, however, brought about significant changes in its appearance beginning at an earlier date. The pavilion was included in all tuck pointing and cleaning that involved the entire building.14

**Tuck Pointing, Cleanings, Skylight and Roof Repair and Replacement**

In 1959, the building maintenance committee of the Wisconsin Legislative Council recommended a number of improvements for the exterior, particularly the continuation of tuck pointing (cleaning and refilling of old masonry joints with new mortar) that had started on the Dome in 1958. The Council also recommended cleaning the masonry elements of the building subsequent to tuck pointing and called attention to the bad condition of the skylights over the Senate and Assembly Chambers. The maintenance committee report remarked that the appearance of the exterior "has been the subject of much comment by many people during the past several years." Over the next few years, the legislature appropriated funds for many of the committee's recommendations.15

Additional tuck pointing projects were undertaken in 1963 and 1964-65. When Governor Warren P. Knowles dedicated the Capitol on 7 July 1965 (because of World War I, it was not dedicated when completed) he spoke about the entire structure having been recently tuck pointed and chemically cleaned. Accordingly, tuck pointing of the East Wing and Northeast Pavilion apparently took place between 1963 and the spring of 1965, when chemical cleaning of the entire structure occurred.16

The chemical cleaning in the 1960s was among the most controversial projects involving the Capitol's exterior. At that time, the granite facing had "heavy accumulations of grease, oil, soot and dirt" on its surface. The Bureau of Engineering had experimented with various techniques on test spots in the 1950s and leaned towards a chemical solution and...
water or steam," rejecting sandblasting as a method. In 1965 the department contracted with the R. E. Doebler Co. of Milwaukee for $41,000 to clean the building with a solution of 4% hydrofluoric acid, 14% detergent and 82% water. First the building was washed with clean water; then workers flowed the acid solution over the stones, and finally they washed off the solution with water from hoses under 1,200 pounds of nozzle pressure. Hydrofluoric acid is used to etch glass and is a powerful compound. As a cautionary measure, the Bureau of Purchases and Services warned parking permit holders around the perimeter of the Capitol Square that "the acid content of the cleaning solution is sufficient to cause damage and . . . it is impossible to control wind carried spray." While no damage appears to have occurred to automobiles, damage did occur to the building. A July 26, 1965 report lists nearly twenty-five separate items that required attention. They included damage to window glass and paint, to shrubbery and grass, to light standards and to quarry tile on the Observation Deck and the fourth floor decks, as well as blackened areas on stone and metal surfaces, corrosion of conduit and hardware, stained stone and broken balustrades. Some cleanup occurred immediately, but reglazing of damaged glass had not yet been accomplished by October 1965.17

Between 1966 and 1969 the entire building was again repointed, with mortar cut from defective joints back to solid material. The state provided the contractor with polyethylene foam "for new backing, when required." During the same period, the roof tile decks on the fourth and sixth levels floors were replaced during the summer months.18

The Capitol's skylights have been a nearly continuous cause of concern throughout the history of the building. Surviving records from the 1950s indicate that the skylights had undergone earlier repairs, replacements and removals between the completion of the building in 1917 and the 1950s. At the latter date the building maintenance committee of the Joint Legislative Council drew attention to the skylights over the legislative chambers. Between 1967 and 1974, considerable skylight work occurred, although its nature and extent remain unclear. In 1976, the Division of State Facilities Management looked into resetting all existing glass in the skylights and replacing all broken panes; in 1977 and 1978, the Division of Facilities Management evaluated various skylight alternatives and in 1981 decisions were made.

5.22 Elevator replacement project 5353 (detail), 1963
When the exterior freight elevator on the ground floor of the Northeast Pavilion was replaced in 1963, state architects designed two alternatives for enclosures. The grille shown in "Elevation X" would have blended with the Capitol's historic architecture.
Finally, in 1982 a $1,674,000 contract was let to Bachmann Construction of Madison to renovate (and to replace, when necessary) the copper roofs on the building and all the skylights. The four skylights over the third floor State Law Library were reopened (the date they had been closed has not been determined). Originally, eleven skylights had illuminated parts of the fourth floor. Two over the secondary stairwell had been closed but were reopened as part of this project. Two over the elevator shafts were still open; they were closed and the curbs for them on the roof were removed. Two over the mechanical equipment rooms in the center of the wing also remained open but were closed and their curbs removed. The large skylights over the barrel vault gallery and the Supreme Court Hearing Room were open and remained open. The large skylight over the State Law Library reading room on the fourth floor had been closed at an earlier, unknown date and it was reopened. The two small skylights over the original private elevator shafts had already been closed and they remained closed; their curbs were removed. At the same time the aged copper roofs were replaced or renovated. From the early 1980s until 1994, occasional repairs were required, especially on the skylight ridges.19

**Modifications to the Northeast Pavilion**

When the building maintenance committee of the Legislative Council issued its 1959 report, it observed that the existing exterior ground floor hydraulic freight elevator at the Northeast Pavilion was "obsolete." The elevator was operated "by water pressure from the service water mains, the pressure on which is subject to fluctuation, repairs are difficult to obtain, and the wood platform is not structurally stable. Employees forced to use the elevator are subject to a considerable accident hazard." It is not known when this elevator had been installed, although the description suggests that it had been in place for many years. No such elevator was indicated on the original drawings for the wing. In 1963, the elevator was replaced by the Northwestern Elevator Co., Inc., of Milwaukee which installed a Dower brand elevator. The replacement occupied the position of the previous elevator but with a new enclosure and a modern hydraulic system that would not vary according to external water pressure. Two alternate designs were created for the enclosure. One called for a decorative grille to surround the door and blend appropriately with the building's architecture. The second alternative of vertical metal strips was chosen instead. The hoistway to the basement was not altered.20

Four years later, the elevator was augmented by a loading dock on the east side of the pavilion. The dock required reconstruction of the tunnel under the approach to the pavilion. At the same time a wheelchair ramp—the first for the Capitol—was built on the north side of the pavilion.21

The final significant alteration to the ground floor of the pavilion occurred in 1970, when the doors to the storage area under the grand staircase were removed and a rolling steel overhead door was installed. Also, the innermost window on the east side of the pavilion was removed and a door to a new loading dock office constructed in the northwest corner of the East Wing.22 In 1984, the pavilion’s exterior staircase was rebuilt to replace the original (but by then displaced) brick walls with concrete. All of the displaced stonework was “reset to proper alignment.” The project followed similar building of the southwest and northwest stairs the year before.23

![Diagram](image)

5.24 Wheelchair ramp project 6701-13 (detail), 1967
This detail shows the elevation of the railing for the Northeast Pavilion wheelchair ramp—the first such entrance to the Capitol. It was built in 1967, at the same time a loading dock for trucks was constructed in the pavilion.

5.23 Elevator replacement project 5333 (detail), 1963
The alternative selected for the freight elevator enclosure was the sheet metal structure represented by "Elevation Z," which had a more contemporary appearance. The elevator was removed during the 1998-2001 Restoration and Rehabilitation.

In the fall and winter of 1993-94, the engineering firm of Wiss, Janney, Elstner Associates, Inc. of Chicago conducted an exterior and roofing survey and analysis of the Capitol’s Dome, West Wing and Northwest Pavilion. The survey was contracted by the Division of Facilities Development as part of Restoration and Rehabilitation of those areas of the Capitol. Wiss, Janney, Elstner found the granite “in good condition with only limited stress observed.” Findings included some localized areas with displaced stones, cracks and spalls, only some of which would require repair; early “dutchman” repairs that would require proper anchorage (a dutchman is a new piece of stone cut to fill a void caused by cracking, etc.); some dirt and occasional bird droppings, and motting that had resulted from natural weathering. The report recommended against trying to correct the motting. The roof, the firm reported, was in “good condition with the exception of sealant work at the counter flashing.” Wiss, Janney, Elstner recommended new membranes in some areas.26

On the basis of this survey and report, the Division of Facilities Development asked Wiss, Janney, Elstner to prepare plans and specifications for the conservation of the entire Capitol exterior as part of overall Restoration and Rehabilitation. The results were published on 17 April 2000. The specifications called for the following work:

- Using the Sponge-jet treatment on all granite surfaces to remove “surface alteration minerals, soiling, stains and organic growth”
- Grinding out and pointing mortar joints between granite units
- Grinding out and sealing joints between granite units
- Fabricating and installing granite dutchman repairs to replace portions of cracked granite units
- Installing through-pin anchors to secure cracked granite units
- Carving decorative granite dutchman
- Grinding out mortar from selected joints where expansion occurs and installing sealant
- Applying chemical treatments for removing ferrous and nonferrous stains, calcite deposits and organic growth
- Rebuilding portions of the granite facing
- Installing new sheet metal roofing
- “Redressing” granite surfaces that were significantly deteriorated, using a brush-chiseled finish, so they would more closely match the original appearance

On 11 May 2000, Wiss, Janney, Elstner received the contract to supervise the conservation of the exterior, and work began not long after. It had 545 days to complete the project. Completion was due to occur in August or September 2001, well within the contracted stipulations. In addition, the firm received the contract to oversee the waterproofing on the exterior of the Northeast, Northwest and Southwest Pavilions to “eliminate water leakage and reduce premature deterioration of the granite.”27

The process began with sponge-jet cleaning so that dirt would not mask damage or damage new repairs, mortar and sealant. Small particles of sponge from an eighth to a quarter of an inch in size were impregnated with grit, then blasted under pressure against the granite. Altogether, 280,000 pounds of sponge were used. The pellets were cleaned and reused as many as six times before being discarded in a landfill to decompose.26

Repair of the stonework followed. Crews ground out old mortar and sealant from masonry joints throughout the Capitol, then replaced the mortar and sealant with new material. They used sealant where earlier expansion joints had been identified, since sealant does not crack and separate from the granite as mortar does.
About 3,000 individual stones were repaired. For the entire Capitol, masons estimated that they had tuck pointed more than 12.5 miles of joints. Wiss, Janney, Elstner photographed every damaged stone digitally before and after repairs. The firm also prepared diagrams of repairs for particularly challenging areas such as the sculpture in the east pediment. Repairs of the dentils on the East façade also proved difficult. Repairs fell into the following categories:

- Remove “exfoliation” (thin layers of stone where it had peeled, swelled or scaled) and blend edges
- Fill cracks with grout
- Fill cracks with sealant
- Install stainless-steel, spring-loaded pins to hold separated pieces of granite together
- Make and install rectangular dutchman where stone was missing or broken
- Make and install irregularly shaped “decorative” dutchman
- Recarve a granite element for sculpture or decorative capitals—a seldom-employed repair

5.27 Cleaning the exterior, 2000
Team members sprayed the Capitol exterior with small bits of sponge that had been infused with grit of controlled hardness and applied under low pressure. The process began in May 2000 in advance of repairing the granite facing. A clean swath of granite appears on the right.

5.28 Expansion joint replacement, 2000-2001
Masonry restoration consultant, Wiss, Janney, Elstner Associates, Inc., prepared drawings that show the location of expansion joints that had opened. On the principal façade of the East Wing, open joints had developed along the walls flanking the Corinthian colonnade, as indicated by the heavy lines. They were caulked with flexible sealant, rather than mortar, so they would not reopen or cause additional damage to the stone.

5.29 Masonry repair of sculptural group, 2000
Wiss, Janney, Elstner prepared diagrams that detailed the number and types of repairs to be made to the sculptural elements of the east pediment. This drawing indicates the extent of work required to restore Karl Bitter’s East Wing group.
5.30 Spall on pediment sculpture, 2000
Most of the masonry repairs took place in late 2000, including the repair of a spall that had nearly detached the nose from one of the figures in the pediment. The engineers recommended pinning the fragment to the nose with a stainless steel pin. If the fragment were to break, they recommended carving a dutchman replacement.

5.31 Repair of the spall, 2000
The spalled portion of the figure's nose was not repaired successfully with a pin; therefore, it was necessary to implement the dutchman repair.

5.32 Damaged Corinthian capital, east façade, 2000
The third Corinthian capital from the left (facing the east façade) had developed a crack, which is visible at the left center and runs under the flower to the upper right. The recommended repair was a stainless steel pin and grouting of the crack.

5.33 Repaired capital, east façade, 2000
The grouted repair is visible appearing as a darker, thicker line than the others in the picture.

5.34 Large cracks, east pediment, 2001
Several cracks had developed in close proximity to one another in the pediment. The engineers recommended a different treatment for each. One was recommended for sealing, the second for the installation of a dutchman (piece of replacement stone) and the third to be left open as an expansion joint.

5.35 Triangular dutchman, 2001
The mason used a triangular rather than rectangular dutchman for this repair and created an expansion joint at its left side.

5.36 Granite exfoliation, east pediment, 2000
Exfoliation, or peeling of the granite, had affected a belt in the pediment group. Wiss, Janney, Elstner recommended the stone be recarved in accordance with the lines applied in the enhanced photograph.

5.37 Repaired element, east pediment, 2000
Very few instances of recarving occurred during the 1998-2001 Restoration and Rehabilitation. This photograph shows the results of the repair and recarving in the exfoliated area of the belt.
Endnotes
1 Sarah Bradford Landau, George B. Post, Architect: Picturesque Designer and Determined Realist (New York: Monacelli Press, 1998), provides the best summary of Post’s architecture. Post’s quote appears in George B. Post to George H. D. Johnson, 21 April 1909, folder 5, box 21, Capitol Commission records, ser. 833, archives division, Wisconsin Historical Society. Hereinafter, George B. Post will be referred to as Post; Lew F. Porter will be referred to as Porter, and the Capitol Commission records, ser. 833, will be referred to without the designation of the archives division and the Historical Society. Chapters Three and Four herein describe the ventilating and structural steel innovations.
2 Post to William F. Vilas, 16 July 1908; Post to Porter, 27 July 1908, both in folder 4, box 21, Capitol Commission records, ser. 833.
4 National Historic Landmark Nomination form for the Wisconsin State Capitol, prepared by Anne Biebel of East Wing Architects, LLC, June 2000, in project files. The size of the park was calculated from its dimensions of 765 feet on a side for a total of 585,225 square feet, with an acre consisting of 45,560 square feet. The current edition of the Capitol guidebook states that the lawn consists of 6.25 acres and that sidewalks, terraces and drives consist of 4.9 acres, meaning that the Capitol itself covers about 2.25 acres.
5 See three drawings, “East Elevation Exterior Cut Stone Work,” 518-515, for the East Wing, and “Ground and First Floor Plans Structural,” 518-2051 and “Sections and Elevations,” 518-2053, for the pavilion, all in the Capitol Archives.
6 The State Street façade of the West Wing constitutes the other major exception to this organization. Its second floor windows extend from the first to the third floor to accommodate the height of the Assembly Chamber ceiling.
7 The side windows have a radius of 8 feet 7 inches; the east façade windows, 6 feet 3½ inches, and east façade doors, 10 feet 7 inches. In the Capitol Archives, see drawing 518-515 for the street façade radii, and “Detail of South Elevation of East Wing,” 518-22, which is the standard elevation for all the eight identical side façades of the entire building. No standard elevations were prepared for the north and south façades of the East Wing.
8 About the statuary, see two letters by Porter to O. H. Ingram and one to his son, E. B. Ingram, 9 January, 12 February, and 20 March 1917, all in folder 17, box 11, and minutes for 17 January 1917, vol. 2, Capitol Commission records, ser. 833. The onset of war and the lack of an appropriation defeated the project.
9 See drawings 518-22 and 518-515, as well as sheet A9.1 in the South Wing drawings prepared by Kahler Slater, all in the Capitol Archives.
10 See drawings 518-515 and 518-1017, which are elevations for the cut-stone work for the street ends of the East and South Wings respectively. The South and North Wings have identical exteriors, so examining one set of drawings suffices.
11 Karl Bitter to Porter, 5 December 1908, folder 1, box 5, Capitol Commission records, ser. 833.
12 “Central Portion Corner Pavilions,” drawing 518-2055, indicates radii. The drawings for the pavilions begin with 518-2050 and end with 518-2057. All are in the Capitol Archives.
13 Drawing 518-2053 of sections of elevations of the pavilions and columns in the Capitol Archives.
14 Records created by the various agencies responsible for maintaining the Capitol from its construction until Restoration and Rehabilitation have not survived for the most part. Piecing together an account of changes in the exterior requires searching of newspaper clippings in the Legislative Reference Bureau and Madison Public Library.
16 The Division of Facilities Development of the Department of Administration supplied annual lists of active projects from 1962 through 1998, including project numbers. The number for the 1963 project was Work Order Number 6202-22; for 1964-1965, the number was 6310-7. Governor Knowles’ press release on the occasion of the dedication mentions the project. It is dated 16 June 1965 and appears in file 336.45 W7z at the Legislative Reference Bureau. No records have been located that spell out the details about the tuck pointing projects.
17 The project number was 6410.22. Numerous clippings about the cleaning appear in file 336.45 W7z at the Legislative Reference Bureau. See especially “$41,000 Scrubbing Started on Capitol,” Milwaukee Journal, 9 April 1965, no page, and William C. Adams, “Capitol Gets Acid Treatment—Cleaned for First Time Since 1917,” Wisconsin State Employee June 1965, no page. See also the folder labeled “6410-22 Capitol Building—Cleaning the Exterior” in the Capitol Archives which includes 7 June and 10 June inspection reports and a 26 October 1965 letter from the T. C. Eser Co., window glaziers, to the Bureau of Engineering. See also Building Maintenance Committee, 2-5.
18 The work order number for the tuck pointing project was 6512-27. See also Wiss, Janney, Elstner Associates, Inc., Exterior Survey and Analysis of the Wisconsin State Capitol Dome, West Wing, and Northwest Pavilion (Chicago: the author, 1994), 6, copy in the Capitol Archives, and lists of Bureau of Engineering active projects, 1966-69. The minutes for 17 February 1968 of the State Capitol and Executive Residence board in the Capitol Archives describe the replacement of roof tiles, with a work project number of 6512.24.
19 The work order or project number for the 1967-74 work was 6707.18; for the 1981-83 work, 7912.03.5. This discussion is based on documents in the following folders in the Capitol Archives: DOA Active Project Lists, 1967-98; 1981, Copper Roof & Skylights Replacement; Capitol Roofs, 1981; 1982, Capitol Skylights, Hardware Replacement, Locks, Secretary of State Bid Documents; Capitol Roof/Skylight 7912-03.5 and a similarly titled folder, 7912-03.5 Capitol Roof/Skylights 1982-84, 95807—Capitol Roof & Skylights 1984-95, and Roof Replacement 1998.
20 Building Maintenance Committee, 7-8. See also specifications for “One Hydraulic Freight Elevator and Hoistway Enclosure . . . (Project No. 5533)” and enclosed drawing and the binder labeled “Freight Elevator” in the Dale Dumbleton files in the Capitol Archives.
21 The project was number 6701-13. See the “Capitol Loading Dock” folder in the Dale Dumbleton files, Capitol Archives.
22 The project numbers were 6910.11 and 6910.12. See the folder labeled “Capitol Vault and Dock Remodeling Project” in the Capitol Archives.
23 See folder labeled “7912-03.8 Steps W. Wash/Wis. Ave., 7912-03.11 Steps, E. Wash.,” in the Capitol Archives.
27 Ibid. and “Exterior Façade Repairs,” sheet 1, project 2000, Wiss, Janney, Elstner, copy in Capitol Archives.

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